

MOVIE WORD-OF-MOUTH GENERATION AT PRE-CONSUMPTION VERSUS POST-CONSUMPTION STAGE: THE SELF-ENHANCEMENT ACCOUNT

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Movie Word-of-Mouth (hereafter WOM) has experienced explosive growth on the Internet. Even before the movie release, the various publics discuss the cast and plot, set gossip, and test screening results of a particular movie and provides their suggestions as to whether it is worth going to watch it in a theater. Due to its significance in determining movie-goers' watching decisions and thus the box office performance, it is important to understand what factors influence movie WOM generation. This research aims to explore whether consumers generate different WOM at different stages (i.e., the pre-consumption vs. post-consumption stage). Starting from a field investigation (Study 1), this research shows that consumers tend to generate more positive WOM at the pre-consumption stage but more negative WOM at the post-consumption stage. In a more controlled experiment (Study 2), it further reveals that consumers' self-enhancement motivation drives the different WOM generation via two different routes. To self-enhance, consumers generate more positive WOM by mentioning more interesting aspects of movies before their actual watching (i.e., to be interesting) but generate more negative WOM by criticizing movies after their watching (i.e., to signal expertise). Additionally, the auxiliary analyses disclose that the post-consumption WOM can, but the pre-consumption WOM not, effectively predict the box office performance. The findings provide theoretical contributions to the current literature and insightful management implications to the movie industry.

Keywords: Movie WOM, Box office performance, Self-enhancement, Pre-consumption, Post-consumption

INTRODUCTION

Online WOM, which is generated to share opinions and exchange information, currently proliferates on various social media platforms and exerts a profound impact on consumer purchase

decisions (Godes and Mayzlin, 2004; Chevalier and Mayzlin, 2006; and Zhu and Zhang, 2010). WOM has become an important element of marketing mix (Chen and Xie, 2008). WOM marketing has been considered as an effective

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tool to gain high box office performance. Meanwhile, the rapid proliferation of social media platforms makes WOM easily accessible to consumers. In the movie industry, many researchers have demonstrated that movie WOM has considerable impacts on decisions on subsequent investment, production, promotion, and consequently the box office performance (e.g., Desai and Basuroy, 2005; Reinstein and Snyder, 2005; Liu, 2006; and Chakravarty *et al.*, 2010). Also, they have generally agreed that negative WOM hurts business more than positive WOM can promote it (Basuroy *et al.*, 2003; Reinstein and Snyder, 2005; Chevalier and Mayzlin, 2006; and Cui *et al.*, 2012). Thus, the existing WOM literature has been increasingly interested in understanding what and how important factors determine the WOM generation. The answers to these issues can provide meaningful theoretical and managerial implications for the movie industry.

According to the different phases of product life cycle, this research classifies WOM into the pre-consumption WOM and post-consumption WOM and explores whether these two types of WOM are differently generated. This perspective complements previous literature in that the majority ignores such difference in WOM generation across different consumption stages. It also differs from the handful research which distinguishes between immediate and ongoing word of mouth (Berger and Schwartz, 2011), or between WOM generation and WOM transmission (Hennig-Thurau *et al.*, 2004; and Berger, 2014). Instead, this paper discusses the different WOM generation processes at the pre-consumption stage and post-consumption stage. Our findings can provide new insights into theoretical development in WOM literature and managerial implications for movie industry.

Previous research on consumers' different evaluations of the products at pre-consumption and post-consumption stage mainly concentrates on the cognitive dissonance theory (Festinger, 1962) and self-perception theory (Bem, 1967). Both theories posit that consumers develop more positive post-consumption attitudes than their pre-consumption evaluations in order to justify their purchasing decisions are correct and avoid cognitive dissonance. Nowadays, however, the publicity of WOM makes its generation depend not only on the consumer actual experiences but also their motivations for generating specific WOM. Thus, this study may expand the former research in this area. Unlike other consumption behaviors, watching movies is essentially experiential. Movie studios always organize various promotions before the release of a movie. These promotions can create consumer expectations, which will lead to ample pre-release WOM.

This study aims to understand whether and why movie WOM generation is different at the pre-consumption and post-consumption stages. It proposes self-enhancement motivation for the diverging WOM generation via two different routes on the one hand, consumers tend to generate more positive movie WOM at the pre-consumption stage because they self-enhance by more mentioning the interesting aspects of a movie. On the other hand, consumers are more likely to generate more negative WOM at the post-consumption stage. To achieve the self-enhancement motivation, consumer strategically criticize movies to demonstrate their expertise.

