Weak Ties to the Narrative Rescue: Starbucks Arrest Controversy Case Study

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Abstract. The arrest of two African American men at a Philadelphia Starbucks café on April 12, 2018, caused public protests throughout the United States. The coffee chain was alleged of being biased against African Americans. This research analyzes the tweets related to the Starbucks arrest and the protests that followed. The research provides the rationale as to how weak ties promulgated messaging through natural occurrences resulting in Starbucks quickly regaining a positive external communication narrative.

Keywords: Starbucks, Social Network Analysis, Weak Ties, Strong Ties, Collective Action, Communication, Narrative

1 Introduction

On April 12, 2018, two men asked to use the restrooms at a Philadelphia Starbucks cafe. After they were told the restrooms were for paying customers only, they sat down at a table without making a purchase. A manager asked them to leave the premises. The men declined stating they were waiting for someone. The manager called the police stating the two men were "refusing to make a purchase or leave." [1] When police arrived, they asked the men to vacate the premises because they were trespassing according to Starbucks. [2] Their refusal led to the men's arrest. They were later released without charge.

The news and videos of the arrest went viral and caused protests and claims of discrimination because Donte Robinson and Rashon Nelson, the two men arrested, are African American. Protesters accused Starbucks of being biased against African Americans stating the chain is anti-black. [3]

This study analyzes tweets that were published during the week of the incident. Researchers observed a connective action campaign, which supports collective action through the inclusion of digital technologies and social media that enables communication and, in this instance, appeared to be the center of gravity for decentralized actions that were connected via social media. These tweets included at least one of the following hashtags: #starbucks, #boycottstarbucks #shutdownstarbucks, #fightthepower, #backtheblue, #blackcoffee, and #starbuckschallenge.

We examined the network of the tweets referencing these hashtags, language distribution, and the sentiments of these tweets. Our observation was that Starbucks had

a clear communications plan that involved engagement and counter messaging which had more influence in the public information space.

The rest of the paper is organized as follows. Section 2 discusses the related work. Section 3 describes our research methodology followed by results and analysis in section 4. We conclude the paper with future research directions in section 5.

2 Related Work

This research identifies relationships during conflicts with key messaging. The messaging is broken down to several small worlds with tight clusters of nodes that are randomly connected to other clusters within the network. The random connections to other portions of the network were identified as weak ties. Weak ties bond other parts of the network and act as a bridge. [4] The end result identifies how to detract from the clusters and create mass opinions throughout the network as described in Key Player - Positive research by Steve Borgatti. [5] Research on Twitter offered that this social media platform is more effective against weak tie networks. [6] This research goes on to identify that: "When Twitter connects us, Twitter is positively linked to protest participation," according to Sebastián Valenzuela. Thus, we used digital datasets to test these theories and determine if their relevance remains valid. We further hypothesize that strong ties may be of more prominence, but supplementary research is needed in this area. The next section describes our research methodology.

3 Methodology

This section describes the data collection, metrics, and analysis that were used in this research. We adopted a multi-pronged approach utilizing four different applications and three different datasets. The applications used were Tableau, Gephi, Twitter Streaming Application (Gephi Plugin), and Twitter Archiving Google Sheets (TAGS).

Prior to the data collection, we identified key issues, relevant hashtags and keywords via a snowball sampling method. This allowed us to generate a list of trending and relevant hashtags and keywords to ensure the collection of content relevant to the study. A review of the tweets tagging Starbucks showed the frequent use of the keywords, #starbucks, #boycottstarbucks #shutdownstarbucks, #fightthepower, #backtheblue, #blackcoffee, and #starbuckschallenge.

The initial data collection of raw unorganized bits of data could not be processed and used and required cleaning so that the data could be analyzed. After we were able to process it, the data had value, which ultimately led to information. The first two data sets consisted of two separate collections on April 13th and April 21st, 2018, respectively. The third dataset collection of Twitter streaming data occurred on April 21, 2018. As with most data sets, cleaning of the data was very time consuming.

For example, the raw tweets dataset from the TAGS data contained line breaks and lines that had non-printable characters, so the TAGS data had to be cleaned several times to get it into a format that worked well for the Python script to process it correctly. This raw data had to be processed based on requirements to create value.

To analyze the data, we applied a combination of social network analysis techniques: (1) The modularity of the network was identified; (2) Partitioning of the data

was conducted; (3) Sociograms were created in order to visualize the data; (4) Social network analysis was used to identify influential actors/organizations; (5) Sentiment analysis provided an overview of attitudes; and (6) Language comparison was conducted to see if one language resonated with online communities more than others.

