Does Twitter Create Similar Patterns of Positivity/Negativity as Face-to-Face Word-of-Mouth?

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Table of Contents

ABSTRACT

Word-of-mouth communication is important to organizations because it is a free form of advertising and has been shown to be influential on consumers' purchasing decisions. Marketers of course, would like WOM to be positive and thus increase brand reputation and sales. In the past decade, new forms of communication have created different channels for WOM to travel through. Current social media websites such as Facebook and Twitter allow one person to send a message to many almost instantaneously. This study's objective is to examine the WOM on the networking site Twitter. Previous research has indentified the relative incidence rates of both positive and negative recommendations for face-to-face WOM, but the anonymity of Twitter may result in different rates. Looking at recent box office movies, over 2,000 posts, commonly called "tweets" were collected to examine the valence. The results were unexpected. Every movie examined, despite how critics reviewed them, received overwhelmingly positive results, with the average close to a 9 to 1 ratio.

INTRODUCTION

Word-of-mouth (WOM) has been shown to influence people and their purchasing decisions. Up until the past few decades, word-of-mouth generally consisted of one to one communication, usually verbally in person or over the telephone. WOM is defined as the passing of information from one person to another. WOM can be significant in influence on the success or failure of certain products and services; if consumers were to speak negatively about a product to their friends, companies could lose revenue.

Word-of-mouth has drastically changed over the past decade, and can now be one person giving his or her opinions to millions of other consumers. The internet and social networking have transformed the landscape of WOM, with many more connections and interactions. These communications allow for positive and negative news to travel faster than ever. They can propel a product, service, or person into almost overnight success or failure. Consumers' voices are now more prominent, and reach a greater number of their peers.

Word of mouth communications about products or services can have a significant impact on a company's earnings. Successful organizations realize the value of positive word of mouth communications and try to encourage customers to engage in it. Originally, WOM meant verbal communications usually restricted to a few people, but with the advent of new channels of communication, WOM has taken many different forms.

Many studies have examined the relative incidence of positive and negative face-to-face WOM, however very few have looked at new forms of WOM, specifically using social media as the WOM channel. This study looks at the valence of WOM in social media compared to traditional face-to-face WOM. We will examine whether WOM in social media exhibits similar patterns of positivity/negativity as traditional face-to-face WOM, and what it means to businesses trying to enter the conversation. This new networking landscape is important for businesses to utilize and capitalize on for future sales.

LITERATURE REVIEW

Word-of-Mouth

Historically, word-of-mouth has been seen as one of the more influential sources of information that consumers use when making purchases (Godes and Dina, 2004). Consumers are more likely to believe a peer about a product than a commercial or print advertisement (Samson, 2006). In a 2004 study, Godes and Dina found that WOM has powerful influence in persuasion, significantly more than corporate advertising communications. Using Usenet, an online message board, the researchers determined that word-of-mouth was a strong indicator of whether or not consumers would watch new television shows, rather than commercials for the same programming.

It has been long understood that face-to-face WOM is a key driver for retail sales (Brown & Reingen, 1986). Brown and Reingen found that WOM through strong ties of people who knew and trusted each other was likely to be used as a source of information for goods. These strong ties are with people who interact frequently and have meaningful connections. Similarly, there is also evidence that online WOM also impacts retail sales, specifically with regard to box office movies. Duan, Gu, and Whinston, (2008) argued that WOM is a precursor to movie sales and has significant influence on box office receipts. They found that infrequent moviegoers were more likely to be influenced by negative comments than by positive comments. However, they also determined that frequent movie goers, who view themselves as experts on the subject matter, are less likely to be influenced by negative word of mouth because they would trust their own judgment more.

