"You can't help but Like it": An Investigation of Mandatory Endorsement Solicitation and Gating Practices in Online Social Networks

E. Mitchell Church[a,*], Samantha Passarello[b]

[a] Assistant professor, Information Systems in the E. Craig Wall Sr.College of Business Administration,
 Coastal Carolina University, USA
[b] Undergraduate Student, Information Technology and Information Systems, Slippery Rock University, USA

A B S T R A C T

Companies operating in social network platforms continue to improve and expand their marketing techniques. This study examines the practice of "gating", which involves virtual barriers between social network users and company content. Gates demand mandatory user endorsements, in the form of a Facebook "Likes", Twitter "retweets" etc., to gain access to company content, such as coupons and rewards,. Gating practices demand a mandatory endorsement before any content consumption takes place. Thus, while user endorsements are assumed to arise voluntarily from trusted known sources, gating practices would appear to violate this assumption. However, whether this violation lessens the effectiveness of gating practices still requires empirical validation. We investigate this question through the use of a unique panel data set that includes data on "like" endorsements obtained from a number of real-world Facebook business pages. Results of the study show that gating practices are effective for endorsement solicitation; however, gates may interfere with more traditional marketing activities.

Keywords: Social Media Marketing, Social Media Buzz, Social Media Endorsements, Gating Practices, Socially-earned Media

Ⅰ. Introduction

Online social network marketing strategies continue to improve in scope and complexity. Today, in addition to relying on paid advertisements, many companies now maintain business pages across a number of social network platforms. These pages provide companies more direct control over marketing activities and customer interactions (Gallaugher and Ransbotham, 2010). Business pages allow companies to establish a virtual presence within the social network, from which the company can post content, receive user feedback, and participate in the larger discourse taking place around their brands (Dholakia

*Corresponding Author. E-mail: mchurch@coastal.edu Tel: 18433496911

and Durham, 2010).

As the number of companies participating in online social network platforms has grown, sites such as Facebook, Twitter and Pinterest have become virtual battlegrounds where companies vie for the attention of customers. Companies operating in these environments naturally look for any marketing advantage available within the established rules and practices of the platform (Gallaugher and Ransbotham, 2010). This study examines a practice many companies have employed in order to more aggressively solicit customer interactions. This method is known as "gating", and it involves an organization or company erecting virtual barriers that between social network users and company content.

Gates reveal content when the user provides an electronic endorsement of the company, using whatever metric is valued by the social network. We define endorsements as a publicly observable, electronic show of support for a company, personality or brand within a social media platform. A number of social media endorsement metrics exist today through which companies can gauge their social media success, and gating practices exist to solicit most of them. These include followers the company has attracted (Susarla Tan and Oh, 2012), the number of "likes" the company has received in Facebook, and Twitter retweets, among others (Boyd et al., 2010).

The study of gating practices is important for several reasons. First, with people spending an ever-increasing amount of time within online social networks, the development of marketing strategies for reaching customers in these platforms is extremely important (Dellarocas et al., 2013; Kumar et al., 2013). Gating represents one of the more unique attempts in this regard. Second, gating practices have important implications when trying to understand the nature of social media endorsements. Endorsements

are typically thought to arise through an organic process that occurs as social network users share experiences through trusted, interpersonal channels (Dellarocas, 2003). The practice of gating actually turns this process around by soliciting customer endorsements *before* any transaction has taken place. This makes endorsement a *mandatory* precursor to consumption. <Figure 1> demonstrates a typical gating practice involving mandatory endorsement solicitation.

The study also addresses an important gap in literature around the actions taken by companies to secure user endorsements. The extant research primarily focuses on the impact to organizations of cumulative media totals. Less focus has been paid to the actual methods employed by organizations in the *acquisition* of these endorsements. As a result, most studies examine the impact of endorsements, and less is known about how companies acquire these endorsements in the first place. This gap in existing research is problematic, in that it necessitates the consideration of endorsements as an *exogenous* by-product of company action. However, when companies take an active role in endorsement solicitation, as in the case of establishing gating practices, their actions are more appropriately considered as endogenous. This study addresses a gap in this regard by working to explicate the actions that underlie endorsement solicitations.

In addressing this gap, the study makes at least two contributions to existing work. While the impact of social media endorsements on desirable marketing outcomes has been studied (Kumar et al., 2013), little research has studied endorsements solicited through mandatory means. Social media endorsements are typically considered to be a natural part of social media "buzz", diffusing simply and naturally through trusted channels of network peers (Stephen and Galak, 2012). Mandatory endorsements, because
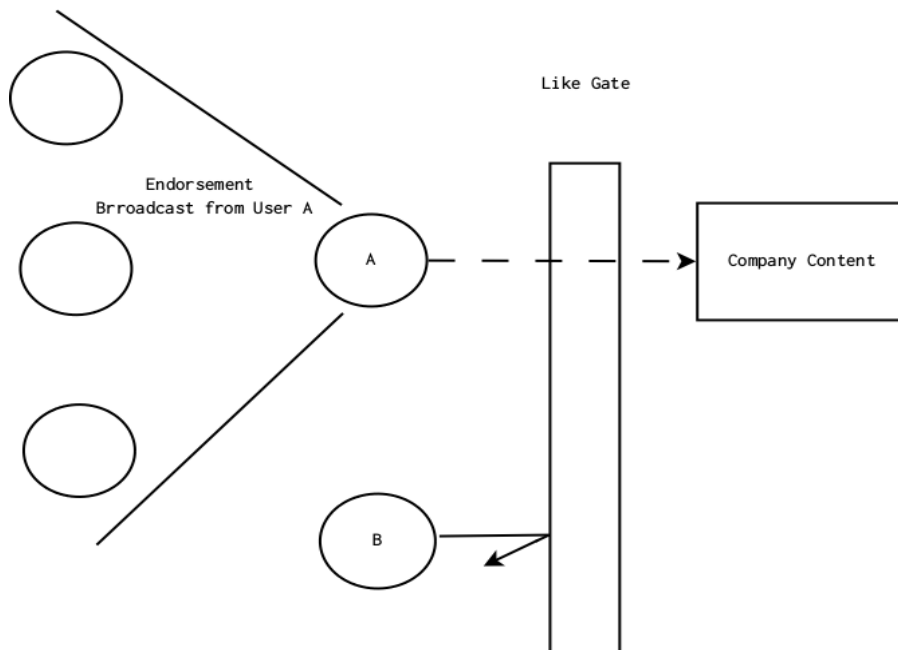
<Figure 1> Depiction Of Typical Gate Functionality. User A is Allowed Access to Company Content after Public Endorsement, while User B, with No Endorsement, is Denied Access. At the Time of Endorsement, Neither User has seen the Company's Content.

