The mystery of the Domino's Pizza Crisis

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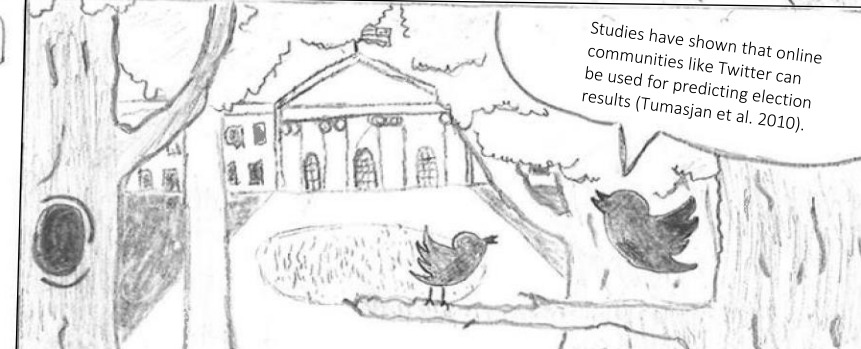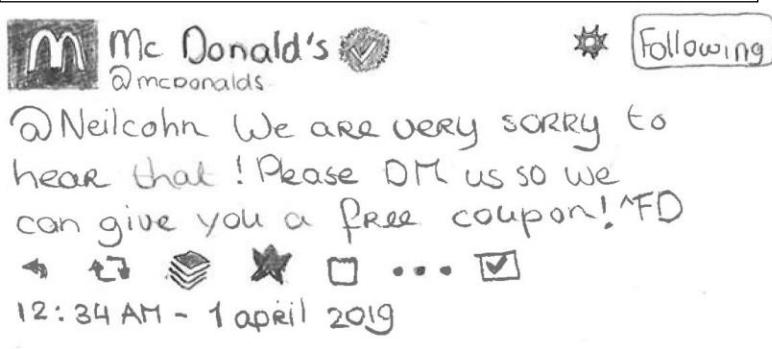https://www.aaai.org/ocs/index.php/ICWSM/ICWSM12/paper/viewPaper/4672

**Introduction** Social media has become prominently popular in society.

Tens of millions of users login to social media sites like Twitter to disseminate breaking news and share their opinions and thoughts.
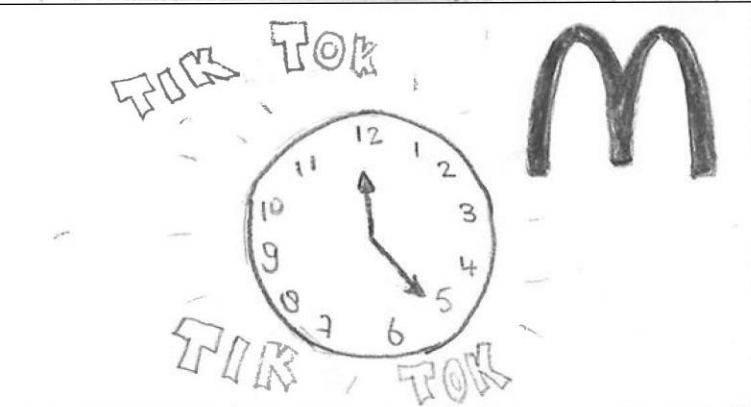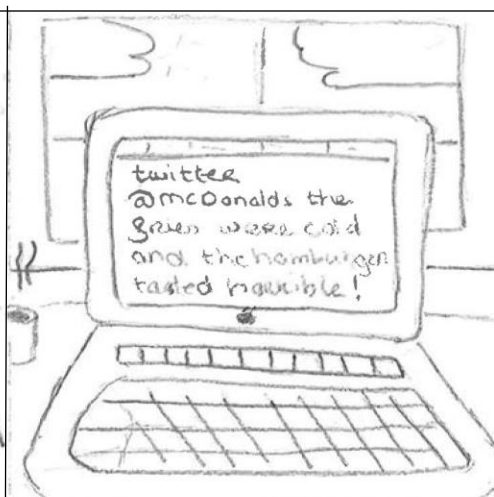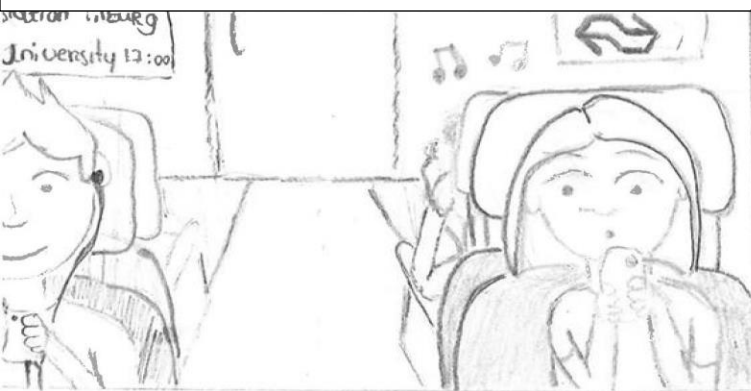
Nowadays, however, the public expects companies to apology promptly (within 24 hours) and have to response directly via social media—the channel in which a crisis occurs.