It has been a long held belief that negative word-of-mouth was far more common than positive word-of-mouth. This myth seemed to have started after the Technical Assistance Research Program studies of WOM in 1986 (TARP, 1986). TARP suggests that NWOM from dissatisfied customers occurs, on average, about twice as frequently as PWOM from satisfied customers, though the ratio varies with the category. This has been perpetuated since then in various textbooks and in the popular press (Hanna and Wosniak 2001; Silverman, 1997). Recently, however, the incidence rate was found it to be 3-to-1 in favor of positive (East, Hammond, Wright, 2007). Using a variety of products and services in 15 different categories, East, Hammond, and Wright found that positive WOM is more frequent than negative. One of their main explanations for this was that with so many alternatives in the marketplace, unsatisfactory products and services quickly fail, leaving consumers with choices from a set of acceptable products. Consumers essentially should be satisfied, and thus WOM about those products is mostly positive. East, Hammond, and Wright (2007) directly refute previous studies, specifically the studies conducted in 1986 at the Technical Assistance Research Program (TARP, 1986) .Also refuting the previous findings, a study conducted by Naylor and Kleiser (2000), found that of 97 users of a fitness and health center, 94 participated in positive negative WOM and 64 participated in negative WOM.

<u>Social Media</u>

With the creation of social networking, WOM has new forms. No longer is WOM confined to face-to-face speech, or only a few people. Now consumers can literally share word-of-mouth with millions of others in a fraction of a second (Laroche, 2005). There are different types of social networking that users can engage in. We chose to use Twitter for examining WOM because of its unique search features, its frequently published content from users, as well as its high click-through rate relative to the other social networking websites. We describe several forms of social media below and then highlight the differences between them that make them attractive vehicles for communication.

One of the earliest forms of social media which is still popular today is instant messaging. First appearing in the 1990s, instant messaging allows the transmission of private messages from one user to another in real-time. Many instant messaging clients also offer a group chat feature. There are even tools that allow instant messenger users to log in on retail websites to spread WOM to their friends.

Blogs, short for weblogs, are websites populated by posts or entries. These are typically created by individuals, and allow thoughts and ideas to be posted and linked on the internet. It is a form of social networking that is mainly one-sided; usually the owner or owners of the website are the main contributors. Thus, not everyone has the ability to post a blog on each website, but most blogs allow for user comments on blog posts.

Recently, social networking websites have emerged. Unlike instant messaging, many social networking sites have large-scale friends or connections webs that show relations of its members. Facebook, the internet's most visited website (CNNMoney.com, 2010), allows users to post a profile picture on their page and write on other friends' pages. It also allows for status updates, where users can post short blurbs about anything.

Another major social networking website is LinkedIn. LinkedIn is a networking website designed for professionals in the workforce. It differs from Facebook and Twitter because it is focused on professional networking, and not leisure and entertainment (LinkedIn, 2010).

Twitter is essentially a social networking website solely built on status updates. It differs from Facebook because it doesn't allow posting entire albums of photos, videos, or games to users' pages, and consists of very short messages called "tweets" (Twitter, 2010).

<u>Twitter</u>

Twitter has become one of the most popular social networking sites, with over 190 million visitors a month tweeting 65 million posts per day (Schonfeld, 2010). It has continued a growth of unique visitors since it opened in July 2006, and will more than likely continue to grow in the coming years.

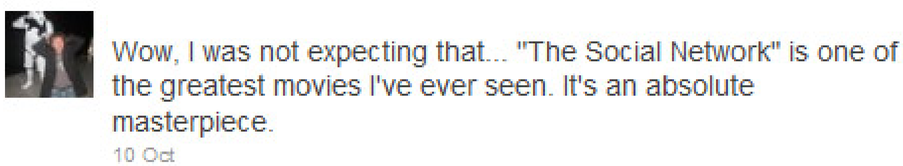
Twitter has specific features that make it unique compared to other social networking sites. First, it is a micro-blogging site. Users create connections on Twitter by requesting to follow other users. Posts can only be 140 characters, essentially just a sentence or two. These posts can also contain links to other pages, videos, articles or blogs. When a user clicks the link, it is called a click-through. This is one of the prominent ways of measuring effectiveness on Twitter—how many users click through a link.

Instead of long monologues from one user posted for many to read, Twitter is comprised of conversations between groups of people replying to and reposting what someone else has said. These tweets will appear in the newsfeed of everyone who subscribes to the original poster.