The remaining parts of this paper are organized as follows. Based on the literature review on WOM generation and WOM effect on movie performance, we put forward the key

hypotheses. To empirically investigate our propositions, we develop a field study (Study 1) with the publicly available movie data collected from two popular movie websites in China. Furthermore, Study 2 replicates the main effects of Study 1 in a more controlled experiment. It further uncovers the self-enhancement account to explain the different WOM generation at the pre-consumption and post-consumption stages. Finally, we summarize the main findings and put forward meaningful suggestions for the movie industry.

LITERATURE REVIEW

The Effect of WOM on Movie Industry

Since the advent of the Internet, online WOM communication has become a major source of information for consumers purchase. Online product reviews have been considered as a good proxy for overall WOM and can influence consumers' decisions (Zhu and Zhang, 2010). Therefore, companies are taking advantage of online consumer reviews as a new marketing tool (Dellarocas, 2003). The movie WOM, which is a kind of third-party information and independent of movie studios, differs from movie advertising lending them greater objectivity and credibility (Chen and Xie, 2005). Movie WOM has also become an influence on movie audiences, especially on young viewers' buying willingness and purchase decisions. The research on movie WOM mainly focuses on the influence of WOM on movie box office or how it predicts the box office performance (Basuroy *et al.*, 2003; Dellarocas, 2006; Eliashberg *et al.*, 2006; and Duan *et al.*, 2008).

Many WOM studies are devoted to exploring the important impact of product reviews and ratings on product sales (Godes and Mayzlin,

2004; Chevalier and Mayzlin, 2006; and Zhu and Zhang, 2010), stock performance (Luo, 2007 and 2009; Tirunillai and Tellis, 2011; and Chen *et al.*, 2012), marketing strategy (Chen and Xie, 2005), and consumer satisfaction (Moon *et al.*, 2010; and Sridhar and Srinivasan, 2012). Recently, the main stream research in WOM literature has shifted from the downstream research (the impact of WOM) to the upstream research (the causes of WOM generation), and particularly focuses on exploring the motivations that driver WOM generation. For instance, Hennig-Thurau *et al.* (2004) proposed eleven different consumer motivations for WOM generation. Also, Berger (2014) summarizes the five functions of consumer WOM communication, including impression management, emotional management, information acquisition, social bonding, and persuasion, and points out the various motivations that shape WOM communication for each function. In sum, current literature has paid insufficient attention to the upstream research (Berger and Schwartz, 2011) and calls more research efforts in understanding what and how different motivations drive WOM communication (Berger, 2014).

The Generation of Positive WOM and Negative WOM

WOM Researchers have widely evidenced that, due to the negativity bias (Fiske, 1980; Skowronski and Carlston, 1989; and Klein, 1996), negative WOM usually hurts business more than positive WOM can improve (Basuroy *et al.*, 2003; Reinstein and Snyder, 2005; Chevalier and Mayzlin, 2006; and Cui *et al.*, 2012). Thus, it is important to understand what and how important factors impact consumers to generate positive or negative WOM. Extant research has made various efforts to investigate whether consumers

are more likely to spread positive or negative WOM. On the one hand, some anecdotal evidence (Heskett *et al.*, 1997; and Hanna and Wozniak, 2001) and other empirical findings (Kamins *et al.*, 1997; and Donovan *et al.*, 1999) indicate that consumers are more likely to participate in negative, but not positive, WOM communication. On the other hand, several other studies have shown that consumers are more likely to generate positive rather than negative WOM (Holmes and Lett, 1977; Godes and Mayzlin, 2004; Keller, 2007; and East *et al.*, 2007). To summarize, there is mixed or limited evidence about whether and why positive WOM generation or negative WOM generation is more prevalent in WOM communication.