they are actively solicited and in fact required for content consumption, would seem to lack many of the characteristics normally attributed to endorsements, and thus the impact of such endorsements may be suspect. However, the question of whether this lessens the value of mandatory endorsements in practice requires empirical validation.

Our research also fills another gap in extant research in that it examines endorsement acquisition as a function of solicitation strategies. We do this through the use of a unique panel data set that includes data on a "like" endorsements obtained by number of real-world Facebook business pages. Through our empirical investigation, we expand on research that examines the impact of endorsements by incorporating endogenous factors which aid in endorsement solicitation. In doing so, we ask two important questions. "*how do gating practices impact the solicitation of endorsements in online social networks?*" Second: "*how do other factors including company marketing activities and demographics impact the effectiveness of gating practices*"?

The study offers several important findings. First, gating practices are useful for the acquisition of user endorsements. The study also confirms past research that shows the effectiveness of other types of traditional marketing activities, specifically company promotions and user "buzz", are also useful for obtaining endorsements in their own right. Interestingly, we note that gates may also interfere with these other activities. For example, because gates impact the visibility of other company actions, they may impart a negative effect on these types of activities. Ultimately, the results of the study urge caution when applying gating practices.

This paper is organized as follows. First, we review

the existing literature around the nature of social media endorsement solicitation. Next, we develop a theoretical model of the role of gating practices in endorsement solicitation. We then discuss our data collection and the empirical methods used in our analysis. The results of this analysis are then presented, followed by discussion of key results and some areas for future research extensions.

Ⅱ. Relevant Literature and Contributions

2.1. Social Media Endorsements and Marketing Outcomes

The relationship between customer endorsements and desirable marketing outcomes is well established. Online endorsements build loyalty between companies and brands (Lim et al., 2006), and customers have more favorable opinions of people, brands and products that they endorse (Lee et al., 2013). Customers are also more likely to engage in positive conversations around products they have endorsed (Keller, 1993). Endorsements ultimately make future customer-to-firm interaction more likely (Yim et al., 2008).

In online environments, customer endorsements are part of the larger category of socially-earned media and "buzz" (Stephen and Galak, 2012). Buzz refers to include many aspects of community generated information pertaining to a company, person or brand. Examples include textual reviews and comments about products, likes, YouTube video views and numerous other metrics (Luo et al., 2013). Over the last ten years, a considerable amount of literature has tied buzz to varied benefits. Chevalier and Mayzlin (2004) show that positive buzz is associated with

increased sales of products. Trusov et al. (2009) finds buzz metrics to be efficient and effective predictors of sales compared to more traditional advertising. Companies with more buzz have been shown to perform well across a number of marketing outcomes including sales and customer acquisition (Luo et al., 2013).

The mandatory endorsement solicitation that we consider is also fundamentally different from other marketing practices. As previously discussed, mandatory endorsement solicitation requires customer endorsement as a prerequisite to customer-firm interaction. As a result, gating practices are a much more overt form of active socially-earned media solicitation. Moreover, it effectively turns the notion of relationship-based marketing on its head, demanding endorsement before relationships have time to form to a point where the customers are willing to give their endorsement freely. Despite the interesting implications of gating practices and the mandatory endorsement solicitation they mediate, little research has looked at the nature or implications of these phenomena. This is the gap in literature filled by the current study.

In the next section, we discuss the theory underlying our research. We focus on our core hypothesis, namely the impact of mandatory methods on endorsement solicitations, drawing from past work in the areas of psychology and marketing. We additionally discuss the proposed impact of multiple control variables.

Ⅲ. Theory and Hypotheses

3.1. Mandatory Endorsement Solicitation

Social media platforms are saturated with market-

ing initiatives in many forms. For example, as users browse social network pages, they are exposed to numerous types of advertisements. These can take the form of general banner ads, system-generated product recommendations, or even personalized product referrals recommended by their social network friends (Dutta, 2010).

While these marketing initiatives have become a large part of the social network experience, they exhibit the commonality of being entirely optional in nature. Users are free to ignore all of these types of advertisements. Banner ads are summarily ignored at significant rates (Danaher et al., 2012). Even recommendations from social media peers can be turned off by hiding or ignoring updates from these individuals.

Mandatory endorsement solicitations operate on an entirely different principle. Unlike banner advertisements, mandatory endorsement practices such as gating create a situation in which consumption of content is not possible without first making a publicly observable company endorsement. Psychology research offers two primary mechanisms for why we might expect that mandatory endorsement solicitations would be effective in like acquisition. First, mandatory endorsement solicitation operations on the powerful psychological motive of reward anticipation. Because many gates do not reveal the content, or the potential reward that may arise from providing an endorsement, it is difficult to imagine the exact nature and scope of consequences at the time of endorsement (Milne and Rohm, 2000).

