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Magatweets: A Content Analysis of Magazines' Use of Twitter

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Abstract

The authors examined Twitter use among magazines by analyzing a sample of Twitter pages from some of the most-followed magazines on Twitter. This study revealed that the frequency of publication and the number of Twitter followers are not significant predictors of the number of tweets that a magazine posts. The authors also found that magazines are, for the most part, more effective when it comes to using Twitter to interact with their audience when compared to a similar Twitter study of newspapers and their interaction with their audience. As expected, the content of the tweets centered on the primary niche of each magazine.

Introduction

Since its inception in 2006, Twitter has become one of the fastest growing social networking sites. In March 2012, 140 million users were sending 340 million tweets a day (Van Grove, 2012). In 2011 there were 23.5 million unique visitors to Twitter.com, a 16% increase from 2010 and up 70% from 2009 (Facebook, 2010; Nielsen's Tops, 2011). The increase is second only to Facebook, which saw twice as many visitors in 2011 as in 2009 (Facebook, 2010; Nielsen's Tops, 2011).

But as digital media platforms enjoy increased popularity, many of the traditional media—including newspapers and magazines—struggle with declining readership. Although much has been said about the circulation challenges of print newspapers, magazines have not fared much better. The number of single copy sales for magazines continued on a four-year slide in 2011, dropping 9% from the previous year, while the number of print subscriptions saw a minimal increase (.04%) during that same period (The State of the News Media, 2012).

The bright spot is that readers are not necessarily giving up on magazines but are instead migrating toward digital and mobile versions. Several prominent magazine publishers have seen dramatic shifts in their traditional audience profiles (Affinity, 2011). For instance, 30% of the

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readers of Time Inc. magazines use both print and digital formats, while 15% rely solely on the digital version. Nearly one fourth of Hearst Magazines readers use both print and digital formats, with 11% relying just on the digital versions (Affinity, 2011). Even more interesting is the fact that several well-known publications now have a larger digital audience than print audience. For example, *Forbes* has more than three times as many consumers (14.3 million) reading the digital version as the print version (4.2 million). *ESPN the Magazine* has twice as many digital readers (24.9 million) as print readers (11.1 million). In addition, *Forbes*, *Sporting News*, *The Atlantic*, and *Food Network Magazine* each have a larger digital audience than print audience (“The Audience,” 2011).

Because more readers are turning to digital platforms for news and information, it is only natural that magazines adopt and use popular social network tools, including Twitter, to drive readers to those platforms. While there is an increasing amount of research dedicated to Twitter use among mainstream news organizations, not much attention has been given to similar trends in the magazine industry. Thus, this study explores how magazines are adopting and using Twitter.

Literature Review

In the beginning Twitter was viewed primarily as a tool used by participants to provide status updates (Lenhart & Fox, 2009). But as Twitter has grown in popularity, so has its usefulness. Twitter is seen as more than just a means of enhancing one’s social network. It is also a tool that can be used to collaborate and share ideas, teach a class, and disseminate news (Dunlap & Lowenthal, 2009; Lenhart & Fox, 2009). Twitter describes itself as a “real-time information network that connects you to the latest stories, ideas, opinions, and news about what you find interesting” (“The Fastest,” 2013). Twitter enhances its identity as a real-time network by providing users with a list of trending topics, top videos, and suggested people to follow, all of which are consistently updated. This study focuses on Twitter’s role as a news and information source.

The popularity of Twitter has not been limited to a specific age group. According to a recent study by the Pew Research Center, Twitter use among individuals in six different age groups increased from November 2010 to March 2011 (Smith, 2011). The biggest increase—from 9% to 19% during the six-month period—came among 25- to 34-year-olds. There was also a sizeable increase among 35- to 44-year-olds, with 14% actively using Twitter in March 2011 compared with just 8% six months earlier.