A review of the tweets tagging Starbucks showed the frequent use of the keywords, #starbucks, #boycottstarbucks #shutdownstarbucks, #fightthepower, #backtheblue, #blackcoffee, and #starbuckschallenge. We entered these keywords into the plugin Twitter Streaming Importer for Gephi. The network import was analyzed as a user network, this represented the interaction between users of mentions, retweets or quotes between at least two users, which is represented in Figure 1.

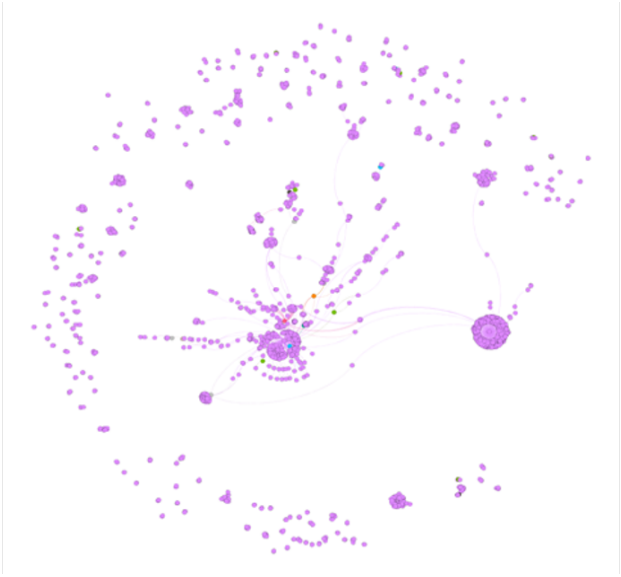

Fig. 1. Initial visualized network.

A directed graph was created with a total of 1,610 users and 1,732 edges. A Force Atlas 2 layout was utilized with a tolerance of 75, scaling set at 20, and gravity set at 100 to produce the best visualization. Next, analysis to identify the existence of small communities was conducted. The report seen in Figure 2 shows 188 communities for this network. This particular network is susceptible to narrative change via insertion of tweets in large quantities, but not analyzed for this particular dataset.

The overall network had a modularity of 0.885, if the modularity is equal to 1 it is an extremely closed off community, this network score (0.885) is a preferential community. [7] In order to take advantage of this modularity score, an opportunistic strategy would be to *temporarily* conduct seeding into multiple network streams, with what can be referred to as a 'light touch'. These quick information bursts in the smaller communities promote global bursts to be more authentic with an increased influence to audiences. [8]

Fig. 2. Modularity report from Gephi showing 188 communities.

After identifying the modularity, we partitioned the data further by follower count in order to identify small world clusters (see Figure 3). The colored cliques represent small worlds with larger follower counts. The weak ties helped bridge the different small worlds.

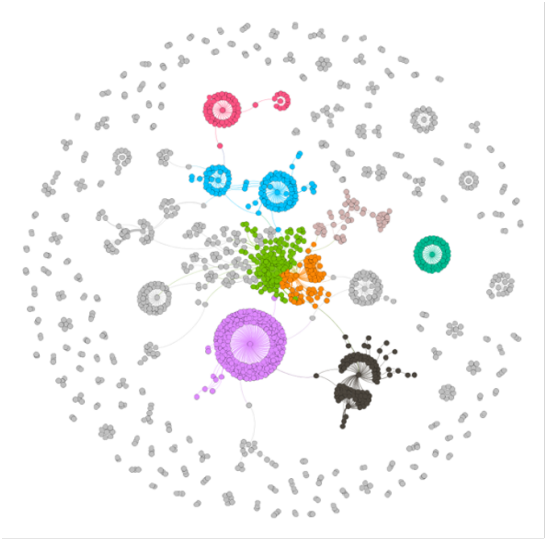

Fig. 3. Small world networks, the central nodes in the colored networks represents a node with a high follower count, i.e., @cnn has 40.2m followers on April 22, 2018.

This was further refined to visualize what the larger clusters were within the network as seen in Figure 4. Of note, the larger clusters were media outlets which have

extremely high follower counts. These media outlets were more in tune with the Starbucks controversy [7] as depicted with the larger clusters from @CNN, @FOXNEWS, and @CBSNEWS based off of the overall messaging.