Past research from psychology shows that when confronted with an unknown situation, as in the case of a gate, the vast majority of participants will focus on the expectation of the potential reward (i.e., the content, coupon etc.). These participants see only the potential upside of receiving the award, ignoring

the potential disconfirmation that may subsequently occur (McKinney and Yoon, 2002; Oliver, 1977). Many offline programs operate on a similar principle. Lotteries for example, are necessarily structured to offer incredibly small odds of winning. They thereby create unrealistic and difficult evaluations due to human inability to conceptualize long odds and low probabilities (Weber et al., 1992). The tendency of humans to focus on the positives that would result from winning the lottery makes it difficult for them to appreciate the way losing their money will feel at the time of ticket purchase (Rogers, 1988). The practice is very successful, as evidenced by the long-standing popularity of many lotteries in the United States and elsewhere. Because gating practices operate on a similar principle, showcasing rewards while downplaying the potential negatives of endorsing a company, we can expect that gating practices will be an effective means of endorsement acquisition.

Gating practices also present users with difficulties stemming from unknown rewards. Many times the coupon or content revealed by the gate is unknown at the time of endorsement. This information is intentionally hidden, and here again literature from the area of contest structure offers some insights into why gating practices might be effective. Hidden rewards are well-known to present very difficult value judgments (Tversky and Kahneman, 1974). More importantly, humans naturally assume that the hidden prize, once known, will be wanted or desired once revealed.

Finally, in online environments, past research offers some final insight into why gating practices may be effective. Users of online social networks will endorse a product for a much smaller incentive than would be required for the same endorsement off-line (Kim et al., 2012). This implies that rewards offered by gating practices need not be especially significant,

<Figure 2> An Example of Gating Practices within Facebook. Note the Coupon that is Inaccessible Prior to Endorsement

thus improving the economic implications of a gating strategy. These characteristics of online environments, combined with the powerful psychological motivations present in gating practices which we have discussed, lead us to the following hypothesis:

H1: *Mandatory endorsement solicitation via gating practices will be positively associated with endorsement acquisition.*

Having detailed the role of gating practices in like acquisition, we next discuss the role of two other important network activities on endorsement acquisition. Both of these factors, company self-promotion and user "buzz", have been identified in the past literature as important aspects of endorsement acquisition in electronic communities in general, and particularly within online social networks. The main effects of these activities are introduced first, followed by the interaction of these activities with gating practices.

3.2. Company Self-Promotion

Within social media platforms, companies have some limited means to interact with customers. Because Facebook and other social networks earn revenue through advertising, they are careful to limit the amount of direct exposure that companies have to general users. Advertising efforts must typically be through paid and sponsored ads. However, companies are given the means to develop and manage their own business pages, and these represent the most prominent form of self-promotion used by companies within the online social network. We define company self-promotion (CSP) as marketing-oriented actions undertaken by the company within the social media platform. This includes advertising company activities or posting product announcements and coupon rewards to the social media business pages.

Much like offline advertising initiatives, CSP is a useful means of delivering a marketing message to customers. Companies that actively manage their pages to good effect, posting frequent updates and generally making effort to interact with their user base can be expected to improve endorsement solicitations as a result. CSPs are able to create market saturation so that their brands and products stay at the forefront of customers' thoughts. Gallaugher and Ransbotham (2010) identify these types of broadcast activities as an important part of social media marketing initiatives. Other past research has shown that CSP can boost consumer interest and the performance of marketing initiatives (Teixeira et al., 2013). Thus giving us the hypothesis:

H2: *Company self-promotions (CSP) will be positively associated with endorsement acquisition.*

3.3. User "Buzz"

Other users also have the ability to promote companies and aid in endorsements through a number of means. Within Facebook users can add virtual "tags" to their conversations when they discuss companies or brands. Through the use of tags, users may help to promote awareness of a company's brand image or attention around a particular company initiative. As an example of the power of positive buzz, when billionaire investor Carl Icahn took to social media in August 2013 to say that he had bought shares of Apple stock, his announcement resounded through the Internet, driving Apple's market capitalization up by $17 billion on the day of the announcement (Clark, 2014).

Past research has tied user buzz to a number of desirable marketing outcomes (Stephen and Galak, 2012) and there are several reasons to believe that buzz will lead to an increase in user endorsements. First, buzz has the advantage of spreading through naturally influential channels (Stephen and Galak, 2012). Buzz often spreads among friends or interested peers. As a result, buzz may be highly trusted and therefore influential (Chu and Kim, 2011).

This mode of distribution also allows buzz to reach more selective pockets of interested users than typically observed with other forms of advertising (Luo et al., 2013). While traditional media is distributed in such a way as to produce an incredible number of impressions (eg., Super Bowl advertisements), wide distribution channels necessarily sacrifice richness for reach. Buzz may be better suited to reach isolated pockets of individuals who may be particularly engaged with a product or brand (Stephen and Galak, 2012). These are exactly the kind of motivated individuals likely to endorse a particular company.

Finally, buzz may also benefit from the effect of an information cascade. Information cascades occur as a message is passed on from one person to another (Bikhchandani et al., 1992). With each step in the diffusion of the information, new network links open up so that information can progress faster and faster. Eventually, the number of nodes for information diffusion reaches a critical mass, and information diffusion occurs. The interpersonal nature of user buzz allows it to diffuse with speed and efficiency, thereby greatly increasing the likelihood of a cascade (Zhong et al., 2015). For these reasons we posit that, consistent with past research, user buzz will positively impact endorsement acquisition.

H3: User "Buzz" will be positively associated with endorsement acquisition.

3.3.1. Potential Interactions

In addition to considering the main effects of related to gating practices, company promotions and user buzz, it is important to also consider the role of interactions between these variables. Interaction effects are likely given the probable impact of gating practices on the ability of companies to communicate with its user base. For example, with gates in place, it makes it impossible for users who have not endorsed a company to see promotions. However, since gating practices are likely to increase like acquisition, they may also draw more traffic to user pages. This makes it difficult to predict the impact of gate and endorsement interactions. When considering this situation, it is likely that the interaction of gating practices and promotions has a significant impact on further like acquisition. However, it is difficult to make a solid argument for the direction of this impact *a priori*. For this reason we propose the following non-directional hypothesis.

H4a: The interaction between mandatory endorsement solicitation via gating practices and company endorsements is significant.