Twitter as an information disseminator

In recent years Twitter has played an important role in disseminating news and information. In 2008 individuals caught in the middle of a three-day gun battle in Mumbai, India, used Twitter to provide first-person accounts, pictures, and rumors. Later described as “Twitter’s moment,” this event left news agencies scrambling to keep up (Caulfield & Karmali, 2008). Since then, Twitter has been at the forefront of nearly every major breaking news story—from deadly earthquakes and plane

crashes to the passing of celebrities and public figures. Often, as with Mumbai, Twitter is breaking news before the traditional news outlets. In May 2011, for instance, Twitter and Facebook users were circulating unconfirmed reports of Osama Bin Laden's death at least 20 minutes before major broadcast and cable networks began reporting on the raid that led to his death (Mataconis, 2011; Stelter & Preston, 2011). At one point, there were 3,440 tweets per second posted about Bin Laden—the highest sustained rate of posts Twitter had seen (Mataconis, 2011; Stelter & Preston, 2011).

While there are plenty of instances where Twitter has been used to report breaking news, there are also plenty of instances where the social network site has been used to circulate false or incorrect news reports. In January 2012 the managing editor of *Onward State*, an independent student publication at Penn State, prematurely—and falsely—reported the death of former head football coach Joe Paterno through Twitter. Several well-known news organizations, including CBS Sports, picked up the tweet and began circulating the false information through its own channels (Stelter, 2012). The mistake led to apologies by each of the organizations involved and cost a few reporters their jobs, including the managing editor who sent the tweet (Laird, 2012; Stelter, 2012). It also brought attention to a growing problem among reporters, who are often more worried about getting the story first rather than getting it right. Speaking of the Paterno debacle, Associated Press editor Lou Ferrara said, "The lesson for everyone should be that accuracy matters." According to Ferrara, social media tools shouldn't force news organizations to compromise their standards because "this is when (they) need them most" (Stelter, 2012, para. 12).

But whatever the risk, the media industry, including magazines, cannot ignore the benefits of incorporating Twitter into newsgathering and disseminating practices. According to one new media specialist, journalists recognize that they need to "adopt or be left behind," especially if they want to stay competitive (White, 2008), meaning that the use of Twitter among reporters has become commonplace (Logar, 2009). It is used not only to report breaking news but also to generate story ideas (O'Connor, 2009). For magazines, Twitter can also be used to pique readers' interest in lifestyle and entertainment content.

Diffusion of innovations

Twitter use among magazines can best be examined within the context of diffusion of innovations, a landmark theory commonly used to explain the successful or unsuccessful adoption of innovations by individuals and organizations. According to this theory, an innovation is defined as an idea, practice, or object that is perceived as new by an individual or another unit of adoption (Rogers, 1995). According to Rogers (1995), diffusion is a "process by which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). Thus, within the context of this study, diffusion of innovations addresses the process by which Twitter (the innovation) is diffused among mainstream magazines and used as a tool to disseminate news and information.

Organizations trying to succeed and survive in volatile business environments have often

viewed innovations as key to their success (Howell & Higgins, 1990; Rogers, 1995; Salaman & Storey, 2002; Tajeddini, Trueman, & Larsen, 2006). According to Mehrtens, Cragg, and Mills (2001), three major factors can influence a business's adoption of the Internet: perceived benefits, organizational readiness, and external pressures. Benefits listed by organizations often involve the relative advantages the Internet offers, particularly in contrast to traditional communication (i.e., email versus telephone). The Internet also offers relative advantage in advertising, marketing, and access to global sources of information (Mehrtens et al., 2001).

Adoption in an organization can come at two levels: organizational adoption and individual adoption (Frambach & Schillewaert, 2002). Organization-wide adoption can be influenced by both internal factors, such as the organization's preparedness, or external factors, while an individual's adoption of innovations can be influenced by an individual's attitude toward the innovation, his or her personal innovativeness, and the social influences in the organization (i.e., employer pressure to adopt the innovation, the opinions of co-workers concerning the innovation, and so forth). In addition, facilitators at the organization can also help influence an individual's adoption of an innovation (Frambach & Schillerwaert, 2002).

Previous studies have examined both the structural effects of the diffusion of innovations in newsrooms and the adoption processes in these settings. In a study of newsroom convergence based on a diffusion of innovations framework, Singer (2004) found that despite cultural clashes and other compatibility issues, journalists saw the clear advantages of convergence. However, the diffusion of convergence was hindered by cultural and technological differences in the approach to gathering news and disseminating it to the audience. It was also slowed by a lack of training that could help alleviate concerns about the perceived complexities of the new media formats (Singer, 2004). Thus, the structure of a newsroom does factor in to how well an innovation is adopted and implemented. The size of a news organization has also been a factor in the past, with larger news organizations being more willing to adopt and use technologies than their smaller competitors (Niebauer, Abbott, Corbin, & Neibergall, 2000).