Regardless of the conditions under which consumers would tend to generate positive or negative WOM and what their actual experience is, previous studies have examined many significant psychological motivations that can drive the generation of WOM alone. However, they do not conclude when and which type of WOM will be more likely to be generated. For example, some studies have found that positive WOM is usually driven by the following motivations: the desire to help the company (Sundaram *et al.*, 1998; and Hennig-Thurau *et al.*, 2004), altruism (Sundaram *et al.*, 1998), showing more insightful desires (Wojnicki and Godes, 2011), and product participation (Dichter, 1966). In contrast, other studies have found that negative WOM is due to the need for retaliation for bad company experience (Sundaram *et al.*, 1998), the desire to solve cognitive dissonance (Engel *et al.*, 1993), and the desire to seek advice on how to deal with negative experiences (Sundaram *et al.*, 1998; and Hennig-Thurau *et al.*, 2004). Serving as a good example, De Angelis

et al. (2012) attempt to coordinate these inconsistent findings by investigating that self-enhancement motivation drives people to generate more positive WOM but convey more negative WOM.

Berger (2014) points out that WOM is driven by a goal and serves five key functions (i.e., impression management, emotion regulation, information acquisition, social connection, and persuasion). Through WOM communication, people can share useful information to create reciprocity and achieve transformation from egoism to altruism. Generally, people are still self-interested and sharing things is mainly for self-service. However, due to the social media platforms, WOM communication becomes conspicuous and increases individuals' attention to others, which provides them opportunities to project a good image. Meanwhile, the popularity of mobile devices has brought more WOM communication and enhanced the connections among people, making them pay more attention to themselves (Lurie *et al.*, 2013). Thus, it is highly relevant to incorporate self-enhancement account in explaining WOM communication, especially when consumers generate divergent (i.e., positive or negative) WOM.

Self-Enhancement Motivation in WOM Generation

When talking about something, people differ in language expression. For instance, when people are going to comment on it, there are different ideas behind the choice of personal pronouns. The use of "I" to comment can increase satisfaction and purchase intentions (Packard *et al.*, 2014). In WOM research, self-enhancement motivation has received much attention (Wojnicki and Godes, 2011; and De Angelis *et al.*, 2012). It

is the most common demand of consumers (Fiske, 2001), which stems from individuals' basic need for good self-esteem (Baumeister, 1998). It reveals individuals' desires of supporting or improving self-concept, achieving positive self-image, and maintaining self-esteem (Smith, 1968; Shrauger, 1975; Brown *et al.*, 1988; and Sedikides, 1993). Self-enhancement is considered as a very important motivation in WOM communication. For example, De Angelis *et al.* (2012) finds that due to the same motivation of self-enhancement, consumers demonstrate different WOM communication behaviors. Specifically, they generate positive WOM to bolster a positive self-concept but spread negative WOM to signal their expertise.

One of the reasons why consumers share WOM is to shape others' impressions of them, which means WOM generation can facilitate impression management (Berger, 2014). The maintenance of self-presentation can be protective (e.g., avoiding social disapproval) (Richins, 1983; and Sedikides, 1993) or acquired (e.g., seeking social recognition) (Brown *et al.*, 1988). Therefore, consumers can achieve self-enhancement in different ways. For example, people often achieve self-enhancement by discussing interesting things. In this way, people make themselves interesting in the eyes of others, and grasp attention from others (Berger and Schwartz, 2011). Schlosser (2005) argues that WOM posters tend to hold more extreme attitudes, ignoring inconsistencies and forming their own unilateral arguments. Besides, the reviewers who write negative WOM may be considered as smarter, more competent and professional than those leaving positive WOM. As a result, people tend to generate negative evaluations, which can signal their expertise and

achieve self-enhancement (Berger, 2014). This research contributes to the pertinent literature by understanding self-enhancement motivation in WOM generation across different consumption stages.

HYPOTHESIS DEVELOPMENT

This research focuses on the generation and impact of movie WOM. Products such as books or movies are popular cultural products. Even if they are not read and watched, they can produce various WOM. Therefore, movie producers and distributors are very concerned with movie reviews. For instance, even when the actual shooting of a movie is over, they rely on movie reviews to make decisions about promotions or sequential distribution after the film's premier (Eliashberg *et al.*, 2006; and Chakravarty *et al.*, 2010). It is precisely because WOM exerts important impact both before and after the movie is released.