When considering the interaction of gating practices and user buzz, the literature is more consistent. As outlined above, gating practices are likely to lead to an increase in like acquisition. This in turn creates a larger buzz network for the company. Past research has shown that user network size is associated with increased diffusion of information to existing users (Susarla et al., 2012). Based on this, we can put forth the following hypothesis:

H4b: The interaction between mandatory endorsement solicitation via gating practices and user buzz is positive.

In addition to this main hypothesis, we consider a number of important control variables. The next sections discuss these variables and the rationale behind their inclusion.

3.4. Control Variables

3.4.1. Company Demographics

It is important to consider the role of certain demographic characteristics on gating practices. Past research has shown that certain industries are more amenable to the nature of social media endorsement. For example, online endorsements are a large part of many retail industries (Lim et al., 2006). Additionally, industries which produce prestige goods would be expected to elicit more endorsements, as the actual public display of the product is a key component of usage (Murphy and Enis, 1986).

On a similar note, we may expect endorsement solicitations to differ based on user demographics. Specifically, the age of social-media users may impact attitudes towards opinion sharing. Past research has shown that younger users are typically more inclined to share opinions in social media environments (Lenhart et al., 2010). We therefore also control for user age.

Finally, endorsement solicitation may be heavily influenced by company size. Large companies have significant brand power, as well as extensive marketing. This marketing is not limited to social media platforms. For example, a company like Coca-Cola spends huge sums advertising across literally all media formats, and this expenditure likely spills over into the social media context. Such spillover makes it difficult to determine whether an increase in endorsements is due to company actions in the social media platform, or rather merely the expected increase in popularity the company could expect with such expenditures.

We already take steps to mitigate some of this effect by controlling for industry, as retail industries and other certain sectors have the most brand awareness within social media demographics (Naylor et al., 2012). These are also the sectors most likely spend large sums marketing to individuals. We go a step further by including market capitalization information. Market capitalization is a commonly used measure of company size in marketing studies. It is useful anytime it is necessary to control for effects that may be due to discrepancies between size or monetary power across companies in a sample (Kumar et al., 2009).

Ⅳ. Methods

4.1. Sample and Data Collection

In this study we are interested in examining the impact of gating practices on endorsement solicitation within online social networks. We therefore collected data on a sample of real companies operating within the social media platform Facebook. When selecting companies for our sample, it was difficult to randomly sample all Facebook companies for two reasons. First, the practice of gating is not universal across companies, making it difficult to guarantee a sample that would include an adequate amount of gates. Second, Facebook's terms of use do not allow the use of webcrawling applications such as bots and spiders. As a result, all data collection had to be conducted manually.

In the end, we decided on gathering a large selection of companies operating business pages within Facebook. This sample contained companies varying in demographics, size and industry. Once the sample was obtained, the companies were divided into two groups based on whether or not they had established a practice of gating. Eventually a random sample of companies was taken from each group. Since Facebook does not allow the use of webcrawling applications, one of the authors used a web browser to physically visit each company page once per week for ten weeks. Each week, data on the company was collected, leading to 834 total usable observations across 84 different companies.

Variables were operationalized in the following way. The dependent variable Endorsements was operationalized as the change in the count of likes for the company for each of the observed time periods. Using likes as a dependent variable has several advantages for this study, because it allows us to examine a sample of companies that may be more representative of the network as a whole. Data on firm equity value, sales or other traditional measures of firm performance may not be available for many of the smaller businesses operating within Facebook. Nevertheless, these small companies often exhibit social media performance on par with larger, better funded organizations (Nakara et al., 2012). Because so much is still uncertain about the competitive use of social media in general, and mandatory endorsement solicitations in particular, studying a wide variety of companies remains very important. Since data on Facebook likes is available for all companies operating in the platform, a focus on likes allows us include more companies and draw insights that should generalize to a larger population.

Our independent variable Gate is represented by a boolean variable that corresponds to whether a company employed a gate on their Facebook business page. Company self-promotions (CSP) represents a count of the number of business page posts and updates initiated by the company in a given week. User buzz was operationalized by looking at a fairly obscure, Facebook-provided variable known as "talking". According to Facebook, the talking variable is a measure of general "buzz" activity around a particular business. It is separate and distinct from user likes, and instead includes other user activity such as tagging photos involving a company, discussing a company in status updates, etc [1].

Control variables included information on company industries and key age demographics were collected from the business profiles of companies in the sample. Companies were placed into market capitalization categories based on data from Yahoo finance.

---

[1] http://mashable.com/2011/10/02/facebook-people-talking-about/ Accessed on April 29th, 2015.

<Table 1> Variable Descriptions

Variable	Description
Endorsements*	Change in the number of user endorsements, or likes, for a particular company in a particular time period.
Gate	Binary variable indicating whether a gate was present for this company.
Company Self-Promotions (CSP)	Count of cross-promotion events initiated by a particular company during the data collection period.
Company Buzz	Socially-earned media instances attributable to a particular company in a particular time period.
Industry	Contrast coded variable indicating the industry housing a particular company.
Demographic	Contrast coded variable corresponding to the prominent user demographic for a particular company.
Market Capitalization	Relative size of company as measured stock valuation**

Note: * Dependent Variable

    **Market Cap. Data obtained from Yahoo Finance

<Table 2> Descriptive Statistics of all Variables

Variable	N	%	M(SD)	Range
Gate				
Present	53	64		
Not Present	31	36		
Key Demographic				
18-34	38	45		
35-44	36	42		
45+	12	13		
Industry				
Product/Service	39	45		
Retail	18	21		
Food/Beverage	18	21		
Telecom	11	13		
Endorsements			37k(180k)	0-523k
Company Self-Promotions			3.87(7.42)	0-97
User Buzz			58k(137k)	0-986k
Market Capitalization			8.31B (7.89B)	0-18.1B

At the end of ten weeks, the data was compiled and combined with data on control variables. All variables and their descriptions are presented in <Table 1> and < Table 2> shows descriptive statistics for these variables.