Twitter also has a unique feature of tagging topics of interest. This allows users to track what millions of people are saying about a particular subject. If people are interested in a specific product, they can tag it with the hash symbol (#). If they were tagging a movie it would appear in the search results as “#MovieTitle”. Even if a post isn’t tagged, its terms can still be searched for.

Twitter also has the highest click-through rates of any social network. A link or a posting is more than 6 times more likely to be clicked when placed on Twitter than on Facebook (Social Twist, 2010). Twitter is where people actively seek out information, and they may take it into consideration for future purchases.

Twitter posts about products and services are essentially non face-to-face WOM. Similar to face-to-face WOM, some people proactively offer info; others seek information. Also, people who use Twitter are not just receiving the information, but they are actually on Twitter to actively listen and learn other users’ opinions. Here’s what two typical posts about a current movie can look like on Twitter:



The examples above would appear in the Twitter feed of anyone who is following the respective author. Users pick and choose who they want to follow, based on similar interests or characteristics. It is more likely that they will choose to believe someone they are willingly receiving information from rather than a random posting on Twitter. Users are also able to repost any tweet that appears in their news feed for all of their followers to see. This reposting is called a retweet.

With so many users and the ability to create a free account, Twitter has become an attractive method for businesses to communicate with their consumers. Businesses can sign up, post relevant information, and interact with the customers who use and love their products. Furthermore, Twitter's search feature allows users or business to find users with keywords in their profile. A skate shop can search for "skateboarding" and find a plethora of people who might be interested in their products. Additionally, Twitter has implemented a new facet of their website called promoted trends, where for $100,000 a day a company can have their trend posted on the website. The value of this promoted trend would be questioned if consumers spoke negatively about the trending topic, however it is a quick way to generate buzz about a product or service. Still, it has been hotly debated whether or not it is worth it for businesses to use social media because of the costs of time and the potential of damaging their reputation (Fisher, 2009).

Measuring a company's return through social media is significantly harder than in other media. Commercials and print advertisements all have estimates of their reach and frequencies. However, as Fisher argued in a 2009 study, it is harder to measure how many people actually see a company's message when it is spread. Word-of-mouth has few easily measured statistics, and while users may be able to search for how many times a product or service was mentioned on Twitter, it is unfeasible to determine how many consumers saw those tweets. It is also significantly harder to determine a particular target market from the wide variety of users on Twitter and with few identifying characteristics.

Still, Twitter has become an integral part of many companies' websites and communication programs. It is becoming more and more common to find a company driving traffic to their "hub" website through Twitter, Facebook, and LinkedIn. This practice will continue to grow in the future as more people get accustomed to social networking and businesses become more technologically savvy on how they can better use social media as a part of their integrated marketing communications.

<u>Twitter & Movies</u>
The recent movie, Bruno, is a current example of the impact Twitter can have on a movie's performance. Released in July 2009, Bruno took an unusually sharp decline in sales after the first day in theaters. Many claimed that the large backlash of negative postings on Twitter had actually caused this drop. Using a tool called Social Radar that tracks trends in Twitter

postings, the website buzzstudy.com actually found a correlation between increasing amounts of negative feedback on Bruno and the sharp decline in sales. If negative comments on Twitter can have an impact on sales, it would be important for businesses to know whether the relative valence of positive and negative comments on Twitter follows similar patterns to other WOM communications.

HYPOTHESES

We chose to use Twitter as the source for social media WOM for several reasons. Data collection on Twitter is efficient and practical through its search feature. Furthermore, content is published rather frequently on Twitter because of the limit of text characters. These characteristics of Twitter have made it easier to spread information in a faster, impersonal way. To examine whether or not this would perpetuate higher rates of negativity, we must first fully understand the current ratios of face-to-face WOM. Looking at over 15 categories, East, Hammond, and Wright found that the WOM ratio is 3 to 1 in favor of positive (2007). This goes against the long-standing idea that people are more inclined to express negative opinions that have been cited in textbooks since the 1980s (Goodman, 1999). The change of the ratio could be caused by a number of factors. First, the breadth of information on the internet and print now allows consumers to make more informed decisions than back in the mid-1980s. If a consumer is informed, s/he is more likely to not make an unsatisfactory purchase. Additionally, it is possible that more poor products or services have been dropped from the marketplace. Furthermore, companies are engaging in deeper levels of target marketing, matching consumers' specific needs and thus increasing overall consumer satisfaction. Also, errors in the original research could have caused inaccurate data to be reported.