Studies have shown that online communities like Twitter can be used for predicting election results (Tumasjan et al. 2010).

The researchers attempted to understand how sentiments on corporate bad news propagate in Twitter and whether any social network feature facilitates its spread. This study investigated the domino's Pizza crisis in 2009, where bad news spread rapidly through social media followed by an official apology from the company.

Four researchers of Graduate School of Culture Technology did a Case Study about the Domino's Pizza Crisis.
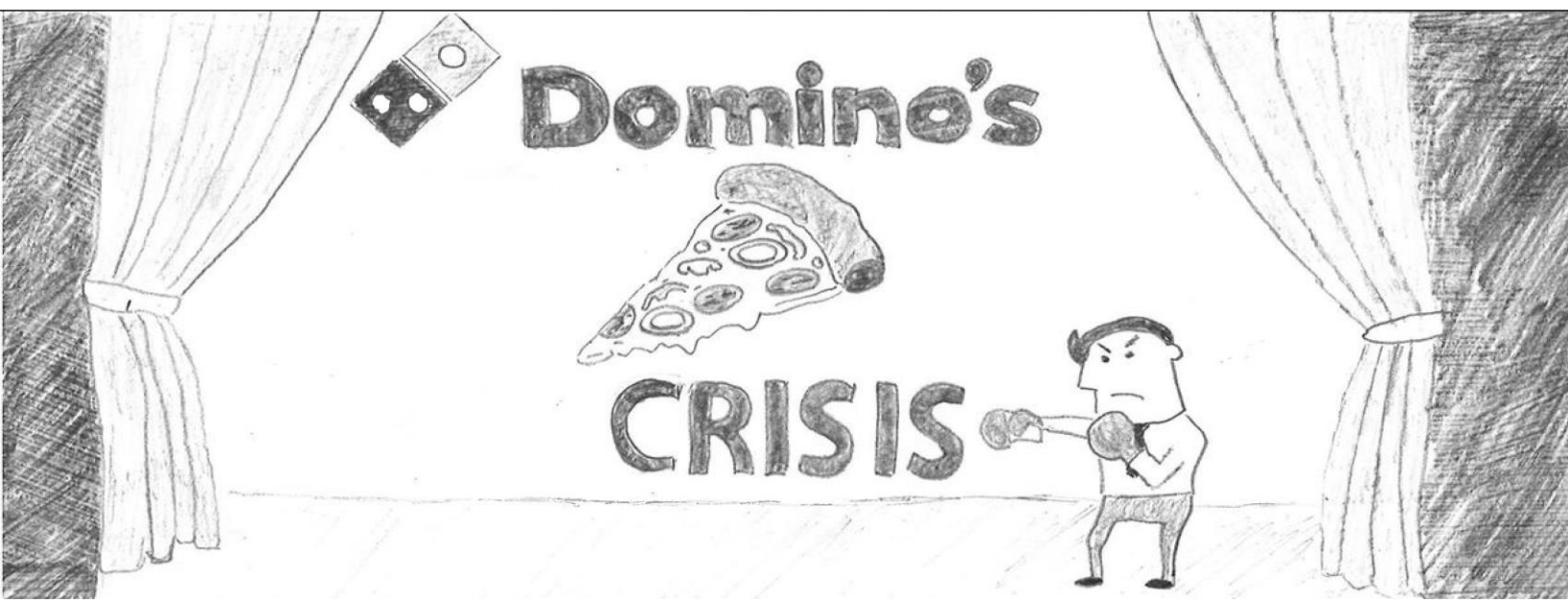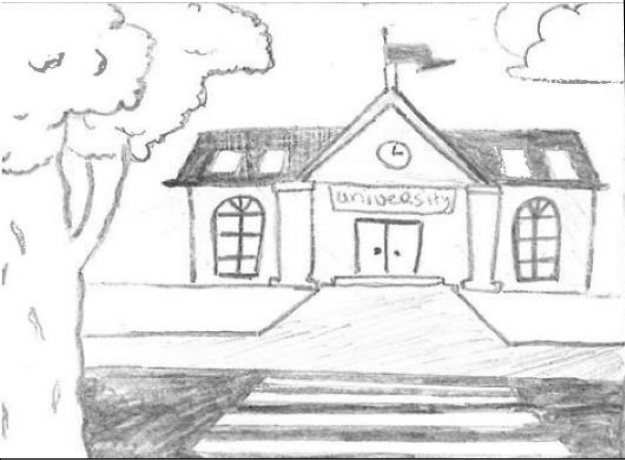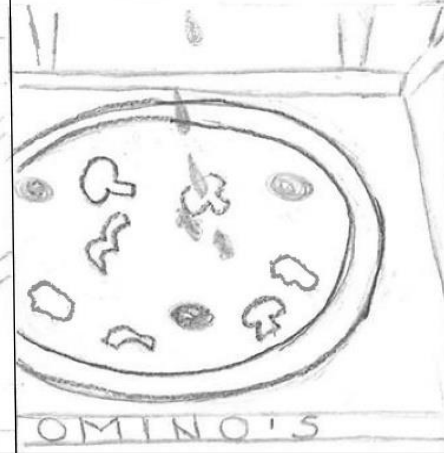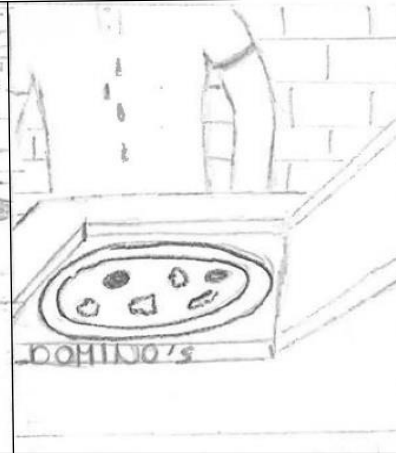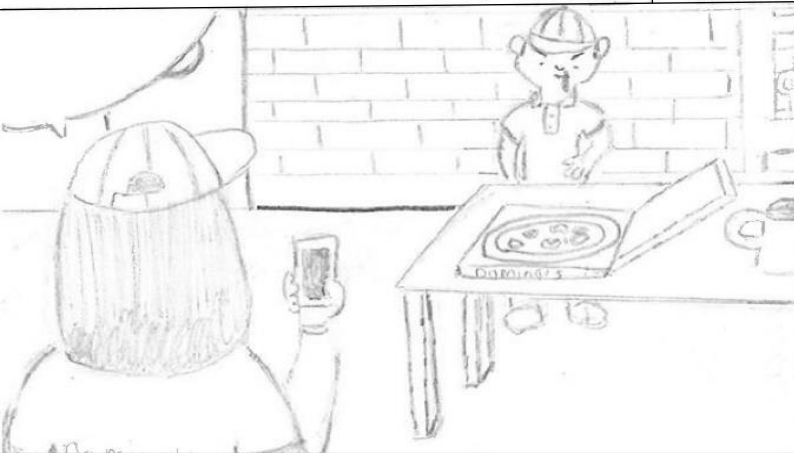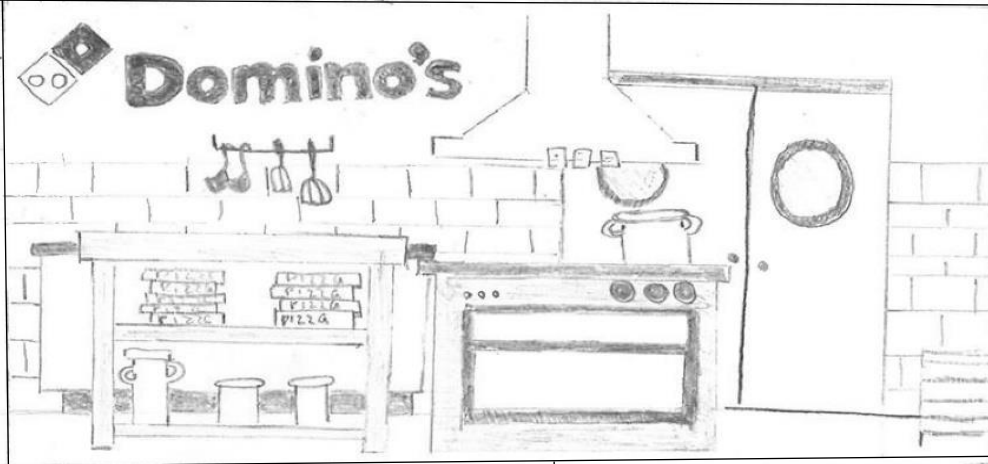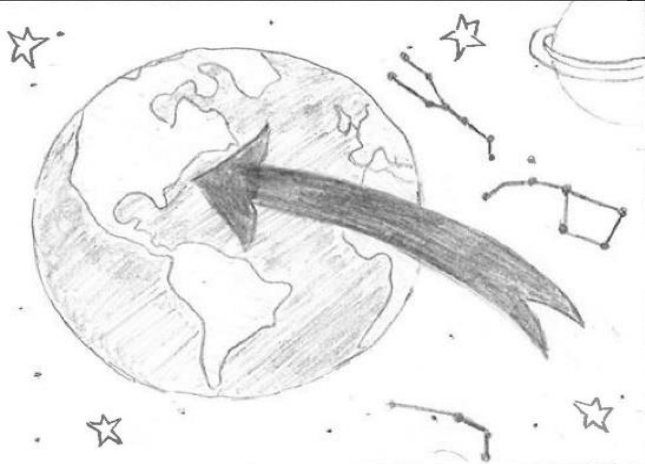
Interestingly, crisis communication researchers have not yet conducted a systematic analysis of public sentiments in social media (Jin & Pang, 2010). So, it is our job to investigate this by conductingan in-depth analysis of public sentiments in Twitter related to the Domino's Pizza crisis.

