The Dynamic Relationships between Online Media Coverage, iWOM, Buzz Perception and Online Search of Celebrities in China

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Abstract

The paper tracked 60 celebrities in mainland China in terms of their online media coverage, consumer iWOM, familiarity, buzz perception, and online search for six months. It was found that both media coverage and iWOM influenced consumer's familiarity, buzz perception, and search of a celebrity, with media coverage possessing a higher impact on familiarity and buzz perception. Media coverage and iWOM influenced each other to build celebrity popularity. Additionally, we found the chronologically dynamic relationships such that more media coverage and search led to higher buzz perception in the following month, while more iWOM and higher buzz perception led to more search.

Since it was proposed in the 1970s (McCombs and Shaw, 1972), agenda setting theory has been applied, tested, and extended in various contexts including presidential election, organized religion, corporate reputation, and so on (see a review paper, McCombs, 2005). One topic that is still missing in this line of literature is to examine the role of agenda setting in public opinion toward celebrities. Celebrity is vividly defined as "the attribution of glamorous or notorious status to an individual within the public sphere" by the well-known culture study scholar Chris Rojek (p.10, Rojek, 2004). Thus, celebrities are cultural fabrications, who cannot present in public and/or achieve public recognition without the aid of "cultural intermediaries" (Rojek, 2004). Among these intermediaries, media are definitely critical. In 2008, the then ultra-popular Hong Kong entertainer Edison Chen was involved in a nude photo-related sexual scandal which was immediately followed by wide media coverage. Meanwhile, the affair was extensively discussed in online chat rooms and forums. It was found that Edison's name turned out to be the No.1 search term in Google search engine's "fastest rising" ranking for 2008 (Google Zeitgeist, 2008). This whole issue

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indicates that there must be a dynamic relationship between various media outlets and public reactions to celebrities. Grounded on the agenda setting theory, we investigated the relationship in the current paper.

Literature Review

Agenda setting theory states that the more salient an issue or object is in terms of its media coverage, the more likely the audience will consider the issue or object to be important. In one word, we are told what to think about by simply being exposed to media. Hundreds of empirical studies have explored this hypothesis and evidenced that issue/object saliency from media agenda will be transferred to public agenda. Media coverage from traditional newspapers and TV used to be the focus of agenda setting effects, while recent studies have started to examine the role of Internet in the agenda setting process. However, these studies tended to treat the information in the Internet as a dependent variable. That is, the information is a reflection of public opinion rather than a source that influences public opinion (e.g., Roberts, et al., 2002).

Online information may come from two different sources. One is official organizations such as news agencies or public companies, and the other is private persons. The latter often serves as the basis for internet word-of-mouth (iWOM, a.k.a. eWOM). In our study, we adapted the definition of iWOM from Hennig-Thurau et al. (2004) and defined it as any positive or negative statement made by potential, actual, or former fans of a celebrity, which is made available to a multitude of people and institutions via the Internet. Previous studies in iWOM have extensively discussed consumer's intentions to participate in iWOM activities (e.g., Hennig-Thurau et al., 2004) or how iWOM affected participant's evaluations on discussed issues or products (e.g., Lee and Youn, 2009). However, the role of iWOM as a source of agenda setting has rarely been examined. It is not known if issue or object saliency from iWOM will manifest itself in public opinion. The likelihood is high in that the key deciding factor in agenda setting process is the frequency or prominence of issue coverage. Thus, it does not matter where the issue or object comes from. Since the rapidly increasing Internet penetration rate worldwide has put more consumers in the digital front, iWOM as powerful information source is likely to set issue saliency in

the eyes of the public.

Issue or object saliency in public agenda may manifest itself in various ways, such as the frequency of the issue being talked. In our study, we seek to understand how online media coverage and iWOM of a celebrity will influence public's familiarity, buzz perception, and online search of the celebrity. The unique set of the three dependent measures enables us to examine the effects of agenda setting from both cognitive and behavioral perspectives. We hypothesize that:

H1: Online media coverage of a celebrity will positively impact consumer's familiarity, buzz perception, and/or online search of the celebrity.