However, the anonymous and semi-anonymous postings made on social media sites may increase the negativity of the postings so that the ratio of positive to negative WOM is less than 3 to 1. On many blogs and other social networking sites, users can remain anonymous while replying to posts and asking questions. Neither their identity nor their username will appear. Semi-anonymous posting, where users can be identified by their username but not their real identity is found on Twitter, as well as other varying degrees of anonymity. A recent phenomenon dubbed "trolling," is a term that refers to the act of posting derogative and negative responses hoping for response (PCMag.com, 2010). Trolling appears on virtually every social media site where there is communication between users. It occurs because users can do it with little fear of an immediate consequence or repercussion (Today Show, 2010). Unless the responses are wildly outrageous, there is little that is done to police them. Often other users join in with negative comments once one troll user posts.

Twitter is more impersonal than face-to-face WOM. Therefore, it is hypothesized that because of this people will be more inclined to voice their negative opinions.

H1: Twitter will show more negativity in tweets than face-to-face WOM.

Corporate accounts interact with their customers because many businesses focus on fostering long-term relationships with their consumers. Corporate accounts should have strict policies and guidelines for interacting cordially with other users, thus reducing the negative amount of Tweets directed to them. Also, these accounts are more likely to retweet good messages than bad ones about themselves.

H2: Corporate and celebrity Twitter accounts linked to specific films will have more positive WOM than non-corporate accounts.

When a negative comment is posted, it may release other users of their inhibitions of talking negatively about a product. We suspect that retweets will show a higher incidence rate of negativity than face to face WOM and original posts.

H3: Re-posts (retweets) will show more negativity than original posts.

METHODOLOGY

To test the hypotheses, we collected posts about movies from Twitter from January 14th, 2011 to March 10th, 2011. We chose movies as the domain because they are relevant to consumers, new movies produce large quantities of data, and it has been shown that WOM has influenced movie sales in the past. The tweets and profile pages of the users provided data for 7 variables. We recorded the type of post--whether the tweet was an original post, a retweet, directed at another user, whether or not tweets were retweeted from or directed to notable people whether they who were associated with the film or not. We also recorded whether or not the user was anonymous, semi-anonymous, or identified, and whether the user was male or female. A user was identified as anonymous if his or her profile had neither a picture nor real name. Semi-anonymous users were identified as having either a profile picture of themselves or their real name listed. Lastly, users were labeled identified if their profiles included both a profile picture and their real name.

Additionally, we recorded the movie genre, the date it was posted relative to the movie's release, and also what time it was posted. The dependent variable that we examined is the valence of the post which was coded as either positive, negative, or neutral. For example, negative responses could include "Just wasted $10 on that movie", or "don't go see 'moviename'!"

Movies were chosen based on criteria that would reduce the potential for preconceived biases influencing the valence of the post. Sequels and movies based on relatively popular previous work, were not chosen. A sequel might generate biased tweets; consumers who viewed and enjoyed the first movie might be more likely to enjoy the sequel. Furthermore, consumers who did not enjoy the first movie might be predisposed to not like the sequel. Films that are based on popular previous work could also have similar biases, such as a Harry Potter or Spiderman film. Consumers might judge the movie based on its accuracy of the previous work instead of the film itself. Furthermore, it is possible that consumers would enjoy the movie solely because it relates to previous work that they are fans of.

Over the two-and-a-half month collection period, we examined eight movies from various genres. These eight movies included two action/drama movies, two comedies, two family movies, and two romance movies. A variety of genres were chosen to achieve more depth in the results.

Data was collected by using Twitter's search feature and searching for a specified movie name five times a day. These collections consisted of 10 tweets per movie, at these specified times:

Hour 1:	3pm
Hour 2:	6pm
Hour 3:	9pm
Hour 4:	12am

These times were chosen because they are just after movies tend to let out. Different times may also help balance out the demographics of moviegoers, with families more likely to opt for movies during the day or early evening while teenagers and young adults often go at night.