4.2. Empirical Analysis

Before examining the proposed analysis model, we looked at the correlations between study variables. <Table 3> shows the pairwise correlations between each variable in the analysis, along with its significance value. In our correlation analysis, the only

<Table 3> Pairwise Correlations for Regression Variables

Likes	1						
Gate	-0.026	1					
CSP	0.082*	-0.448**	1				
Buzz	-0.023	0.011	-0.035	1			
Industry	0.016	-0.012	0.157**	0.127**	1		
Key Demo.	0.009	0.150**	-0.077	-0.268**	-0.173**	1	
Market Cap.	-0.021	-0.183**	0.098	0.028	-0.161**	-0.189**	1

Note: **$p < 0.01$, *$p < 0.05$

variable that showed a significant correlation with Likes was CSP (Corr. 0.082, p < .05). The lack of significant correlations is not surprising given the nature of our data. Our dependent variable endorsements, as well the control variables for CSP and buzz, consist of non-negative count data. This type of data is often skewed because of the large number of small values.

In order to analyze the relationship between our variables of interest and endorsements we therefore employed a Poisson regression model with panel data. Poisson regression methods have seen significant use in both marketing and information systems research to model socially media phenomenon (Berger and Schwartz, 2011; Hinz et al., 2010).

All variables in <Table 1> were entered into the model simultaneously. In addition, we also made two additions to the model to improve the analysis. Time dummies were added to control for any time trend. We also included a quadratic term for CSP. This was done based on extant advertising research that suggests such advertising activities often show diminishing marginal returns (Hsieh and Chen, 2011).

<Table 2> shows the results of our analysis. Column 1 shows the pooled Poisson regression estimates. We report these first, before discussing our panel estimation methods. Consistent with our

hypothesis, the coefficient on Gate was significant (2.54, $p < .01$). We can interpret this and other coefficients in our as follows. Poisson regression models the change in log counts on the dependent variable. In this case, Gate was associated with a 2.54 unit increase in the log count of endorsements.

The variables for CSP behaved as expected, with the coefficient on the linear term positive and significant (0.39, $p < .01$), while the quadratic term was both significant and negative (-0.003, $p < .05$), thus showing positive yet diminishing returns. The coefficient on user buzz was not observed to be significant (-0.0003, $p = 0.136$). Of the remaining control variables, only key age demographic played a significant part in the analysis (-.60, $p < .05$). The model overall showed good fit to the data, with a pseudo R^2 of 0.31.

We next consider our panel data estimations. Because our main variable of interest, Gate, is time invariant, we use a random effects estimation method. The results are qualitatively consistent with our pooled estimates. The coefficient on Gate is once again positive and significant (4.31, $p < .01$), thus providing support for hypothesis H1. CSP performed as expected, with the coefficient on the linear term positive and significant (0.42, $p < .01$), while the quadratic term was both significant and negative (-0.003, $p < .05$). One departure from the previous

<Table 4> Regression results and Robustness Checks

Variable	Pooled Poisson Estimation	Random-Effects Poisson Panel Estimation	Panel Analysis with Added Interaction Terms	Panel Analysis with Added Industry Variables	Panel Analysis with Added Age Variables
Gate	2.54**	4.31**(.74)	1.75**(0.84)	3.08**(0.910)	4.40**(0.76)
Company Promos.	0.39**	0.42**(.001)	0.002**(0.001)	0.42**(0.001)	0.42**(.001)
Promotions^2	-.004**	-0.003*(.001)		-0.004**(0.001)	-0.0004**(0.001)
Buzz	-0.0003	-0.0001*(-.0004)	-.0002**(0.0004)	-0.0001**(0.0004)	-0.0001**(0.0004)
Promotions X Gate			-0.07**(0.0003)		
Buzz X Gate			-0.0001**(0.0001)		
Industry	-0.13	6.47**(0.38)	9.15**(0.434)		6.47**(.379)
Product/Serv.					
Food/Bev				0.15(0.80)	
Retail				7.41**(0.98)	
Telecom				-1.18(1.27)	
Key Age Demographic	-0.6*	-0.44(0.74)	-0.39**(0.82)		
18-24					
25-34					0.37(0.620)
34-45					-2.89*(1.12)
45+					-1.46(3.19)
Market Cap.	-0005	-.00012(0.0003)	0.0002(0.0003)	-0.00032(.0004)	-0.00052(.0004)
Pseudo R^2	0.31	0.30	0.32	0.33	0.31
N	834	834	834	834	834
Groups		84	84	84	84

**$p < 0.01$; * $p < 0.05$

Hypothesis	Supported?
H1: Mandatory endorsement solicitation via gating practices will be positively associated with endorsement acquisition.	Yes
H2: Company self-promotions (CSP) will be positively associated with endorsement acquisition.	Yes
H3: User "Buzz" will be positively associated with endorsement acquisition.	No
H4a: The interaction between mandatory endorsement solicitation via gating practices and company endorsements is significant.	Yes
H4b: The interaction between mandatory endorsement solicitation via gating practices and user buzz is positive.	Yes

model concerned company buzz. In the panel analysis, the coefficient on buzz was quite small, but nonetheless significant (-0.0001, $p < .05$). Of the remaining control variables, only Industry played a significant

part in the analysis (6.47, $p < .01$). The model again showed good fit to the data with overall pseudo R^2 of 0.30.

Finally, to address hypothesis H2 and H3, we

add interaction terms to our panel data model (<Table 4>, column three). Fortunately, the main results of our analysis are qualitatively consistent. We again find that gate is positive and significant (1.74, $p < 0.01$). Promotions is once again positive and significant (0.001, $p < 0.01$), while buzz remains negative and significant (-0.0001; $p < 0.01$). In this analysis, we are largely interested in the interaction variable representing company promotions and gating practices, as well as the interaction between gating practices and buzz.