H2: iWOM of a celebrity will positively impact consumer's familiarity, buzz perception, and/or online search of the celebrity.

Due to the fact that the influences from various media outlets on public agenda may differ, we also ask:

RQ1: To what extent will online media coverage and iWOM of a celebrity impact consumer's familiarity, buzz perception, and/or online search of the celebrity?

Mass media tend to adopt each other's stories, a.k.a. intermedia agenda setting. Dearing and Rogers (1996) explained the phenomenon as that "news people operate in a special kind of environment, without much contact with their audience members. So they take their clues about an issue's priority from other media" (p.33). Numerous studies have found correlations between traditional mass media. For instance, it is found that New York Times plays an important role in shaping the issue priority of three leading U.S. TV news networks (Golan, 2006). Recent studies in new media have also showed that there is a link between newspaper coverage and Internet bulletin boards in South Korea's 2000 general election (Lee et la., 2005), between online media coverage and electronic bulletin board discussion during the 1996 fall political campaign in the U.S. (Roberts et al., 2002), and between political candidates' blogs and TV network broadcasts in U.S. 2004 presidential election (Sweetser et al., 2008). Thus, we hypothesize that:

H3: There will be a significant correlation between online media coverage and iWOM of the same celebrity.

The process of agenda setting follows a time sequence. Thus, the key factors involved in the process must form some chronologically dynamic relationships. We attempt to find out the relationships in our study.

RQ2: What do the chronologically dynamic relationships between online media coverage, iWOM, buzz perception, and online search look like?

Methods

We obtained our data of online media coverage and online search from Baidu. Baidu is the biggest search engine company in China and accounts for more than 70% share of search engine market in China. It provided us the amount of online media coverage of each celebrity and the quantity of online search of each celebrity on a monthly basis. The data of iWOM was offered by CIC, a China's leading social business intelligence provider. The data includes the amount of content generated from online forums, social network sites, etc. for each celebrity, also on a monthly basis.

The data for respondent's familiarity and buzz perception of a celebrity was selected from Millward Brown's CelebrityZ, which is the largest celebrity market influence and personality database complied in China. CelebrityZ, which is based on the Cebra model, tracks the dynamics of celebrity familiarity, affinity, buzz perception, and other celebrity-related factors. "Familiarity" asked respondents "How well do you know these celebrities?" and was measured on an 11-point Likert scale from "Never heard of" to "Very well". "Buzz perception" asked respondents "How much have these celebrities been talked about by the media within the past 30 days" and was measured on a 9-point Likert scale from "Not at all" to "A lot". The CelebrityZ conducts for each respondent a 10 minutes survey of 10 celebrities tied on Lightspeed Screener 7/24 nationwide. Currently the database covers over 200 celebrities, has surveyed over 80,000 consumers and is increasing its total sample size by an additional 5,000 per month. The data for the current study was selected between

October 2011 and March 2012 for a total of 60 celebrities.

Results

We first conducted Pearson Correlations between online media coverage, iWOM, familiarity, buzz perception, and online search. It was found that all of the variables were positively correlated (see Table 1).

H1 and H2 predicted that online media coverage or iWOM of a celebrity would positively influence public's familiarity, buzz perception, and/or online search of the celebrity. In order to test these hypotheses, we performed three multiple regression analyses. In each analysis, we entered both media coverage and iWOM as independent variables, and entered familiarity, buzz perception, or online search as a dependent variable. Results revealed a significant relationship between the independent variables and each dependent variable, i.e., familiarity, $F(2, 429) = 21.633$, $p < .001$, buzz perception, $F(2,429) = 62.887$, $p < .001$, online search, $F(2,429) = 133.154$, $p < .001$ (see Table 2). Thus, both H1 and H2 are supported.