Practitioners of WOM marketing usually propose that a product, which is expected to be discussed among consumers, needs to be interesting. For example, Sernovitz (2006, p. 6) shows that the most important rule for WOM marketing is to be "interesting". Nobody talks about boring companies, products, or advertisements. Webster's Dictionary defines interesting things as things that grab attention. Products become interesting because they are new, exciting, or to some extent violate people's expectations. Based on these viewpoints, Hughes (2005) believes that unusual, sensational, or notable events can generate conversations. Besides, Rosen (2009) points out that people like to talk about different and surprising things (Nulman, 2009; and Knox, 2010). Most people may conclude that Hollywood movies are more

interesting than cereals, whereas Apple phones are more interesting than detergents. Therefore, it can be expected that movies and iPhones should be more talked about, while those boring products, for example, cereals, may receive less discussions.

To a certain extent, what mentioned above are based on the self-concept of consumers. They tend to talk about things that provide social currency (Hughes, 2005). When it comes to the sharing of WOM, consumers convey not only information but also themselves (Wojnicki and Godes, 2008). Most people want others to think highly of them, and talking about interesting, but not boring things, helps them to achieve this goal. In other words, people may talk about interesting products (rather than those products that are relatively less interesting) because it makes them look interesting. Compared to ordinary products (such as toothpaste), interesting products (such as night-vision goggles) tend to have more immediate (Berger and Schwartz, 2011) and online (Berger and Iyengar, 2013) WOM. This is quite similar to our daily life that the more interesting and surprising New York Times articles are more likely to be subscribed (Berger and Milkman, 2012).

People who think they are very knowledgeable about the product are more likely to share product information with others. This principle is crucial for understanding the motivation of WOM communication (Katz and Lazarsfeld, 1955; Engel *et al.*, 1969; Jacoby and Hoyer, 1981; and Keller and Berry, 2003) and meets the Grice criterion of the maxim of quantity and quality—those who believe they have more useful information usually make an appropriately weighted “conversation contribution” by more sharing their knowledge (Grice, 1991). Some WOM research attributes

the positive relationship between individuals’ self-perception of knowledgeable and information sharing to their desire to maintain self-concept. Consumers who consider themselves to be very knowledgeable (such as market experts, opinion leaders, etc.), want to maintain the good self-concept and tend to share their opinions to maintain it (Dichter, 1966; and Feick and Price, 1987). The products like cars, clothes, and other publicly visible goods are often used as a sign of identity (Berger and Heath, 2007), while knowledge is usually private and difficult to display. Therefore, experts and individuals who have (or want to have) expertise in a given field may be particularly interested in talking about this knowledge and presenting it to others. Schlosser (2005) proposes that consumers implement self-image management by generating negative WOM. This is because consumers who generate negative WOM are considered to be smarter, more capable, and more professional than those who generate positive WOM (Amabile, 1983). Although posting dissenting views may be inconsistent with others’ opinions, such differences may make the poster appear more knowledgeable or have higher standards. Thus, expressing a less positive attitude may increase the possibility of being admired and respected.

Based on the previous arguments, this study proposes that consumers are more likely to generate positive WOM before the actual consumption, but more likely to generate negative WOM after the consumption. We posit that the difference in WOM generation before and after the consumption is due to consumers’ self-enhancement motivation. To satisfy this motivation, consumers adopt two different routes depending on the different stages: to be interesting at the pre-consumption stage and to

signal expertise at the post-consumption stage. As Wojnicki and Godes (2008) illustrate, when sharing something with others (i.e., generate WOM), consumers convey not only information but also themselves. Most people want others to think highly of them. Talking about interesting things can attract others attention and make others to attach importance to them. The newly released movie is an interesting product. Even before the real watching of it, consumers discuss it and mentioning more interesting aspects of the movie, engendering the WOM content to be more positive.

On the other hand, consumers who think they are knowledgeable (such as market experts, opinion leaders, etc.) want to maintain their good self-concepts and tend to share their opinions to maintain their own images. However, they tend to write negative WOM for image management. According to Amabile (1983), this is because negative evaluators are considered smarter, more capable, and more professional than positive evaluators. Thus, after the consumption, consumers are motivated by the desire to signal their expertise and thus generate more negative public opinions.

Thus, we propose the following hypotheses of this research based on the aforementioned discussions.

Hypothesis 1: Consumers generate more positive WOM at the pre-consumption stage but more negative WOM at the post-consumption stage.

Hypothesis 2: The main effect in Hypothesis 1 is mediated by consumers' self-enhancement motivation but via two different routes. In order to achieve the self-enhancement, consumers generate more positive WOM for being an

interesting person at the pre-consumption stage, whereas they generate more negative review to signal their expertise at the post-consumption stage.