Ten tweets were collected at the four specified times for 7 days for each movie. It was also recorded how far away from the release date of the movie the post occurred. This resulted in 2,240 observations. A sample of the data collection form used is listed as Appendix A. The valence of the tweet was coded as positive, negative or neutral. Only tweets from people who had seen the movie were recorded.

The valence of the tweet was recorded and the aggregate measure expressed as a percentage of the total tweets. This rate is shown per movie, as well as per genre and overall score. Data also was measured as an incidence rate of total positive and negative comments. Using a binomial model we were able to compare valence incidence rates found through this research with historical data on WOM.

<u>Measures</u>

Judgments of a tweets' valence was determined by a variety of factors. For example, a tweet stating that the user had viewed the movie and enjoyed it would be positive. Also, a tweet that stated a user viewed the movie and included an emoticon such as a smiley face (☺) or a frown (☹) would be classified as a positive and negative response, respectively. Other creative uses of language were determined on a case by case basis to determine valence. For example, the tweet that stated "*so green hornet was actually pretty legit!*", while not explicitly saying it was good in common language, was classified as positive.

If a tweet shared both positive and negative valences, or was indifferent towards a movie, it was classified as neutral. An example tweet displaying a neutral valence:

"*agreed about adjustment bureau. Doesn't compare to inception for a second. Not bad. But not great.*"

Anonymity of a user was measured on two aspects: whether a first and last name was present on the twitter account, and if the user had a picture that could be identified as possibly a legitimate person linked to the account. For instance, if a user indicated their real name as "True Beiliber", and included a picture of pop star Justin Beiber, the account would be classified as unknown. While it includes a picture and name, neither suffices in actually identifying the true user's identity.

All data was analyzed using analytical software SPSS. Chi-squared tests were used to determine if there were any significant relationships between gender and tweet valence, as well as the origin of posting and tweet valence.

RESULTS

A summarized table of the data can be found in Appendix B. The table includes the raw numbers for each movie with regard to valence of the tweets, number of tweets by gender, number of tweets by anonymity, and the origins of the tweets. As the appendix indicates, tweets were overwhelmingly positive (85.4%).

There was significant difference in where the tweets originated from. Our chi-square test showed a value of 54.988, with a p-value of less than .05. Most tweets were original posts. Retweets and directed tweets made up 8.3% and 10.2% of total tweets respectively. Surprisingly, only 1.25% of tweets were directed at accounts affiliated with the movie.

Known users made up 74.9% of the total sample. Semi-anonymous and anonymous users were 19.2% and 5.9%, respectively. Females tweeted 57.6% of the time, compared to males at 36.4%. Roughly 6% of users' gender could not be identified.

Valence

H1: Twitter will show more negativity in tweets than face-to-face WOM.

Our findings show that when tweeting about box office movie releases, the incidence rate of positive WOM is much greater than negative and neutral WOM (Figure 1). When computing the ratio of incidence, we excluded neutral responses because there were so few cases, and data from past research that we compared it to did not have a neutral category. The overall ratio of positive to negative WOM was 9 to 1, significantly higher than in the findings of East and Hammond (2007), which was found to be 3 to 1. Our initial hypothesis that the impersonal nature of Twitter would lead to higher rates of negativity is not supported.

(Figure 1) Valence of Tweets By Movie

		Valence of Tweet			
		Neutral	Positive	Negative	Total
Movie Name	Just Go With It	4	267	9	280
	The Adjustment Bureau	4	246	30	280
	Rango	22	238	20	280
	Green Hornet	34	205	41	280
	Hall Pass	19	234	27	280
	I Am Number 4	12	260	8	280
	Drive Angry	22	201	57	280
	HappyThankYou	4	262	14	280
Total		121	1913	206	2240
		5.4%	85.4%	9.1%	

With this high level of positively valenced tweets, one might question whether people only tend to tweet if they liked a movie. If that was true, there should be little variation across different movies. We used a chi-squared test to examine whether there was any significant variation of valence across the movies and found that there was.