As anticipated in our hypothesis development, both of these interaction terms are significant (Promotions × Gate -0.07; $p < 0.01$; Buzz × Gate × -0.0001; $p < 0.01$). However, the signs of these interaction terms require some additional explanation. Both interaction terms were negative, showing that the combination of gating practices with both company promotions and user buzz led to reduced endorsements. Thus, the combined effect of gating practices with promotions and user buzz was detrimental to endorsement acquisition. These results are discussed in further detail in the discussion section below.

4.3. Robustness Checks

We next conducted some robustness checks to determine the stability of our model in the presence of additional variables. When moving from our pooled Poisson estimates to our panel analysis, some change was observed in the variables around the demographic categories for age and industry. We therefore examined the robustness of the gate variable when adding variables that looked at these company characteristics. <Table 4>, column four shows the model with additional variables added around company industry. In these results, companies producing products and services serves as the constant. Variables related to the other three industries of food/beverage, retail and telecom allow us to see the impact of industry on endorsement acquisition. As shown from the data, retail companies gained significantly more endorsements (7.41, $p < .01$). Importantly, our other variable coefficients remain qualitatively similar with the addition of these new variables.

Next we added additional variables to consider changes in key company demographics. These results are found in <Table 4>, column five. The 18-34 demographic serves as the constant, and we see that companies that predominantly operated in the 35-44 demographic realized significantly fewer endorsements (-2.89; $p < .05$). The remaining variables remained consistent. Based on our original analysis as well as our robustness checks, we can conclude that there is support for the hypothesis that gating practices were associated with more endorsements in the Facebook platform. Additionally, we observed that company activities in the form of CSP were associated with more endorsements, though these activities were subject to diminishing marginal returns as expected. Other interesting findings concerned the role of company buzz and company demographics. All of these findings are discussed in more detail in the next section.

Ⅴ. Discussion

Social media continues to be one of the most popular sources of online time for individuals around the world. As the popularity of sites like Facebook, Twitter, Pinterest and Google+ continues to rise, many businesses are following their customers to these platforms. Today, most businesses maintain pages within social media platforms that serve as

outposts from which to manage marketing initiatives (Stephen and Galak, 2012).

While the majority of marketing activities within social media consist of advertisements and company promotions of products and services, other less traditional methods are also employed. In this paper, we explored gating practices, in which artificial barriers are erected between users and a company's content, coupons and other offers. In order to gain access, users must provide a publicly visible, mandatory endorsement of the company.

Based on an analysis of ten weeks of panel data taken from Facebook, we observed that gating practices present a complex method of endorsement acquisition. We observed that, when considered alone, gating practices offer a positive and significant impact on endorsements. This significant and positive effect remained even after controlling for many other types of factors that might influence like growth including industry, demographics, other marketing actions and user buzz. In terms of practical significance, gates also have the benefit of being low-cost and relatively easy to operate, involving a one-time implementation.

In addition to the effect of gating practices on social media endorsements, the study produced several other findings worthy of mention. The first of these concerns the role of company activities, or CSP, in endorsement solicitation. We observed that CSP are associated with increased endorsements. It is important to note, however, that these impacts are observed on a *per week* basis. Gating practices can be expected to deliver results every week once implemented. CSP, by comparison, require the sustained cost and effort involved in continual content generation. Coupled with the observed decreasing marginal returns from CSP activities, companies may find it cost prohibitive and difficult to elicit enough

endorsements through CSP practices alone.

One unexpected finding concerned the limited impact of company buzz. At first this appears surprising when considered in light of an established body of work showing the positive benefits stemming from buzz and socially-earned media (Luo et al., 2013). One explanation for our finding comes from the lack of sentiment captured by our buzz variable. Most research showing benefits regarding buzz focuses on positive sentiment (Chevalier and Mayzlin, 2004; Mudambi and Schuff, 2010). Since the data used in our analysis did not distinguish between positive or negative buzz, we are essentially capturing only a snapshot of the overall discussion involving a particular sample company. It is reasonable, therefore, that positive and negative comments largely cancel each other out, accounting for the limited observed impact on endorsement solicitation.

In addition to the main effects of gating practices, CSP and buzz on user endorsements, the study also considered interactions between these three key variables. The results of our analysis in this area offer deeper insights for companies interested in incorporating gating practices into their marketing initiatives. We found that gating practices, while positively impacting endorsements, tend to actually decrease the effectiveness of other marketing activities. In other words, gating practices paired with CSP activities were associated with a decrease in endorsement solicitation. User buzz as well was also shown to decrease for companies with gates in place.

This fundamental finding underscores the difficulty of marketing initiatives within social media platforms. Our explanation for the finding is that gating practices, while soliciting more endorsements, actually put up a barrier between a company and other network users. As a result of this barrier, company communications, and user buzz, are necessarily

limited. Put simply, the gate may attract users, but at the same time make other actions invisible. This aspect of gating ultimately complicates the effectiveness of strategies in this regard. The implications of this and other key findings are discussed in the next section.

Ⅵ. Contributions and Implications

This study makes several contributions to existing literature. In the social media literature, much work has examined the strategies that organizations can use to try and reach customers and improve marketing effectiveness. In this research, effective social media marketing relies on strategies for customer engagement (Gallaugher and Ransbotham, 2010).

The importance of customer engagement is shown by research studying the value of socially-earned media (Stephen and Galak, 2012). While research has shown that the accrual of social media endorsements, of which likes are an important category, are associated with numerous desirable marketing outcomes, less research has examined the methods employed by companies in endorsement acquisition. Our study is one of the first to examine such methods in an online, social media setting using a sample of real-world companies. While using unknown outcomes to solicit customer information *a priori* has long been an effective strategy in consumer marketing, we show that the efficacy of these methods translates well to online environments.

In terms of practitioner contributions, the study provides empirical evidence that mandatory endorsement solicitation is a practical way to increase likes in social media platforms. The obvious implication of the study is that companies would do well to incorporate gating practices into their marketing initiatives. However, when viewed from the standpoint of the social media platform the situation becomes murky.