I think this would be our three research questions:

1. What are the temporal and spatial diffusion characteristics in the spread of corporate bad news?
2. How does the network structure determine the reactions of socially connected users?
3. What kinds of negative and positive sentiments are portrayed in Twitter conversations?

On April 13th, 2009, two employees of Domino's Pizza in Conover, North Carolina, filmed a prank in the restaurant's kitchen and posted a video on YouTube, showing vulgar acts while making sandwiches. The employee in the video put cheese up his nose, nasal mucus on the sandwiches, and violated other health-code standards, while his fellow employee provided commentary. The URL of this video rapidly spread via online social media, especially through Twitter, as soon as it appeared.

The video was viewed more than half a million times in the following two days and prompted angry reactions from the customers and from social media users.

YouTube

Next

Prank Video Domino's
500.000 views

👎 0 👍 100000

Let's burn that place down!

Common dude, this is the 21th century. Let's cause a crisis via Social Media!
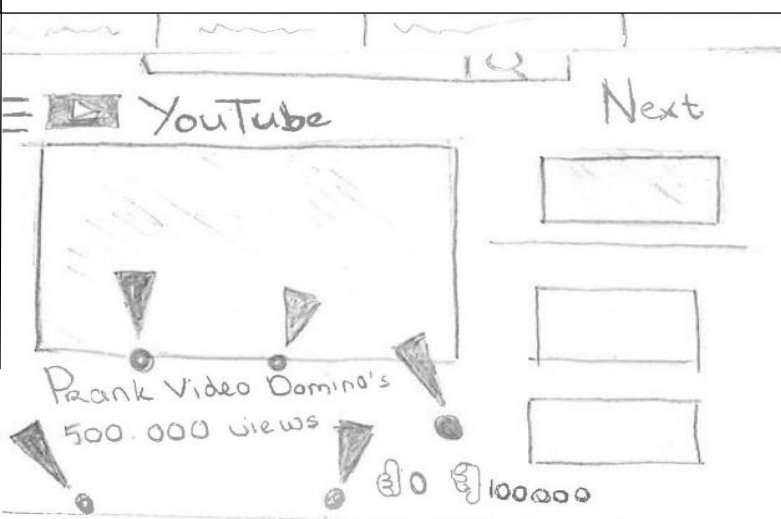
Many people posted negative comments on Twitter.

@Dominois Your pizzas never again!

The employees of @Domino's are so damn gross!!

We need to boycott @Domino's! #Dominosboycott

@Domino's is the most horrible company ever!

In the meanwhile on the Domino's headquarter...
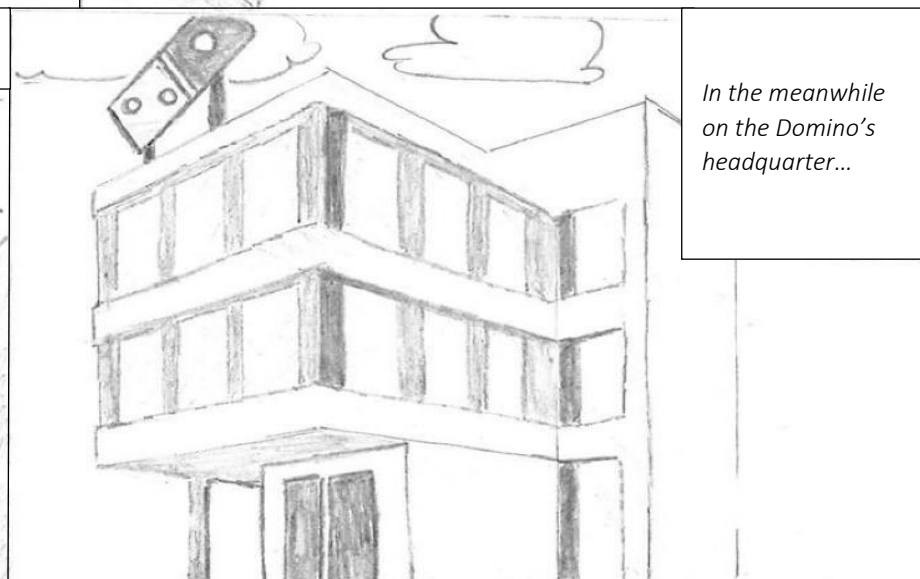
The CEO of Domino's saw the Prank Video and was very shocked. He was even more shocked when he found out that people were posting very negative comments about Domino's on Social Media. He needed a plan to solve this problem.

2016

CEO of the month

2019

Maybe I should make an apology video...
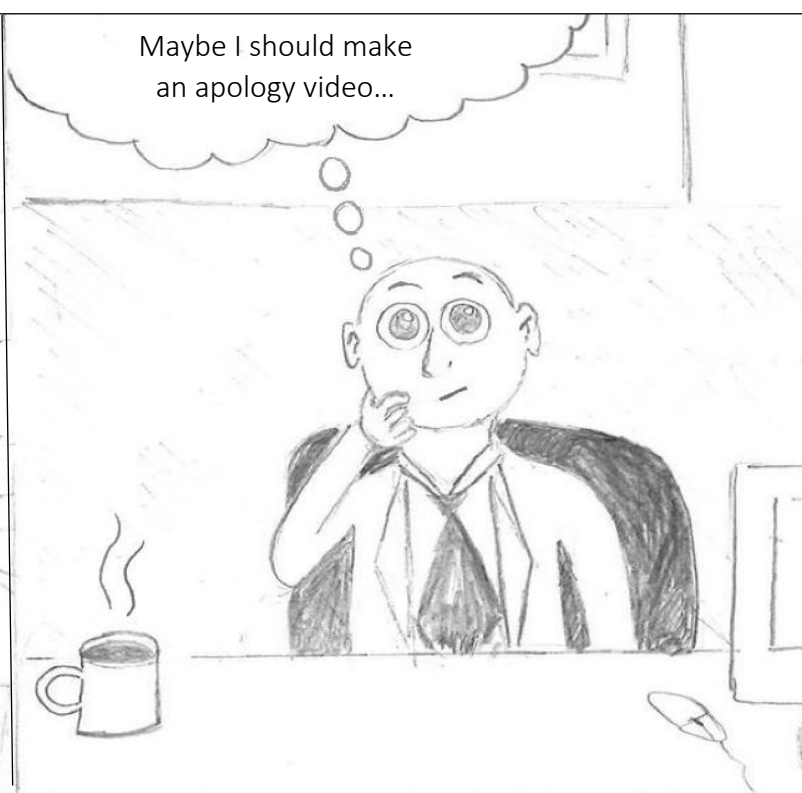
Two days later, on April 15th, the president of Domino's, Patrick Doyle, shot a video directly apologizing about the incident and uploaded the apology on YouTube.