THE OVERVIEW OF TWO STUDIES

In order to verify the proposed hypotheses, this paper adopts two different but complementary studies. Relying on the field data collected from the movie review websites, Study 1 demonstrates the realistic phenomenon that consumers show diverging WOM generation behavior across different consumption stages (i.e., generating positive WOM in the pre-consumption period and negative WOM in the post-consumption period). Besides a direct examination of Hypothesis 1, Study 1 also reveals the different predictive power of pre-consumption WOM and post-consumption WOM for movie box office performance. While Study 1 shows the field evidence of the proposed effects, Study 2 replicates the effects in Study 1 in a more controlled experiment. Furthermore, it reveals that the self-enhancement motivation works as the underlying mechanism for the observed diverging WOM generation. In sum, it delineates the two different routes consumers adopt to satisfy the self-enhancement motivation by generating the different contents at different consumption stages.

STUDY 1: FIELD INVESTIGATION OF PRE-RELEASE AND POST-RELEASE MOVIE WOM

Data Collection Procedure

Study 1 collected the movie data from the two most popular movie websites in China: www.mtime.com and <https://movie.douban.com>.

We selected 50 movies released in the latest two years from mtime.com, and gathered such specific information as the title, release date, type, or country of origin. Meanwhile, we recorded the box office performance 4 weeks after the movie release. Furthermore, we collected ten pre-release reviews and another ten post-release reviews for each movie from movie.douban.com. Since the numerical ratings are not available for pre-release reviews, we conducted the sentiment analysis by the Boson Chinese Semantic text-mining platform (bosonnlp.com) to obtain the positivity/negativity for both pre-release and post-release reviews.

Statistical Summary for the Sample in Study 1

The sample contains 50 movies released

between January 2015 and January 2017 in the Chinese market. The average box office performance is 35.5 million RMB, with the minimum 0.02 million RMB and the maximum 285 million RMB. In terms of the country of origin, 46% are from the United States, 32% are from Mainland China, 16% are from Hong Kong, and the others are from India, Japan and France. Among them, 36% are comedies, 16% are animations, 24% are actions, and 24% are scientific fictions. Based on the text-mining results, the average valence for the pre-release movie reviews is 0.64 (minimum: 0.003; maximum: 1), and that for the post-release movie reviews is 0.58 (minimum: 0.001; maximum: 1). The average length (i.e., word count) for the pre-release and post-release reviews are 12.44 and

Table 1: Statistical Summary for the Sample in Study 1			
Box office performance within 4 weeks after release (unite: million RMB)			
Average: 35.5		Minimum: 0.02	Maximum: 285
Valence of pre-release movie reviews			
Average: 0.64		Minimum: 0.002	Maximum: 1
Length of pre-release movie reviews			
Average: 12.44		Minimum: 1	Maximum: 15
Valence of post-release movie reviews			
Average: 0.58		Minimum: 0.002	Maximum: 1
Length of post-release movie reviews			
Average: 12.88		Minimum: 1	Maximum: 24
Country of Origin	Percentage	Type	Percentage
United States	46%	Comedy	36%
China	32%	Animation	16%
Hong Kong	16%	Action	24%
India	2%	Scientific fiction	24%
Japan	2%		
France	2%		

12.88 respectively. The detailed summary of the sample is shown in Table 1.

Difference in Pre-Release WOM and Post-Release WOM

As the starting point, we show that, at different stages (pre or post consumption), consumers generate systematically different WOM. Specifically, we propose that the pre-release WOM is more positive than the post-release WOM (Hypothesis 1). We investigate this proposition in the econometric model shown below:

$$\begin{aligned}
 \text{WOM Valence} = & \alpha_0 + \beta_1 \text{Stage} + \beta_2 \text{Overall popularity} + \sum_j \beta_j \text{Country of origin} + \\
 & \sum_k \beta_k \text{Type} + \beta_3 \text{Length} + \epsilon
 \end{aligned}
 \dots(1)$$

WOM valence is measured by the sentiment score based on the text mining for each review. Stage, which is the focal variable here, is a dummy variable, with 1 for post-consumption and 0 for pre-consumption. Model (1) controls for the overall popularity of the movie by the average rating collected from movie.douban.com, country of origin (5 dummies for 6 origins), move type (3 dummies for 4 types), and review length. The estimation results are displayed in Table 2.