While gates do appear to encourage the acquisition of endorsements, the study also urges caution around gating practices for two reasons. The first is the potential interaction between gating practices and other company activities which we have discussed above. The net benefit of gating practices could be called into question in light of the apparent negative role they play in encouraging user buzz, for example. Additionally, the argument could be made that Facebook "likes" solicited through gating practices are not given in the spirit in which the metric was created. In a New York Times interview, Michael Scissons, CEO of social media performance management company Syncapse, described the value of the like in terms of five key metrics: "...one, product spending within the past 12 months. Two, loyalty and purchase intent in the future. Three, the propensity to recommend the brand to other potential customers. Four, the media and messaging value that is inherent with fan membership. Five, the propensity emotional draw felt by brands or brand affinity."

At issue with gating practices is their potential to "water-down" the value of social media endorsements. Through the practice of hiding company content, and essentially paying customers through coupon and content rewards, companies may in fact be getting more endorsements, but less value per endorsement. In fact, this is the conclusion that Facebook reached recently when it began an active campaign to end the practice of like-gating. In August of 2015, Facebook moved to stop gating practices throughout the platform. Whether these efforts can be successful however is a matter of some debate. Today, gating practices are still prevalent in a number of different

forms, and some gates have actually expanded the data they demand to include even more sensitive information such as personal customer information and email addresses.

Finally, it is important to note that the practical implications of this study are not limited to the Facebook platform. Gating strategies exist in similar forms on nearly all social media sites. For example, Twitter users frequently encounter "follow-gates" that demand that a user enter into a following relationship between content is revealed. The results of our study should be generalizable to many other such settings.

Ⅶ. Limitations and Future Research

While this study offers both research-oriented and practical implications, it is important to mention several opportunities for future research. First, the data collection limitations impacted the study in three important ways. The sample size of 84 companies may fail to adequately generalize to all companies operating in Facebook. It is possible that the strategies that work for some companies may differ from what works for others. A future research study could work to examine a larger sample of more diverse companies. However, since Facebook's policies do not allow for collection of data via web-crawling applications, and Facebook's API does not allow for the export of much of the data used in our analysis, practical realities of data collection may continue to place restraints on this type of analysis.

A second limitation of this study concerns the existence of potential unobserved variables. Because we used data collected from Facebook, we were necessarily limited to the visible information available for companies. It is certainly possible that other unobserved variables could help further explain the relationships in our regression models. We have, however, made every effort to control for what can be controlled. For example, in including data on company market capitalization, we help to control for the effect of "popular" or "big name" companies in our sample.

A final limitation of this study concerned the variable that we used to denote user buzz. Because of data visibility constraints, it was not possible to examine buzz from the standpoint of user sentiment. Put differently, we could not distinguish between positive and negative buzz. Such a classification could potentially be valuable, as past research has shown numerous benefits stemming from positive buzz (Chevalier and Mayzlin, 2004). This would be an interesting avenue for future research.

<References>

[1] Bikhchandani, S., Hirshleifer, D. and Welch, I. (1992). A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades. *Journal of Political Economy*, *100*(5), 992-1026.

[2] Berger, J., and Schwartz, E. M. (2011). What Drives Immediate and Ongoing Word of Mouth? *Journal of Marketing Research*, *48*(5), 869-880.

[3] Boyd, D., Golder, S., and Lotan, G. (2010). Tweet, Tweet, retweet: Conversational Aspects of Retweeting on Twitter. *43rd Hawaii International Conference on System Sciences*.

[4] Carr, K. (2012). *Pinterest for Dummies*. John Wiley and Sons.

[5] Cheung, C. and Lee, M. (2012). What Drives

Consumers to Spread Electronic Word of Mouth in Online Consumer-opinion Platforms. *Decision Support Systems*, *53*(1), 218-25.

[6] Chevalier, J.A., and Mayzlin, D. (2003). The Effect of Word of Mouth on Sales: Online Book Reviews. *Journal of Marketing Research VOL.*

[7] Chu, S.C. and Kim, Y. (2011). Determinants of Consumer Engagement in Electronic Word-Of-Mouth (EWOM) in Social Networking Sites. *International journal of Advertising, 30*(1), 47-75.

[8] Clarke, T. (2014). Dangerous Frontiers in Corporate Governance. *Journal of Management & Organization, 20*(3), 268-286.

[9] Culnan, M., McHugh, P. and Zubillaga, J. (2010). How Large US Companies can Use Twitter and Other Social Media to Gain Business Value. *MIS Quarterly Executive, 9*(4), 243-259.

[10] Danaher, P. J., Lee, J., and Kerbache, L. (2010). Optimal Internet Media Selection. *Marketing Science, 29*(2), 336-347.

[11] Dellarocas, C. (2003). The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms. *Management Science, 49*(10), 1407-1424.

[12] Dellarocas, C., Katona, Z., and Rand, W. (2013). Media, Aggregators, and the Link Economy: Strategic Hyperlink Formation in Content Networks. *Management Science, 59*(10), 2360-2379.

[13] Dholakia, U., and Durham, E. (2010). One Café Chain's Facebook Experiment. *Harvard Business Review, 88*(3), 26.

[14] Dutta, S. (2010). What's Your Personal Social Media Strategy? *Harvard business review, 88*(11), 127-130.

[15] Gallaugher, J., and Ransbotham, S. (2010). Social Media and Customer Dialog Management at Starbucks. *MIS Quarterly Executive, 9*(4), 197-212.

[16] Harris, L. and Dennis, C. (2011). Engaging Customers on Facebook: Challenges for E-Retailers. *Journal of Consumer Behaviour, 10*(6), 338-46.

[17] Hinz, O., Skiera, B., Barrot, C., and Becker, J. U. (2011). Seeding Strategies for Viral Marketing: An Empirical Comparison. *Journal of Marketing, 75*(6),

55-71.