Using a Chi-Square test for independence, we found a value of 93.964, with a statistically significant p-value of less than .005. This variation shows that while overall WOM on Twitter is positive, certain movies do fair better than others in this domain.

There was concern that the overwhelming positive responses might be a reflection that the movies were better than movies in the past. To check for this, we compared the average ratings of our sample from reputable movie critiquing website www.rottentomatoes.com and compared them with the average ratings of several movies from the previous year in the same time frame. We found that there was no significant difference in the ratings of movies this year compared to previous years. The eight movies of this study received an average rating of 47%, while the average of the previous year's selection received an average rating of 51.5% (rottentomatoes.com).

H2: Corporate and celebrity Twitter accounts linked to specific films will have more positive WOM than non-corporate accounts.

H2 looked at whether corporate and celebrity Twitter accounts linked to each film would receive more positive feedback. We originally hypothesized this because we believed consumers would act cordially to their favorite celebrities, but also because these accounts were more likely to retweet positive tweets about themselves. However, there was no statistical difference between the valence of these tweets. The x^2 value of the chi-squared test was 4.180, with a p-value of .124. H2 is not supported.

H3: Re-posts (retweets) will show more negativity than original posts.

H3 originally hypothesized that when a user saw a negative message posted Twitter, their inhibitions of spreading negative information would diminish. In turn, we would find a higher ratio of negative retweets than in the other origins. However, there was no significant difference in valence of tweets depending on the origin of the tweet. Our chi-squared test between origin and valence of tweets found a value of 2.973, with a p-value of .396 which is statistically insignificant. Thus, H3 is not supported.

<u>Gender</u>

We also looked at gender to see if there were any trends between males and females worth noting. There was significant difference between total tweets of each gender. Using a Chi-Square test to determine independence, we found the Chi-Squared value to be 95.209, and the p-value to be less than .005. Overall, females tweeted significantly more than males, accounting for 61.3% of the observations. However, this was not equal across all movies. Some movies had overwhelmingly female responses, while others had narrower gaps between genders and one had more tweets from males (Figure 2). The main influencer of this is the genre of the movie. The 68.8% of tweets romantic comedy Just Go With It were by females.

The action film Green Hornet received 52.8% of its tweets from males. However, genre alone isn't perfectly accurate, as females tweeted roughly two-thirds of the time for Drive Angry, an action/thriller movie.

Figure 2: Male & Female Percentages Per Movie

			Male	Female	
Movie Name	Just Go With It	Count	83	183	266
		% within Movie Name	31.2%	68.8%	100.0%
	The Adjustment Bureau	Count	131	140	271
		% within Movie Name	48.3%	51.7%	100.0%
	Rango	Count	104	141	245
		% within Movie Name	42.4%	57.6%	100.0%
	Green Hornet	Count	141	126	267
		% within Movie Name	52.8%	47.2%	100.0%
	Hall Pass	Count	89	182	271
		% within Movie Name	32.8%	67.2%	100.0%
	I Am Number 4	Count	82	189	271
		% within Movie Name	30.3%	69.7%	100.0%
	Drive Angry	Count	86	169	255
		% within Movie Name	33.7%	66.3%	100.0%
	HappyThankYou	Count	100	161	261
		% within Movie Name	38.3%	61.7%	100.0%
Total		Count	816	1291	2107
		% within Movie Name	38.7%	61.3%	100.0%

We also examined any differences between genders in their tweets' valence. Using a Chi-Square test (x^2 = 3.864, p-value = .049) we found statistically significant differences. When looking at WOM for box office movies on Twitter, females are more likely to give positive feedback than males (Figure 3). This finding aligns with past research that has found that females are more likely to give favorable WOM than males (East and Lomax, 2010).