According to the estimation results, the average valence of pre-release movie reviews is significantly higher than that of post-release reviews (-0.063, p-value = 0.002). On average, the valence of pre-consumption WOM is 0.063 higher than that of post-consumption WOM. Thus, Hypothesis 1 is supported.

The Predictive Power of Pre-Release WOM and Post-Release WOM

An interesting question lies in the predictive power of pre-release and post-release WOM in predicting the movie box office performance. The

DV \ IV	WOM Valence		
	Coefficient	Standard Error	P-value
Stage	-0.063	0.02	0.002
Overall popularity	0.004	0.012	0.732
Hong Kong	0	0.038	0.991
India	0.065	0.085	0.448
Japan	-0.074	0.09	0.409
France	0.022	0.089	0.802
United States	0.03	0.035	0.39
Animation	0.043	0.046	0.341
Action	0.04	0.037	0.274
Scientific fiction	0.042	0.036	0.234
Review length	-0.01	0.008	0.226
Constant	0.648	0.085	0
Log likelihood=-273.203		Wald chi2(11)=21.26	Prob>chi2=0.031

answer to this question can provide important management implications, because, in most situations, movie studios invest substantial budget in marketing before releasing a movie to boost public attention. Consequently, it is common to observe pre-release movie WOM, which turns out to be more positive than post-release WOM. Does the pre-release (vs. post-release) WOM more accurately predict box office performance? We run the Model (2) to answer this question.

$$\begin{aligned}
 \text{Box office performance} = & \alpha_0 + \theta_1 \text{Valence1} + \theta_2 \text{Valence2} + \sum_j \theta_j \text{Origin}_j + \\
 & \sum_k \theta_k \text{Type}_k + \theta_3 \text{Revlengh1} + \theta_4 \text{Revlengh2} + \theta_5 \text{Overall popularity} + \epsilon
 \end{aligned}
 \dots(2)$$

Valence 1 and Valence 2 denote the valence of pre-release WOM and that of post-release WOM respectively. The control variables include Origin (country of origin), Type (movie genres),

Table 3: The Predictive Power of Pre-Release WOM and Post-Release WOM				
DV IV	3 Weeks Box Office Performance		4 Weeks Box Office Performance	
	Coefficient (SD)	P-value	Coefficient (SD)	P-value
Valence of pre-release WOM	202.23	0.897	222.22	0.76
	(1561.57)		(729.22)	
Valence of post-release WOM	2350.4	0.118	1282	0.068
	(1501.62)		(701.22)	
Pre-release review length	243.52	0.64	279.31	0.251
	(519.99)		(242.82)	
Post-release review length	492.53	0.131	233.27	0.126
	(325.97)		(152.22)	
Overall popularity	4141.04	0	1946.82	0
	(521.05)		(243.32)	
Hong Kong	-564.35	0.74	279.8	0.725
	(1699.46)		(793.61)	
India	-20052.76	0	-7332.48	0
	(3645.34)		(1702.29)	
Japan	-17504.86	0	-7427.26	0
	(3880.73)		(1812.21)	
France	-18438.81	0	-7361.71	0
	(3856.48)		(1800.89)	
United States	-9855.72	0	-2910.55	0
	(1537.58)		(718.01)	
Animation	1835.66	0.363	1589.27	0.092
	(2015.65)		(941.26)	
Action	-2159.13	0.181	-506.56	0.502
	(1613.38)		(753.41)	
Scientific fiction	-1506.98	0.328	-975.64	0.175
	(1538.84)		(718.60)	
Constant	-13973.49	0	-9096.47	0
	(3673.55)		(1715.47)	

revlength 1 (average review length for pre-release WOM), revlength 2 (average review length for post-release WOM), and overall popularity (the average rating on <http://movie.douban.com>). The

estimation results for the box office performance for 3 and 4 weeks (unit: RMB) after movie release are demonstrated in Table 3 as follows.

As Table 3 displays, the pre-release movie WOM does not exert significant impact on 3 or 4 weeks box office performance (202.23, p -value = 0.897; 222.22, p -value = 0.760). However, the post-release WOM shows a significant positive effect on the 4 weeks (but not for the 3 weeks) box office performance (1282.00, p -value = 0.068). These results imply that, although many movie manufacturers implement lots of marketing activities to build up the momentum before release, only the post-release WOM helps enhance box office performance. This indicates that movie manufacturer should allocate more budget in movie manufacturing for a better quality.