In a study of online newspapers, Li (2006) found that several factors can influence the adoption and use of interactive elements. Internal factors can include the size, the length of a newspaper's Web presence, and the makeup of its staff. For instance, bigger newspapers can more easily afford the high fixed costs of creating interactive websites. In addition, there is a positive relationship between interactivity and the length of a newspaper's presence on the Web. Websites that have been operating longer are usually more interactive.

A similar study of magazines and their websites shared some of these same findings. Size, staff makeup, and business structure all influenced website management and the selection of online content (Navasky & Lerner, 2010). And while magazines have been struggling to adopt some technologies—fewer than one in five magazine sites is designed for smartphones and tablets—they are readily adopting others, especially social media, with promising results. More than 60% of magazines surveyed reported that tools such as Facebook and Twitter were either very or somewhat effective in driving traffic to their websites (Navasky & Lerner, 2010).

Thus, the advantage Twitter enjoys over other innovations is the ease of adoption. Participating in Twitter does not require extra equipment or complex training. Anyone interested just needs to create an online account, which can be accessed from any computer with Internet access or from a cell phone. Factors such as a magazine's size, staff makeup, and available capital do not necessarily influence whether the magazine adopts Twitter as a news or information dissemination tool.

While little attention has been paid to Twitter trends among mainstream magazines, Twitter use by newspapers has been a topic of interest for researchers in recent years. In 2009 the Bivings Group conducted an analysis of Twitter use by the country's top 100 newspapers (Rindfuss, 2010). The group examined 300 Twitter feeds, gathering a wide range of data that helped them determine how these newspapers were using their accounts. The study found that 38% of newspapers did not provide links to their Twitter accounts on their websites. Newspapers were sending out an average of 11 tweets per day, with newspapers tweeting anywhere from 1 to 95 times a day. Just over half (51%) of these newspapers primarily used a Twitter Web interface (i.e., TweetDeck, HootSuite).

The more interesting findings, however, dealt with the newspapers' interactions with other users, including through retweets and replies. Just over one-third of newspaper Twitter feeds (37%) replied to users in more than 10% of their tweets, while 33% of the Twitter feeds analyzed replied to users in less than 1% of their tweets. About 15% of these accounts did not reply to even one tweet. Only 16% of newspaper Twitter feeds retweeted other users in more than 10% of their tweets, while nearly half (43%) of the accounts retweeted other users in less than 1% of their tweets. There were 23% of accounts that did not retweet other users even once. The Bivings Group concluded that newspapers are rarely reacting, or even reading, the comments and updates of users they follow (Rindfuss, 2010).

As researchers continue to study Twitter use among newspapers, it would be worthwhile to examine similar trends among mainstream magazines and compare them with newspapers. This study attempts to answer the following research questions.

RQ1: How frequently are magazines tweeting?

RQ2: When are the magazines most often tweeting?

RQ3: To what extent are magazines engaging their Twitter followers with their content?

It appears likely that magazines that publish more frequently (weekly versus monthly) will be tweeting more often because they will have larger staffs and more content to tweet about. Thus, we propose the following hypothesis:

HQ1: Magazines that circulate print publications weekly will tweet content more often than magazines that circulate print publications monthly.

There is also evidence that the number of followers a user has on Twitter often influences the number of tweets the user sends. The more followers that users have, the more frequently they tweet (Huberman, Romero, and Wu, 2008). Thus, we propose a second hypothesis:

HQ2: Magazines with more followers tweet more than those with fewer followers.

Methodology

The authors coded the Twitter pages of magazines appearing on a list of the most-followed magazines on Twitter, compiled by Folio ("The Most-Followed Magazines," 2011). This list included 50 magazines, sorted by the number of Twitter followers. The authors coded Twitter pages from 10 magazines selected through a stratified sample. Two magazines listed in the top 10 were randomly selected; two more magazines from the next set of 10 were randomly selected; and so on. Stratified sampling was used to obtain more generalizable results in the event there were significant gaps in Twitter activity between the top 10 and those listed 11-20, or between those listed 11-20 and those listed 21-30, and so forth. The authors analyzed the tweets posted on each of the magazines' Twitter accounts from Sunday, July 8, to Saturday, July 14, 2012.