Figure 3: Male & Female Positive and Negative Counts

	Gender	Total

			Male	Female	
pos or neg	Positive	Count	684	1114	1798
		% within pos or neg	38.0%	62.0%	100.0%
	Negative	Count	87	105	192
		% within pos or neg	45.3%	54.7%	100.0%
Total		Count	771	1219	1990
		% within pos or neg	38.7%	61.3%	100.0%

Anonymity

We looked at anonymity based on previous trends of negative behavior on the internet. Findings on cyber-bullying and trolling originally led us to believe that the more anonymous a user could become, the more negative things they would say. Our data showed that while there is significant difference between the total number of known, semi-anonymous, and anonymous users, there was no significant difference between the anonymity of the poster and the valences of their tweets (x^2 = 4.180, p-value = .124.).

The anonymity and impersonal interactions on Twitter were the reasons we believed results would show higher incidence rates of negativity than previous WOM research, however this does not appear to be the case. One plausible explanation is that people who tend to not reveal information or accompanying photos on Twitter do so not to submit malicious posts, but for their own privacy and security.

IMPLICATIONS

There are many implications that can be drawn from the findings in this research. First, for box office movies, Twitter is more positive WOM than what previous research would suggest. Not only is it positive, but the WOM comes from users with connections to each other. If these are strong connections, users may be likely to act on the information (Brown & Reingen, 1986). However, there isn't sufficient information on the strength of connections between users on Twitter to draw any conclusions.

Our findings underscore the importance of movie studios using Twitter. While it may be difficult to exactly measure return-on-investment, Twitter is a medium that allows WOM, the most credible form of advertising to be spread instantaneously to millions of customers. When that feedback is extremely positive, even for poorer quality movies, marketers have a unique opportunity to promote their movie in a meaningful way. It would be wise for box office movie releases to include a strong social media campaign focusing on Twitter into their Integrated Marketing Communications. It is relatively a low cost to setup and supervise a Twitter account. Links and information about the specific account could be included in other advertising media.

If consumers can receive messages directly from the movie producers or stars, they may be more inclined to retweet them or respond to these accounts. It may be possible to generate more WOM by having these accounts linked to specific movies perpetuate news the few weeks leading up to the movies release.

One suggestion is for marketers would be to utilize Twitter's PromotedTrends tool, where you can purchase a spot at the top of the website's Trending Topics. Trending Topics is essentially a list of the most talked about things on Twitter. This is a list of possible subjects to discuss, and leads to more conversations and awareness of whatever the conversation is. By purchasing a spot on this list, a movie can generate awareness, and start dialogue between Twitter's millions of users.

Another issue to note is that more anonymity on Twitter did not produce more negative responses. It appears that box office movies on Twitter are not affected by harsher comments than what previous research and ideas might suggest. We believe that this is because Twitter is more about connecting to people you know and wanting to hear from or people you have interest in. Cyber-bullying and trolling generally occur when you are connected anonymously to many people at once, such as on message boards, or when you specifically remain anonymous on a website to target someone you know personally. It is possible that even though users remain anonymous or semi-anonymous, those connected to them still know their identities. This is pertinent because it may lend more credibility to Twitter WOM.

LIMITATIONS & FUTURE RESEARCH

There are a few limitations of this study that should be addressed in future research. First, the narrow scope of box office releases does not give an accurate, comprehensive reflection of all word-of-mouth on Twitter. To generalize the results beyond movies, a wider variety of categories would need to be examined. Furthermore, little research has been done analyzing the strength of connections between Twitter users. A precursor to effective WOM is a strong connection between the speaker and the recipient. How strong these ties are will help determine the effectiveness of WOM on Twitter.

Another issue for future research is looking at the PromotedTrends tool on Twitter. While most Trending Topics (a short list of popular topics at the moment) on Twitter are a result of natural conversations making it popular, PromotedTrends can circumvent these conversations and appear on the list for a fee. This has blurred the line between natural discussion and advertising, and its effects are unknown. It may be possible that PromotedTrends begins a valuable conversation between consumers and companies about their services. Users may feel more inclined to give feedback if they believe that they are heard by the company promoting the trend.

Additionally, future research may want to examine the incidence rate of valence towards movies on other websites. Twitter’s users are generally connected to people they know. The ratio found in this research may differ on other websites that don’t make connections based on who you know, but what interests you have.