STUDY 2: EXPERIMENTAL INVESTIGATION FOR THE SELF-ENHANCEMENT MECHANISM

While Study 1 provides initial evidence that consumers generate different WOM at different consumption stages and that the pre-consumption WOM is more positive than post-consumption WOM, such a field investigation suffers from the inability in establishing a causal relationship or uncovering the underlying mechanism. Thus, Study 2 serves two purposes. First, it replicates the results of Study 1 in a more controlled experimental design to enhance the internal validity. More importantly, it aims to reveal the self-enhancement motivation as the underlying mechanism. That is, motivated by self-enhancement, consumers generate more positive WOM before consumption and more negative WOM after consumption.

Experimental Design

We manipulate the focal variable (i.e., pre-consumption WOM generation and vs. post-consumption WOM generation) by assigning subjects into one of the two scenarios. A screening question was set after the introduction of the survey to each subject, asking whether he or she had watched any movie that was recently released. If had, the subject would be instructed to write a review for the movie watching experience. If not, the subject instead would be asked to write a review for a recent movie coming first to his or mind. After writing a review, the questions followed to gauge the two routes that served self-enhancement motivation: to be interesting and to be expertized. Subjects were asked on a 7-point Likert scale: "to what extent do you believe you are an interesting person?" and "to what extent do you believe you are an expert in commenting a movie?". Demographic variables such as age, gender, education or movie-going frequency were included before the end of the survey. We launched the survey on a popular online platform (www.wjx.cn) to recruit the subjects. We received a total of 268 responses, among which 250 were complete and valid. The average valence of all reviews in the sample is 4.296. The average valence of pre-consumption reviews is 4.426 and that of post-consumption reviews is 4.218. The "to be interesting" motivation is 5.202 for the pre-consumption condition and 5.109 for the post-consumption condition. The "to be expertized" motivation is 4.245 for the pre-consumption condition and 4.397 for the post-consumption condition.

ANCOVA Analysis

The ANCOVA analysis is implemented to show the effect of pre-consumption vs. post-

Table 4: ANCOVA Results for Study 2

DV: Review Valence	Partial SS	df	MS	F	Prob>F
Pre-consumption vs. Post-consumption	1.885	1	1.885	3.66	0.0569
Movie-going frequency	1.689	4	0.422	0.82	0.5136
Gender	1.252	1	1.252	2.43	0.1203
Age	3.13	4	0.783	1.52	0.1971

consumption stage on review valence, controlling the covariates including movie-going frequency, gender and age. The results in Table 4 replicate the field evidence that WOM contents generated at pre-consumption vs. post-consumption stage are significantly different ($MS=1.885$, $p\text{-value}=0.057$). The planned contrast shows that consumers rate the movie higher before (vs. after) watching it ($M_{\text{pre-consumption}} = 4.212$, $M_{\text{post consumption}} = 4.355$, $p\text{-value} = 0.092$).

The Mediation Effect of Self-Enhancement

This research posits that the difference in WOM content generation at the pre-consumption and post-consumption stage is due to consumers' different routes (to be interesting and to be expertized) to satisfy self-enhancement motivation. We generate an aggregate score by "to be interesting" minus "to be expertized" to measure consumers' relative tendency, with a larger score indicating being more motivated by "to be interesting" and a smaller score representing being more motivated by "to signal expertise". We test the mediating effect of self-enhancement using the aggregate score in the three steps proposed by Baron and Kenny (1986). First, the review valence is regressed on the different consumption stages (dummy variable with 1 for pre-consumption condition and 0 otherwise). Second, the aggregate item for the self-enhancement motivation is regressed on the different consumption stages. Third, the review

Table 5: The Mediation of Self-Enhancement in Study 2

DV \ IV	Review Valence		Self-Enhancement		Review Valence	
	Coefficient (SD)	P-value	Coefficient (SD)	P-value	Coefficient (SD)	P-value
Pre-consumption vs. Post-consumption	0.168	0.071	0.3	0.097	0.15	0.108
	(0.093)		-0.18		-0.093	
Aggregated Self-enhancement	—	—	—	—	0.062	0.059
			(0.033)			
Movie-going frequency	0.04	0.28	0.001	0.989	0.04	0.278
	-0.037		-0.072		(0.037)	
Gender	-0.157	0.093	0.155	0.392	-0.167	0.074
	-0.093		-0.181		(0.093)	
Age	-0.093	0.089	-0.267	0.012	-0.076	0.164
	-0.054		-0.105		(0.055)	
Constant	4.385	0	0.953	0.003	4.327	0
	-0.162		-0.314		(0.164)	

valence is regressed on both the different consumption stages and the aggregate item for self-enhancement. In all steps, the consumers' movie-going frequency, gender and age are included as the control variables. Table 5 summarizes the mediation analyses results.