Coding categories included the number of followers, the number of Twitter accounts the magazine account followed, and the number of tweets posted by the magazine during the analyzed week. The authors counted the number of tweets in several categories, including general feature, sports, business/professional, entertainment, health, home/family, travel, columns/commentary, and blogs. In addition, the authors counted the number of tweets linked to stand-alone multimedia content (i.e., photo slideshows and videos), advertisements, promotional tweets, and responses or parts of conversations with followers.

Tweets about feature-based topics were coded as general features, while those dealing primarily with sports were coded as sports. Tweets about celebrities and media-related events or issues (i.e., movies, television, and books) were coded as entertainment. Those that dealt with medical or health-related topics were coded as health. Tweets discussing topics such as home improvement, parenting, and family life were coded as home/family.

Travel tweets were categorized as those that promoted content dealing with traveling or features about popular vacation destinations. Editorial/commentary tweets included those that promoted an opinion piece/editorial or a reporter's column. Blog tweets were those that included the word "blog" in the text. Advertisement tweets were those that promoted a commercial product or business. Lastly, any tweet that referred the reader back to the magazine or its website was coded as promotional. For instance, inviting a follower to participate in an online chat with magazine editors or sign up on the magazine's website to win a new iPad would both be considered promotional.

The authors also counted the number of tweets linking to the magazine's website and to outside websites, as well as those that did not contain a link. Also counted were the tweets soliciting participation from readers ("Tweet us your best summer vacation spot" or "Who do think was the

best dressed at last night's Emmys?"), tweets that included hashtags, and retweets. Finally, the authors also noted the time each tweet was posted, grouping them into one of three categories: midnight to 8 a.m., 8:01 a.m. to 4 p.m., and 4:01 p.m. to 11:59 p.m. CST.

Both authors were involved in the coding process. A pre-test was conducted on one magazine's Twitter account (10%) randomly selected from the stratified sample in order to calculate intercoder reliability. The authors measured the consistency between themselves using Holsti's formula, which is essentially a correlation coefficient ranging from .00 (no agreement) to 1.00 (full agreement). The initial test produced a coefficient of less than .70, which is the minimum requirement for reliability (Holsti, 1969). However, after making some adjustments to the coding sheet to include more specific definitions for categories, a second magazine Twitter account (10%) randomly selected from the stratified sample was coded and produced a coefficient of .77.

Data analysis

Frequency analysis was primarily used to identify trends in terms of the topics about which magazines were most often tweeting, as well as the frequency of tweeting. Regression analyses were used to test the hypotheses.

Results

All 10 magazines analyzed for this study tweeted during the specified week. The magazines had an average of 762,043 followers. Within the analyzed week, there were, on average, 61 tweets per feed.

The most popular tweet topic was entertainment ($M = 18.4$), followed closely by features ($M = 12.1$). Interestingly, the least popular tweet topics were business and technology; none of the magazines sent out business- or technology-themed tweets during the analyzed week. (See Table 1 for a complete list of means.) It is worth noting that each magazine's niche played an important role in the tweet topics. For instance, of the 184 entertainment tweets posted, *TV Guide* was responsible for 170 (92%). In addition, *Real Simple*, a magazine focused on providing helpful information related to home, cooking, child rearing, and health, posted all of the 30 home/family-themed tweets. Most of the magazines tweeted multimedia and feature content.

Magazines posted an average of 48 tweets linking back to their websites. Every magazine had at least one tweet linking back to its website. All but one of the magazines—*Eye Magazine*—posted a link to their websites in a majority of their tweets. All but one magazine—*National Geographic*—included a link to an outside website in at least one tweet. The magazines posted an average of 6 tweets with outside links and an average of 9 tweets without links.

Just over half of the magazines (60%) included tweets that solicited feedback from users. Eighty percent of magazines posted retweets, with an average of 6 retweets on the feeds of those that did. Most tweets were posted during the daytime hours of 8:01 a.m. to 4 p.m., with every magazine publishing at least one tweet during this time. Each magazine posted an average of 36 tweets during this time. The least popular time to tweet, not surprisingly, was in the early morning hours from

midnight to 8 a.m. Twenty percent of the magazines did not tweet during this time period and, on average, those that did had just 7 tweets.