APPENDICES

APPENDIX A SAMPLE COLLECTION SHEET

Harry Potter - Action/Adventure

Tweet	Origi	Identit	Gende	Date	Time	Valenc
Harry Potter was awesome! Though I knew when it was ending so it I wasn't too mad about it.	O	K	F	11/24/2010	9:00pm	+
Harry Potter and the Deathly Hallows part 1 is AMAZING!!! you must see it!!	O	K	M	11/24/2010	9:00pm	+
I want to watch **Harry potter**. For the third time	RT	K	F	11/24/2010	9:00pm	+
amazing! It's the Oy **Harry potter** film I've enjoyed because I'm not really a HP fan.	O	S	F	11/24/2010	9:00pm	+
Harry Potter was weird. AMAZING. But strange.	O	K	F	11/24/2010	9:00pm	+
Harry potter was amazing the second time, possibly better than the first time! :P	O	K	F	11/24/2010	9:00pm	+
Just got home after a loooong almost 14 hour day.. So tired! **Harry Potter** was fab though!?	O	K	F	11/24/2010	9:00pm	+
The new **Harry Potter** is so good!	O	K	M	11/24/2010	9:00pm	+
Holy shit, **Harry Potter** was awesome. Going out my sister and her boyfrond now	O	K	M	11/24/2010	9:00pm	+
Harry Potter and The Deathly Hallows for the 2nd time! Haha, I'm freak, yeah. :D	O	K	F	11/24/2010	9:00pm	+
just watched "**harry potter** and the deathly hallows". greeeeaaaat film :) but very saaaaad :(	O	A	F	11/24/2010	9:00pm	+
Oh Gosh, **Harry Potter** and the Deathly Hallows Part One is the best HP movie yet!!! One more to go :D	O	K	F	11/24/2010	9:00pm	+
Harry Potter was AMAZING<3 My little brother keeps asking me when the next one comes out. I'm so proud :')	RT	S	F	11/24/2010	9:00pm	+
i'm seeing **harry potter** again it was so good (':	D	K	U	11/24/2010	9:00pm	+
I saw **Harry Potter** 7 and it was amazing... My new phone is blackberry :D with WWE Divas Blackberry cover ;)	O	K	F	11/24/2010	9:00pm	+

Origin: RT = Retweet, O = Original, D = Direct Tweet

Valence: Positive + ; Neutral O ; Negative -

Identity: K = Known, S = Semi-anonymous, A = Anonymous

Appendix B: Table of Raw Data For Each Movie

Movie	Tweets	Valence			Gender		
Name	#	Positive (+)	Neutral (0)	Negative (-)	Male	Female	Unknown
Just Go With It	280	267	4	9	83	183	14
The Adjustment Bureau	280	246	4	30	131	140	9
RANGO	280	238	22	20	104	141	35
Green Hornet	280	205	34	41	141	126	13
Hall Pass	280	234	19	27	89	182	9
I Am Number Four	280	260	12	8	82	189	9
Drive Angry	280	201	22	57	86	169	25
HappyThankYou	280	262	4	14	100	161	19
Total	**2240**	**1913**	**121**	**206**	**816**	**1291**	**133**
(%)		**85.40%**	5.40%	9.20%	36.43%	**57.63%**	5.94%

Movie	Tweets	Anonimity			Origin of Tweet			
Name	#	Known	Semi-Known	Anonymous	Original	Retweet	Directed Tweet	Celebrity/Movie
Just Go With It	280	214	52	14	222	15	40	3
The Adjustment Bureau	280	226	45	9	222	32	26	0
RANGO	280	186	59	35	241	18	21	0
Green Hornet	280	207	60	13	224	20	36	0
Hall Pass	280	208	63	9	209	37	29	5
I Am Number Four	280	199	73	8	222	27	25	6
Drive Angry	280	233	22	25	221	25	25	9
HappyThankYou	280	204	57	19	234	14	27	2
Total	**2240**	**1677**	**431**	**132**	**1795**	**188**	**229**	**28**
(%)		**74.87%**	19.24%	5.89%	**80.13%**	8.39%	10.22%	1.25%

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