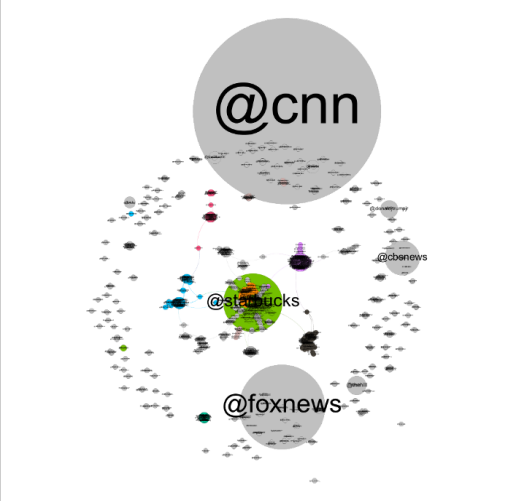

Fig. 4. Clustered network depicting media outlets with the highest followers pushing information.

The key takeaway identified was that media outlets may not have tweeted directly about the controversy, rather they were tagged in relation to using a specific hashtag, a representation of this is displayed Figure 5. Tagging the influential media outlet encourages the message/tweet to spread throughout the community of small clusters.

Fig. 5. Screen shot of Tweet collected via TAGS. @CNN and #Starbucks were part of this Tweet and fell within the dataset collected.

The sentiment analysis was created by using the TextBlob library within Python to create an output file with a sentiment value per tweet. TextBlob is a Python (2 and 3) library for performing complex analysis and operations on textual data. It provides a simple API for diving into common natural language processing (NLP) tasks such as part-of-speech tagging, noun phrase extraction, sentiment analysis, classification, and translation. We used the default PatternAnalyzer sentiment module to analyze our

data. TextBlob returns polarity and subjectivity of a sentence. Polarity lies between [-1,1], -1 defines a negative sentiment and 1 defines a positive sentiment. Each sentiment value was converted to a positive (>0), negative (<0), or neutral (=0) opinion based on its value and depicted in the next section below.[1]

4 Analysis of Results and Findings

As many controversial topics within the United States often become a global discussion, we also observed the different languages used throughout this network to identify patterns of potential change in language distribution. We used Tableau and compared the language distribution within the dataset collected by TAGS on both April 13th and April 21st, 2018, respectively. The controversy remained a North American English driven discussion (see Table 1 below).

Language	Week of 4/13	Week of 4/21
en	91.2%	97.3%
ja	3.9%	0.4%
es	2.6%	0.8%
en-gb	0.5%	0.3%
fr	0.4%	0.2%
de	0.3%	0.0%
pt	0.2%	0.1%
it	0.1%	0.1%
nl	0.1%	0.0%
tr	0.1%	0.0%

Table 1. Comparing language trends. English was the prevalent language.

The sentiment analysis provided an observation into the event that occurred, and the response taken by Starbucks. Figure 6 below clearly shows a significant shift from neutral tweets the day after the event occurred, to positive tweets a week later. During the week Starbucks announced that it would be shutting down all 8,000 stores and holding racial-bias training. [9] This data (1,610 Tweets) suggests and supports that Starbucks' crisis management campaign had largely worked.[2] The purely negative tweets did not

[1] The text blob tutorial guide provides a further information and is a tool for researchers found at this link (https://textblob.readthedocs.io/en/dev/).

[2] "In March 2015, Starbucks announced the Race Together Initiative. The purpose was to inspire Americans to start a dialogue about race, race relations, and racism throughout the country. Starbucks announced that baristas would write "Race Together" on coffee cups with the goal of triggering conversation with the customers." [10] This public relations (PR) campaign is the first identified Starbucks race related PR event by these researchers. It is presumed by these researchers that Starbucks continued to develop lessons learned from this event to enable future mass media communications.

change significantly, however, those that may not have made their mind up about the incident, could have been swayed by how Starbucks handled the crisis.[3]

The comparison between the two dates indicated that English decreased by 4.5%. Additionally, the sentiment analysis was congenial to have and did not sway the conclusion left or right. Figure 6 goes onto graphically display the large sway in audience response between 13 April 2018 (neutral to Starbucks at 53.20%) and 21 April 2018 (positive towards Starbucks at 53.41%), depicting 'fence sitters' who had previously remained neutral, swinging 99.6% in favor of Starbucks.

Rather, this exploration provided anecdotal evidence in favor of Starbuck's information management, indicating little interest globally on this topic. We found this relevant because it can provide an indication or warning (I&W) of the potential for this to spread adversely across the globe.

Of interest, was the slight increase in Japanese. A different study on this topic identified that "America has polarized Japanese views and values when considering activism efforts pertaining to the fight for social justice for black individuals." [11] It is unknown, but possible that Philadelphia had a Japanese influence with this particular event and this topic may have started to tick upwards slightly, but further analysis would be needed to confirm.[4]

In this particular study it appears to have no impact, but nonetheless it is recommended to monitor.