[18] Hsieh, Y. C. and Chen, K. H. (2011). How Different Information Types Affect Viewer's Attention on Internet Advertising. *Computers in Human Behavior, 27*(2), 935-945.

[19] Keller, K. (1993). Conceptualizing, Measuring, and Managing Customer-based Brand Equity. *Journal of Marketing, 27*(2), 1-22.

[20] Kim, H. K., Son, J.Y. and Suh, K. (2012). Following Firms on Twitter: Determinants of Continuance and Word-of-Mouth Intentions. *Asia Pacific Journal of Information Systems, 22*(3), 1-27.

[21] Kumar, V., Bhaskaran, V., Mirchandani, R. and Shah, M. (2013). Practice Prize Winner - Creating a Measurable Social Media Marketing Strategy: Increasing the Value and ROI of Intangibles and Tangibles for Hokey Pokey. *Marketing Science, 32*(2), 94-212.

[22] Lee, J., Lee, J.N. and Tan, B. (2013). The Contrasting Attitudes of Reviewer and Seller in Electronic Word-Of-Mouth: A Communicative Action Theory Perspective. *Asia Pacific Journal of Information Systems, 23*(3), 105-129.

[23] Lenhart, A., Purcell, K., Smith, A., and Zickuhr, K. (2010). Social Media and Mobile Internet Use among Teens and Young Adults. *Pew Internet and American Life Project,*

[24] Lim, K. H., Sia, C. L., Lee, M. K. and Benbasat, I. (2006). Do I Trust You Online, and if so, Will I Buy? An Empirical Study of Two Trust-Building Strategies. *Journal of Management Information Systems, 23*(2), 233-266.

[25] Luo, X., Zhang, J. and Duan, W. (2013). Social Media and Firm Equity Value. *Information Systems Research, 24*(1), 146-163.

[26] McKinney, V., Yoon, K., and Zahedi, F. M. (2002). The Measurement of Web-Customer Satisfaction: An Expectation and Disconfirmation Approach. *Information systems research, 13*(3), 296-315.

[27] Milne, G. R. and Rohm, A. J. (2000). Consumer Privacy and Name Removal across Direct Marketing Channels: Exploring Opt-In and Opt-Out Alternatives.

Journal of Public Policy & Marketing, 19(2), 238-249.

[28] Murphy, P. and Enis, B. (1986). Classifying Products Strategically. *Journal of Marketing*, 50(3), 24-42.

[29] Nakara, W.A., Benmoussa, F. and Jaouen, A. (2012). Entrepreneurship and Social Media Marketing: Evidence from French Small Business. *International Journal of Entrepreneurship and Small Business*, 16(4), 386-405.

[30] Naylor, R., Lamberton, C. and West, P. (2012). Beyond the Like Button: The Impact of Mere Virtual Presence on Brand Evaluations and Purchase Intentions in Social Media Settings. *Journal of Marketing*, 76(6), 105-120.

[31] Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research*, 17(4), 460-469.

[32] Rogers, P. (1998). The Cognitive Psychology of Lottery Gambling: A Theoretical Review. *Journal of Gambling Studies*, 14(2), 111-134.

[33] Stephen, A.T. and Galak, J. (2012). The Effects of Traditional and Social Earned Media on Sales: A Study of a Microlending Marketplace. *Journal of Marketing Research*, 49(5), 624-639.

[34] Susarla, A., Oh, J. and Tan, Y. (2012). Social Networks and the Diffusion of User-Generated Content: Evidence from YouTube. *Information Systems Research*, 23(1), 23-41.

[35] Teixeira, T., Picard, R. and Kaliouby, R. (2014). Why, When, and How Much to Entertain Consumers in Advertisements? A Web-Based Facial Tracking Field Study. *Marketing Science*, 33(6), 809-827.

[36] Trusov, M., Bucklin, R.E. and Pauwels, K. (2009). Effects of Word-of-mouth Versus Traditional Marketing: Findings from an Internet Social Networking Site. *Journal of Marketing*, 73(5), 90-102.

[37] Tversky, A. and Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, 185(4157), 1124-1131.

[38] Weber, E. U., Anderson, C. J. and Birnbaum, M. H. (1992). A Theory of Perceived Risk and Attractiveness. *Organizational Behavior and Human Decision Processes*, 52(3), 492-523.

[39] Yim, C.K., Tse, D. and Chan, K. (2008). Strengthening Customer Loyalty through Intimacy and Passion: Roles of Customer-Firm Affection and Customer- Staff Relationships In Services. *Journal of Marketing Research*, 45(6), 741-756.

[40] Zhong, C., Karamshuk, D. and Sastry, N. (2015). Predicting pinterest: Automating a distributed human computation. *Proceedings of the 24th International Conference on World Wide Web*. International World Wide Web Conferences Steering Committee. 2015.

◆ About the Authors ◆

E. Mitchell Church

E. Mitchell Church is an assistant professor of Information Systems in the E. Craig Wall Sr. College of Business Administration at Coastal Carolina University. His research interests include online consumer behavior and the economic value of social media information. His research has been published in academic journals including the *Journal of Electronic Commerce Research*, *Information Systems Management*, and *The Journal of Computer Information Systems*. Dr. Church has also authored and presented work for national and international conferences including the *Americas Conference for Information Systems (AMCIS)*, the *International Conference for Information Systems (ICIS)* and the *Conference on Information Systems and Technology (CIST)*. His current teaching interests include the Management of Information Systems and Information Systems Project Management

Samantha Passarello

Samantha Passarello will graduate from Slippery Rock University in May 2016 as a dual major in Information Technology and Information Systems and with a minor in Business Management. In her time at Slippery Rock University, she was awarded Information Systems Senior of the year and has received the honor of being Slippery Rock University's nominee for the 2016 Syed Ali-Zaidi Award. After graduation, she will start her career at PNC Bank working in technology and operations. She received a Student/Faculty Research Grant from the Slippery Rock University to complete this project. She has also presented this project at Slippery Rock University's Student Research Symposium in April of 2015.