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Case Study

Social media marketing analytics: A case study of the public's perception of Indianapolis as Super Bowl XLVI host city

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Abstract

Using the example of a major event, this case study shows how social media analytics can be used for real-time assessment and issue identification. We introduce a method of using social media analytics that enable both broad overall assessment and in-depth understanding of the topics and issues that emerge around a marketing campaign. *Journal of Direct, Data and Digital Marketing Practice* (2013) **14**, 321–328. doi:10.1057/dddmp.2013.18

This case study offers a snapshot of the public's perception of Indianapolis' marketing of Super Bowl XLVI and presents practical implications for how social media analytic tools can be used to help organizations with real-time monitoring, analysis and assessment of marketing activities.

Background

Among the world's top sporting events, none create as much economic impact as the National Football League's Super Bowl.¹ In 2011, the National Retail Federation (NRF) forecasted consumer spending on Super Bowl 'game-related merchandise, apparel and snacks' to reach \$10.1 bn;² in 2012, the NRF predicted consumer spending to exceed \$11 bn.³ With such staggering figures, it is easy to see why the Super Bowl is lauded as the sporting industry's largest consumer spending event — and an incredible financial opportunity for the city that hosts it. In 2012, Indianapolis won this opportunity and capitalized on social media analytics to assess the public's perception of its Super Bowl marketing efforts.

Wait — Indy as a Super Bowl host city?

Pre-game insights: Indy as an unusual Super Bowl host city

Indianapolis ('Indy') was not considered a typical Super Bowl host city (eg, Miami, FL, New Orleans, LA) because of its cold climate, limited accommodation and small population. However, state officials saw Super Bowl XLVI as a prime chance to highlight the city's capability to host a large-scale event. Hospitality and accommodation were two key areas that, if effectively marketed to the public, could ensure an overall positive perception of Indianapolis, thus bringing it on a par with other Super Bowl host cities — and to the forefront of America's top tourist destinations. Therefore, to ensure that their marketing efforts were successful, city officials outsourced some of its social media analytic efforts to our research team during Indy's 5-day hosting of the Super Bowl.

Why focus on social media?

On the playing field: Gaining grassroots consumer insights through social media analytics

Measuring a marketing campaign's success solely through financial metrics can leave out important details relating to consumer experience, sentiment and the perceived effectiveness of an organization. Assessing the successful marketing of a large-scale sporting event such as the Super Bowl hinges upon understanding people's overall experiences, not just how much money they spend. Few traditional marketing campaign assessment strategies seek to truly understand this overall experience at the grassroots consumer level. However, social media marketing analytics can fill in this gap by uncovering the multidimensional experience of consumers through real-time analyses of qualitative data (ie, people's discourse about their lived experience).⁴⁻⁷ Moreover, real-time monitoring of large events can help identify issues as they arise and address them before they become crises.⁸⁻⁹

A play-by-play recap of Super Bowl XLVI social media analytics

Game on: Our method for analysing social media marketing data

To perform our analyses, we collected and analysed publicly accessible content ('tweets' and 'posts') from Twitter, Facebook and blogs. We gathered the content using Radian6, a software platform that aggregates social media network data by mining public blog content and accessing Twitter and Facebook's application programming interfaces used by many Fortune 100 companies. We chose this software as a tool for collecting social media data because it allowed us to designate content-specific criteria for aggregating relevant social networking data and because the data visualizations it provided were conducive to the analyses we needed to perform.

Hashtagging Super Bowl marketing data

During Indianapolis' 5-day hosting of the Super Bowl (2–6 February 2012), we used criterion sampling to aggregate tweets and posts that contained topic-specific keywords and Twitter hashtags.¹⁰ Specifically, we used the following social media keywords and hashtags:

- #superbowlxlvii indianapolis
- #superbowlxlvii indy

- #super bowl indianapolis
- #super bowl indy
- #sbXLVI indianapolis
- #sbXLVI indy.

Coupling these variants of trending Super Bowl XLVI keywords and hashtags with Indianapolis (or 'Indy') yielded a total of 71,063 tweets and posts during the 5-day period (see Figure 1).