RQ1 asked to what extent online media coverage and iWOM of a celebrity would impact consumer's familiarity, buzz perception, and/or online search of the celebrity. We found that online media coverage was more influential than iWOM on familiarity ($\beta = .265$ for media, $\beta = .088$ for iWOM) and buzz ($\beta = .437$ for media, $\beta = .100$ for iWOM), while they had similar effects on search ($\beta = .304$ for media, $\beta = .457$ for iWOM, see Table 2).

H3 predicted that there was a significant relationship between online media coverage and iWOM. This hypothesis is supported as online media coverage was positively correlated with iWOM, $r = .293$, $p < .001$ (see Table 1).

RQ2 asked what the chronologically dynamic relationships between online media coverage, iWOM, buzz perception, and online search looked like. We performed several step-wise multiple regression analyses by regressing one of the variables on the other variables whose data was collected one month earlier. The results showed that online search and online media coverage predicted post buzz perception (i.e. buzz perception generated in the following month), $F(1,358) = 93.433$, $p < .001$, and iWOM and buzz perception predicted post online search, $F(1, 358) =$

92.566, $p < .001$ (see Table 3 and Figure 1).

Discussion

Using agenda setting theory as a framework, we examined the dynamic relationships between online media coverage, iWOM, buzz perception, and online search of celebrities. The study is important as celebrities are extremely valuable to brands and celebrity sponsorship has never gone out of vogue. Knowing what influence public reactions to celebrities enables companies to adjust celebrity-related branding strategies anytime, anywhere. We found in our study that both online media coverage and iWOM greatly impacted consumer's familiarity, buzz perception, and online search of a celebrity. Meanwhile, the impact from media coverage was relatively higher than that from iWOM on familiarity and buzz perception. It may be due to the fact that consumers are more likely to seek credible information from official media rather than from user generated content. Additionally, we found that online media coverage and iWOM were moderately correlated, which revealed an intermedia agenda setting. What we have found most interesting is that online media coverage and online search of a celebrity positively affected consumer's buzz perception of the celebrity in the following month. Meanwhile, higher buzz perception and more iWOM of a celebrity also led to more online search of the celebrity in the next month. These factors formed the incredible chronologically dynamic relationships.

One limitation of the current study is that the data was collected monthly (vs. daily). Vliegenthart and Walgrave (2008) pointed out that analysis with long lags (e.g. monthly) might identify media convergence rather than agenda setting effects. We plan to collect the data on a daily basis for our future studies. Additionally, our data was limited within a six months period, which made it impossible for us to conduct complicated time series analysis. However, the database is mounting. We also attempt to analyze the data in a more precise way, such as identifying the content valence generated by iWOM, in our future studies.

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Table 1

Means, Standard Deviations, and Correlations between Online Media Coverage, iWOM, Familiarity, Buzz Perception, and Online Search

	Mean	SD	Media	iWOM	Familiarity	Buzz	Search
Media	1086.52	1432.26		.293***	.291***	.466***	.438***
iWOM	252783.11	406618.03			.166**	.228***	.546***
Familiarity	0.59	0.10				.762***	.426***
Buzz	0.58	0.08					.479**
Search	137184.06	143676.79					

** $p < .01$

*** $p < .001$

Table 2

Multiple Regression between Online Media Coverage, iWOM, and Familiarity, Buzz Perception, and Online Search

	Familiarity			Buzz			Search		
	β	t	p	β	t	p	β	t	p
Media	.265	5.506	.000	.437	9.848	.000	.304	7.665	.000
iWOM	.088	1.829	.000	.100	2.249	.025	.457	11.533	.000

Table 3

Step-Wise Multiple Regression between Online Search, Online Media Coverage, and Post Buzz Perception, and between iWOM, Buzz Perception, and Post Online Search

	Post Buzz				Post Search		
	β	t	p		β	t	p
Search	.361	7.655	.000	iWOM	.373	8.432	.000
Media	.335	7.100	.000	Buzz	.369	8.328	.000

Figure 1

Chronologically Dynamic Relationships between Online Media Coverage, iWOM, Buzz Perception, and Online Search