STUDIO

NEWS
CEO Domino's apologizes on YouTube
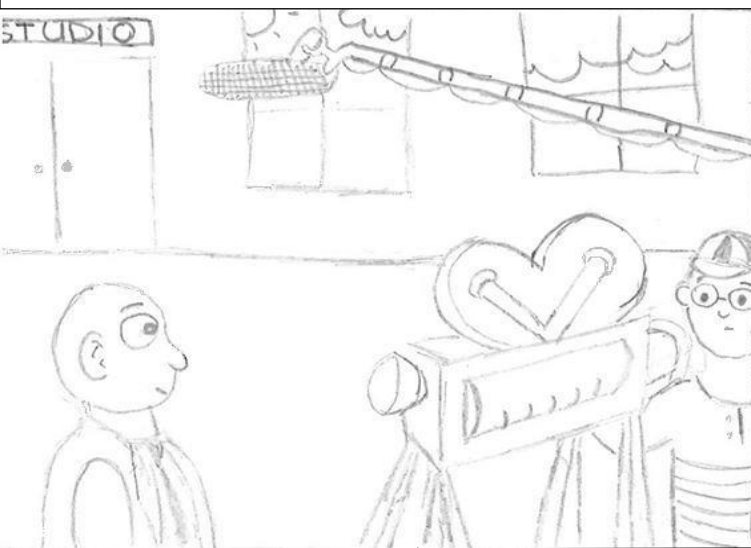
Twitter data