Seeing Super Bowl sentiment in real-time

To see trends associated with the public's opinion of the city's marketing campaign foci, we categorized our data set of tweets and posts according to sentiment (ie, positive, somewhat positive, neutral, negative, somewhat negative or mixed) through Radian6's 'system for automatically determining the sentiment of a sentence or phrase'.¹¹ Categorizing social media data by sentiment allowed us to gauge the public's general feelings about Indy's marketing offerings. Figure 2 illustrates the 5-day trend of this public sentiment.

Touchdown: How marketing affected sentiment

These sentiment analyses helped us to monitor the public's reaction to Indy's hospitality and accommodation in real-time, which offered important marketing insights to Indy's city officials: they used our insights to conduct real-time assessments of marketing campaign foci, in addition to mitigating safety or public relations disasters.

Resolving sources of negative sentiment

We were not only interested in the public's overall assessment, but also in discovering, early on, whether any negative issues emerged that need to be addressed. If, for example, our analyses discovered a sudden influx of negative sentiment toward parking, lodging, traffic and so on, we could quickly notify city officials, who could immediately attempt to resolve the source of the negative sentiment. To that end, we used word clouds to investigate in-depth posts identified as negative sentiment. For security reasons, our research team was not privy to the particular actions the city took in response to the analyses we supplied on a daily basis and, unfortunately, we are therefore unable to assess the marketing effect of these responses.

Keeping an eye on the sky: Social media word clouds

Further visualization of our data in the form of word clouds gave us insight into public discourse that was specific to the city's Super Bowl

Figure 1: The frequency of posts and tweets per social network

Figure 2: Social media sentiment analysis: Most posts were neutral, some were positive and very few were negative

marketing interests. Word clouds offer analysts ‘visual representation[s] of text, based on themes in which the size of the word illustrates how often it was used’.¹² We explored word clouds iteratively to identify issues that may arise from the public chatter associated with this event. For example, a word cloud of negative sentiment posts would be examined in order to identify what major issues emerged that negatively affected the public’s experience (see Figure 3).

We further explored each major negative keyword by examining a secondary word cloud generated only from posts that included this keyword. This method enabled us to identify quickly potential issues as soon as they arose and gain an in-depth understanding of each issue.

In addition to specific issue identification, we used the same technique to identify the main topics the public mentioned in relation to Indy’s hosting of the Super Bowl and to provide a final, in-depth qualitative evaluation of the overall event. Figure 4 shows the list of topics we identified for each of the conversation peaks during a 24-hour period.

Delving further into the clouds

Once again, we used word clouds to identify the most frequently mentioned topics, and then further explored each one using second- and third-level word clouds and manual examination of the posts they emerged from. This method enabled us to both identify the major topics of public chatter and gain an in-depth understanding of the nature of public discussion under each topic.

The advantage of this method is that it uses a combination of automated and manual analyses in order to gain maximum insights efficiently. Using this method, we identified overarching themes in the public’s stream of social media content about Indianapolis’ marketing campaign. We then performed a manual thematic analysis¹³ on the selected posts that emerged as relevant for each major theme. These themes became the summative assessment of our efforts — the results are shown in the next section.

Post-game highlights

What Indy’s Super Bowl visitors said

The public social media chatter about Indianapolis’ hosting of the Super Bowl revolved around three major themes: hospitality,

Figure 3: Negative sentiment analysis: Insights from a word cloud generated from negative posts

Figure 4: Negative sentiment analysis: The public's prominent, negative topics of discussion

accommodation and the game itself. Our exploratory method enabled us to identify specific topics associated with each of the major themes. For example, topics related to hospitality were about the way the city and its residents received and treated visitors and about the entertainment in Indy's Super Bowl Village.

Indy's hospitality

The major themes that arose are as follows:

Reception and treatment of visitors

Social media content specific to this theme underscored how Indianapolis (eg, city workers, event organizers, local area residents)

treated visitors to the city. The following sample social media content is indicative of the overall discourse among social media users about this city's hosting of Super Bowl XLVI:

In reading the post-Super Bowl coverage today, I still haven't read a single negative thing about Indy as host city. That's pretty awesome.