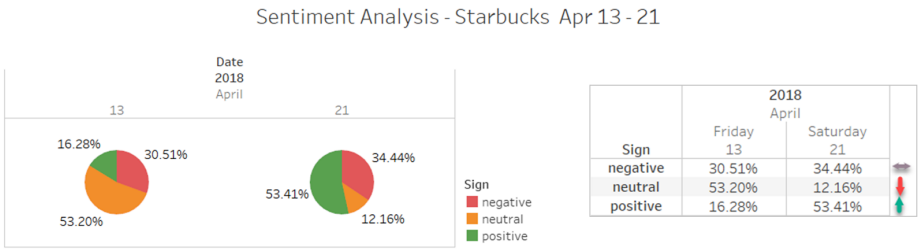

Fig. 6. Tableau was used to chart the sentiment data from the Python output. The pie chart on the right shows a large shift from neutral to positive sentiments.

Detracting from the clusters and creating mass opinions throughout the network appears to have happened in this particular study. This effect was created via two different methods. The first being the use of large influencers being mentioned, retweeted or quoted. This relates to Key Player Positive (KPP-Pos), which the key player set is maximally connected to all nodes. [5] These actors within the graph that have a high KPP-Pos would be maximized to distribute information, even indirectly or without implicit

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[3] For clarification, a positive tweet does not necessarily indicate positive sentiment towards Starbucks, as this could be a result of the release of the two African American men.

[4] The U.S. has 22 Japanese consulates, of which one is in Philadelphia. This indicates a large enough local or regional presence of Japanese to provide consular support. (https://www.cia.gov/the-world-factbook/countries/japan/)

knowledge of that actor. Tapping into this maximal node through this method is normal and social media was created with this pretense in mind.

The second method was through the very nature of the weak ties in the network. If a particular cluster's prominent discussion surrounded a hashtag such as #backtheblue, it would not appear that this would have any relation to the Starbucks discussion at all. Through what Granovetter defined as weak ties, these discussions broke through into the larger discussion, thus creating influence on these clusters.

In no way is this suggesting that the media were the causation of this topic, the media accounts were merely the critical nodes for behavior change as they optimally spanned the network. Also, in no way are weak ties intended to be the causation of topic change, they are a naturally occurring and proven in social science studies. What is relevant is that this topic emerged naturally with social media acting as a medium to promulgate. This study demonstrates that understanding and utilization of social theories and integration of social media analysis techniques can benefit organizations in developing successful communication campaign whether it be for target marketing or crisis management. In summary, to arrive at this conclusion, the following analyses were conducted:

- Messaging is broken down to several small worlds with tight clusters of nodes that are connected to other clusters within the network via weak ties.
- Detraction from the clusters created mass opinions throughout the network, which can have effect globally, hence the importance of weak ties.
- Anecdotally, due to the modularity, this network was subject to quick narrative change via the smaller clusters through what we have termed a 'light touch'. Meaning, that minimal effort was required to conduct injects.
- Tagging large influencers (in this case media outlets) allowed for quick dissemination to the smaller networks; thus, enforcing the KPP-Pos theory.
- Both language distribution and sentiment analysis provides enough of an indication to increase monitoring or messaging to a particular audience.

5 Conclusion and Future Work

This paper focused primarily on weak ties and how they appeared to promulgate the network and information flow and is contributory in nature to fostering both internal and external collaborative research amongst academia as well as other industry professionals.

The aforementioned bullets provide a high level academic and social networking approach for a social media monitoring/messaging cell to have an effect on the information environment. This is not all inclusive as timing, visuals/graphics, and sometimes luck tie in at the operational level. This does provide a proven scientific approach to being effective, which would ultimately drive costs (up or down) for a brand.

Alternatively, what was not identified is what the effectiveness of strong ties are for social control. For instance, a strong tie could fall under the 'second-order free-rider problems [12], whereas a node or organization with a high efficacy of influence can control or play a crucial role in collective action.

This is completely contradictory to Granovetter's work and widely cited theory on weak ties, but it provides a counterargument as to why strong ties may be even more important than what was previously thought. [13] Combining this proposed research with a collective action focus appears to be where electronic communications are currently self-organizing and a shared practice may lie. This is a preliminary thought that research, modeling, evaluation and peer reviews would be necessary to validate this hypothesis.

Based on our observations presented in this paper, it shows that Starbucks had a clear communications plan based on lessons learned from previous public relations campaigns, one of which was provided as an example in this paper (the 2015 Race Together Initiative). Our study shows the network moved in favor of Starbucks.

Weak ties to the narrative rescue provided the foundation for tying in the greater network, which ultimately detracted from the clusters to create mass opinions and allowed Starbucks to maintain their ethical footprint, credibility, and continued customer loyalty to the brand.

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