The researchers used Twitter to analyse the Domino's Pizza Crisis. Table 1 displays the number of users, tweets, mentions, re-tweets (RTs), and tweets with URls on the Domino's case. The n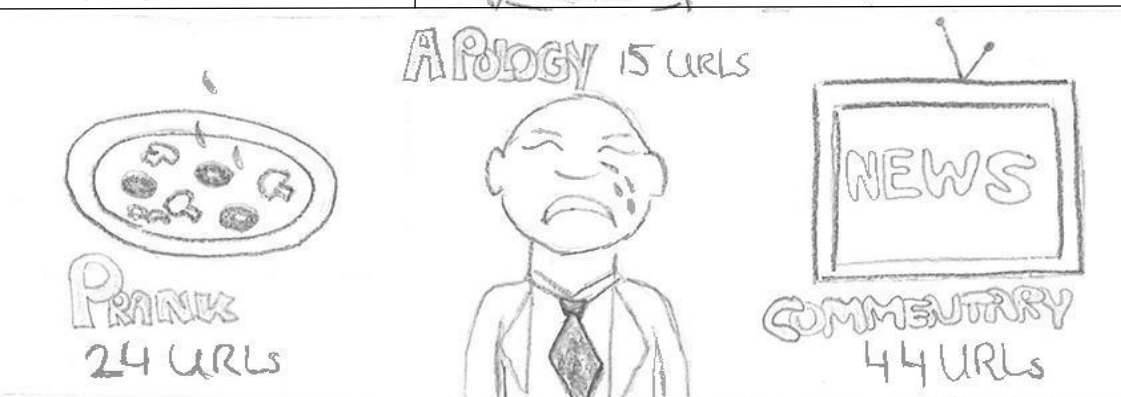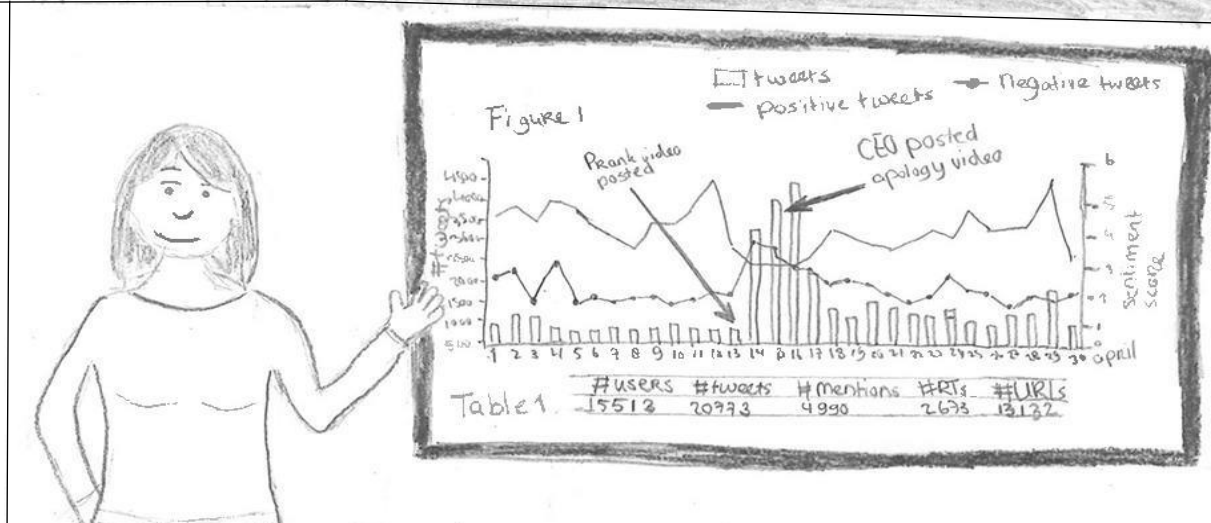umber of users who posted at least one tweet is 15,513. The researchers found that 4,990 of the tweets were mentions, they also found that 2,673 of the tweets were re-tweets.

Overall trend

The bar plot in Figure 1 shows the daily number of tweets containing the word "domino" throughout the month of April in 2009.The line plots in Figure 1 show the level of positive affect and negative affect embedded in tweets over the same time period. Twitter users exhibited a stronger positive affect towards Domino's Pizza except for during the three peak days. Based on a randomly chosen set of 10,000 tweets from the same period, the level of positive and negative affects were 4.24 and 1.65, respectively.


Figure 1

□ tweets → negative tweets
→ positive tweets

Prank video posted

CEO posted apology video

Sentiment score

April

Table 1.

#users	#tweets	#mentions	#RTs	#URls
15513	20973	4990	2673	13132

APOLOGY 15 URLS

PRANK 24 URLs

NEWS

COMMENTARY 44 URLs

URLS used in Tweets

• **Prank**: There were 24 URLs on the prank video, either containing a link directly to the YouTube video or containing a link to news or blog articles which had the link to the prank Video.
• **Apology**: There were 15 URLs on the apology video, either a direct link or a link to a website with relevant information.
• **Commentary**: When a crisis happens, journalists, crisis management consultants, and consumers write various articles to show their points of view on the event. Furthermore, Twitter users often spread the commentaries by linking the URLs. There were 44 URLs on the commentary in total.

Users

• **Isolated users**: those who tweeted independently about the Domino's event and did not follow any other user who tweeted about the same event.
• **Connected users**: those who are connected to other users who tweeted about the Domino's event with #tweets #RTs #mentions.

The researchers compared the difference in sentiments of the isolated users with the connected users. Two-sample t-tests were performed, which showed that there was no significant difference between the two groups in both positive sentiments and negative sentiments (p>.05). This observation indicates that there is no statistically meaningful level of influence of asocial link in the propagation of sentiments shared by two connected users. That is to say, the users that tweeted about the Domino's Pizza incident had similar sentiments, whether they were linked to each other or not.