Friday night in Indy ... perfect weather, and locals as nice as any I can remember from any Super Bowl host city. Crowded, but great.

Thank u to city of Indianapolis for being an awesome host for Super Bowl XLVI ... 1st class operation & people couldn't have been friendlier.

Entertainment and attractions provided by the city

Social media content specific to this sub-topic referenced the entertainment and attractions provided by Indianapolis within its Super Bowl Village, the epicentre of the city's hosting festivities. The sample social media content that is included below exemplifies the positive social media discourse:

The Great thing abt a non-traditional SB host city: Indy set up a welcome band at the airport! #SBXLVI <http://t.co/rSU9gk1G>

Love it! RT @tenormack @DanielleSmithTV took my 9 y/o son ziplining on an 800' line in Super Bowl Village, Indy today!

Super Bowl village wayfinding sign, underscoring just how much Indy was offering the crowds, and not just zip lines <http://t.co/iPl1wLTM> Fabulous bonding time.

The zip lines are a huge hit, and Madonna seems to excite everyone. Hosting the Super Bowl has given local politicians a chance to puff out their chests, show off their beautiful new stadium, and declare this is a big city after all. More ...

Indy's accommodations

Overall, Indy was marginally successful at marketing its accommodation; most social media users perceived the city's lodging (hotels) as limited and expensive, but as per the norm for a large-scale event. Furthermore, large crowds and limited parking caused negative sentiment, which had an ancillary negative effect on the public's perception of the city's accommodation. Sample content from such negative social media content is as follows:

13 hurt in Friday's Super Bowl 2012 Village crowd of 200,000; police announce ... — Indianapolis Star <http://t.co/6eogPxdj> follow me

So ... Darrin & I went downtown Indy tonight to see all the Super Bowl excitement. We had went to the Village last night. It was pretty cool. BUT TONIGHT!!!!!!!!!!!!!! O M G!!!!!! I have NEVER seen so many people in one place in my life!!! The police had to block off Washington St, Illinois, & Meridian St due ...

Overwhelming crowds and reports of injuries and arrests in Indianapolis' Super Bowl Village are causing police to rethink crowd control before the game. Eleven were injured Friday night as an estimated 50,000 people flooded downtown streets for a free outdoor concert by the band LMFAO. Police ...

Downtown Indy is PACKED. Like Gman Tuesday of syllabus week packed. Can barely walk through Super Bowl village. #SBXLVI

Ventured downtown Indy. Too crowded for me. Super Bowl crazy! Just trying to watch IU at Purdue.

Recapping the game

Going beyond generic sentiment analysis

This case study shows how social media analytics can be used to gain real-time insights about marketing campaigns. The steps we used first to identify issues as they emerged and then to examine them closely generated insights that had both breadth and depth and could be used as a basis for immediate action. This method goes beyond generic analysis of overall sentiment (positive, neutral, negative) while not being slowed down by the need to examine every post manually. Our method used the Radian6 application to identify and explore major issues and themes that emerged, followed by manual analysis of selected posts to gain further in-depth understanding. As a result, the evaluation shows not only the general sentiment of public opinion, but also the specific topics of discussion associated with this sentiment.

Social media analytics offer marketing analysts the possibility of real-time monitoring of consumers' sentiment and response to an organization's marketing activities. As opposed to traditional marketing assessment tools, social media marketing analytics can monitor marketing activities as they occur in real-time. This offers organizations an opportunity to assess marketing efforts according to the ebb and flow of consumer response to that organization's marketing activities.

We have shown how this can be done effectively in real time, even when dealing with large amounts of information. Identifying issues and specific topics in real-time enables marketers to quickly adapt and improve campaign efforts. This can, in turn, ensure the success of the various aspects of a marketing campaign and identify the specific aspects that account for success. Furthermore, by monitoring marketing campaigns in real time, analysts can impose quantifiable metrics (sales, the frequency and response to social media discourse, etc) on an organization's marketing campaign and assess such metrics as they occur.

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