Table 1

Breakdown of mean scores for Twitter variables

Variable	M	Variable	M
Followers	864,783.3	Tweets	70.9
Tweet Categories			
Entertainment	18.4	Health	1.7
Feature	12.1	News	1.2
Multimedia	8.3	Travel	0.5
Opinion	0.5	Advertising	0.5
Conversation	5.9	Blogs	0.5
Promos	5.8	Sports	0.2
Home/Family	3.0	Business	0.0
Fashion	2.3	Technology	0.0
Tweet Times		Interactivity	
Tweets (12–8 a.m.)	6.6	Tweets w/links	47.6
Tweets (8:01 a.m.–4 p.m.)	35.5	Tweets w/ outside links	5.9
Tweets (4:01–11:59 p.m.)	18.8	Tweets w/o links	8.5
		Feedback tweets	5.1
		Retweets	6.0
		Hashtags	18.2

Several regression analyses were conducted, with publication frequency and number of followers as independent variables and total number of tweets and within specific topics as dependent variables. We hypothesized that magazines circulating print publications weekly will be tweeting content more often than magazines circulating print publications monthly. Publication frequency was not a significant predictor of the number of overall tweets ($\beta = -.045$, $p > .05$). Thus, the analysis failed to support H1,

The second hypothesis suggested that magazines with more followers would tweet more often. However, the number of followers failed to significantly predict the number of overall tweets ($\beta = -.278, p > .05$). H2 was not supported.

Discussion

The aim of this study was to examine Twitter use among magazines by analyzing the Twitter pages of some of the most-followed magazines' Twitter feeds. The results revealed that on average, the magazines were posting 60 times a week, most during daytime hours between 8 a.m. and 4 p.m. They took several steps to engage their followers, including posting links back to their websites. More than half the magazines used Twitter to solicit feedback from their followers.

This study also posited two hypotheses. The first suggested that magazines publishing a print edition weekly would post more tweets than those magazines publishing monthly. The second hypothesis suggested that magazines with more Twitter followers would tweet more than those with fewer followers. Neither of these hypotheses was supported.

The lack of support for either hypothesis offers a starting point for highlighting differences between newspapers and magazines in their adoption of Twitter. As magazines and other media navigate digital platforms and the business models necessary to support them, those who create the content must also find ways to attract readers to the digital platforms, which means working in an environment that does not conform to a traditional weekly or monthly publication calendar. The lack of support for the hypothesis that frequency of publication would predict total number of tweets might show that magazines are attempting to adapt to that always-on mentality. Magazines also have archival material that can be reused in different ways.

An interesting example is the Twitter feed of *Life* magazine. The Twitter profile lists Life.com as "the most comprehensive and iconic collection of professional photography on the web" (Life, 2012). While the magazine no longer publishes, its photo collection offers a new way to get readers to the Life.com and *Time* sites. The *Life* Twitter feed uses anniversaries or events to highlight photos in the collection.

The second hypothesis grew out of a study of midsize newspapers' Twitter feeds that found papers with more followers did tweet more often (Boyle & Zuegner, 2012). The lack of support for magazines could come from several areas. The newspaper study looked at midsize newspapers, not at a list of magazines compiled and ranked by the number of followers. The newspaper study also took place in 2010, and the diffusion of Twitter as an innovation has grown since then.

There were limitations in this study. First, the sample size (10) was relatively small. A larger sample size would likely produce more robust results. In addition, because this study looked only at magazines with large numbers of Twitter followers, the identified trends and results apply mostly to magazines in this category. Studying Twitter trends of magazines that do not have as many followers might produce different results. Lastly, only one week of content was coded during the summer, when magazines are likely short-staffed while employees go on vacation.

As magazines seek to increase their digital readership, social media tools such as Twitter send readers to their websites. This study examined the number and basic content of tweets, but additional research among magazine categories or about individual magazines' use of Twitter might yield interesting results. How magazine editors and content creators are adapting their workflow to the demands of the digital world could also be a fruitful area for research. Our study was based on a list of all types of magazine categories, but an examination of Twitter use of magazines in a particular category, such as shelter or fashion, also has research potential. Magazine research would benefit from studies that look at digital adoption practices as the industry struggles to cope with changing platforms and business models.

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