As shown in Table 5, WOM generation occurring at the pre-consumption or post-consumption stage leads to different review valence (0.168, p -value = 0.071). Furthermore, it also significantly shapes consumers' relative tendency to self-enhance by "to be interesting" or "to be expertized" (0.300, p -value = 0.097). After including both the different consumption stage dummy and the self-enhancement in the third step, the direct effect of consumption stage dummy on review valence becomes statistically insignificant (0.150, p -value = 0.108). The mediation effect of self-enhancement is further supported by the Sobel-test (Sobel test = 3.625, p -value < 0.05). Thus, Hypothesis 2 is supported that consumers generate more positive WOM during the pre-consumption stage and more negative WOM during the post-consumption stage due to self-enhancement motivation. Consumers self-enhance by being an interesting person when generating more positive pre-consumption WOM and by signalling expertise when generating more negative post-consumption WOM.

CONCLUSIONS AND DISCUSSION

In the competitive market, movie WOM plays a critical role in influencing the movie box office performance. In the Internet era, consumers get more and easier access to movie information. Many popular websites, such as Douban Movie or mtime.com, not only provide ample movie

relevant information, but also provide a platform for WOM generation. Based on the literature review in WOM generation, this paper proposes and empirically demonstrate in a field study and an experimental design that consumers generate more positive WOM during the pre-consumption stage and more negative WOM during the post-consumption stage due to self-enhancement motivation. The main conclusions are summarized as follows.

- Consumers often produce more positive movie WOM before they watch the movies; but after watching the movie, they tend to generate more negative movie WOM.

Both the real WOM data and the experimental data show converging findings that WOM generation at different consumption stages leads to different WOM content (i.e., WOM valence in this research).

- We also show a positive correlation between movie WOM and box office performance and such an effect is valid only for post-consumption WOM. It implies that, although many movie manufacturers implement lots of marketing activities to build up the momentum, only the post-release WOM helps enhance box office performance. This indicates that movie manufacturer should allocate more budget in movie manufacturing for a better quality.
- Consumers generate different WOM content at different consumption stages due to self-enhancement motivation. However, they achieve self-enhancement through two different routes on the one hand, before watching the film, consumers tend to generate more positive movie WOM because they believe talking about the interesting aspects of the movie makes them look better. On the

other hand, after watching the movie, consumers are more likely to generate negative movie reviews, as criticizing the negative aspects of the movie can demonstrate their expertise and improve their image.

Theoretical and Managerial Implications

In the existing literature, researchers explore how consumer attitudes or evaluations differ between in the pre-consumption stage and in the post-consumption stage mainly concentrate on the cognitive dissonance theory proposed by Festinger (1962) and the self-perception theory proposed by Bem (1967). According to the cognitive dissonance theory, people hold internal drivers to maintain all attitudes and beliefs harmony and avoid any dissonance. Self-perception theory states that when consumers hold dissonant beliefs in pre-consumption and post-consumption stages, they change their attitudes to make them consistent with the consumption behavior. In other words, after their purchase or consumption of products, consumers tend to evaluate the products more positively to avoid cognitive dissonance and prove that they have made a smart decision. Our theorizing that self-enhancement motivation influences how people evaluate the product at the pre-consumption or post-consumption stages and that consequently they may evaluate more negative at the post-consumption stage. This means that, in the era of WEB2.0, consumers' evaluation of products is determined not only by their consumption experience but also their motivation in WOM generation.

Our research also provides insightful managerial implications for movie industry. It is rather common that movie manufacturers and studios invest heavily before the release of a

movie to promote it, grasp public attention and boost positive and hot discussions. However, our empirical results evidence that the pre-release WOM does not help box office performance. Instead, the post-release WOM, which reveals the movie quality to a greater extent, helps enhance box office performance.

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