Connected users
#tweets 2009 #RTs 559 #mentions 535

Isolated users
#tweets 2210 #RTs 243 #mentions 684
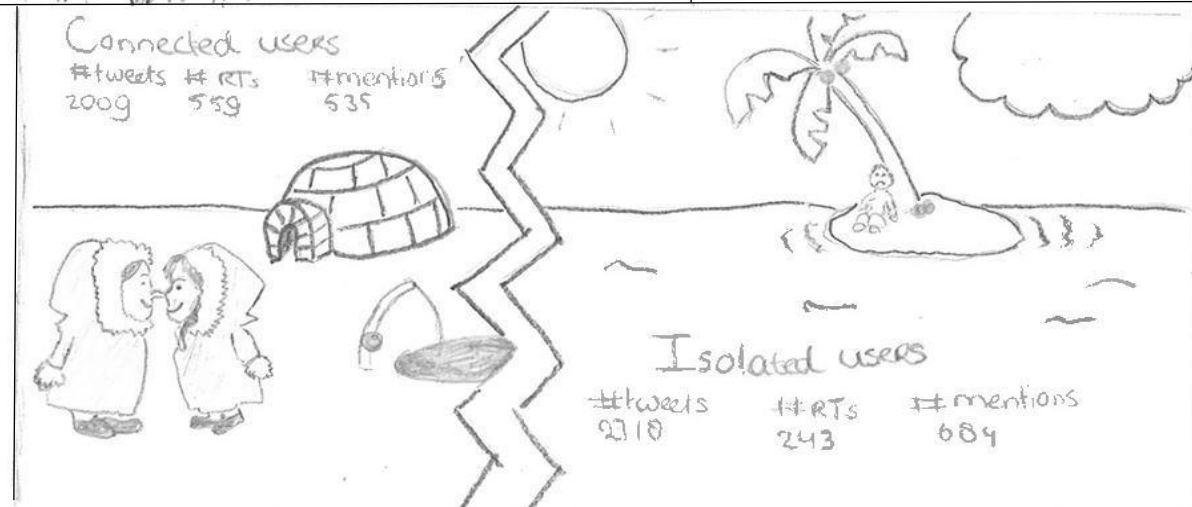
User interactions

Next, we examined the various types of user interactions on Twitter such as retweets and mentions to determine whether tweet sentiments are affected by user interactions.

According to the results of analysis of variance, the tweets that were retweeted had more negative sentiment words compared to tweets without any interaction (called "statement" in the figure) tweets (p<.05). That is, as the tweet introducing the prank video was retweeted on Twitter, people added more negative comments in their retweets. While retweets had more negative sentiments than the statement tweets, mentions had more positive sentiments than the statement tweets did (p<.05). This contrast is worth noticing because it means that when people converse with others about bad news, their choice of words are much more positive than when they simply forward the same piece of information to others.


Qualitative Analysis

The researchers conducted a qualitative content analysis. Qualitative analysis focuses on the meaning of the content, providing a thick description rather than quantification of the data (Geertz 1973). Computerized quantitative content analysis has prestructured content categories, and it can deal with mass content data. In qualitative analysis, the coding scheme is developed during the analysis, but the size of the data is limited. While quantitative analysis can provide a big picture, qualitative analysis can give a detailed picture of the data. No pre-structured coding categories were used. Instead, open coding was used so that relevant categories could emerge. Open coding is the part of analysis that pertains specifically to the naming and categorizing of phenomena through close examination of the data (Strauss and Corbin 1990).

Methods

The researches sampled a total of 860 Twitter conversations from two peak times: 395 from 3:00–4:00, April, 15th, when the video prank by the employees spread, and 465 from 20:00–21:00, April, 16th, when the Domino's President released an apology video in YouTube.

Through continuous review of the data, some tweets were excluded. For example non-English tweets, tweets from other brands or tweets about Domino's that were not related to the crisis. From the 860 tweets, 117 tweets (53 from the 1st peak and 64 from the 2nd peak) were considered as irrelevant and thus, excluded.
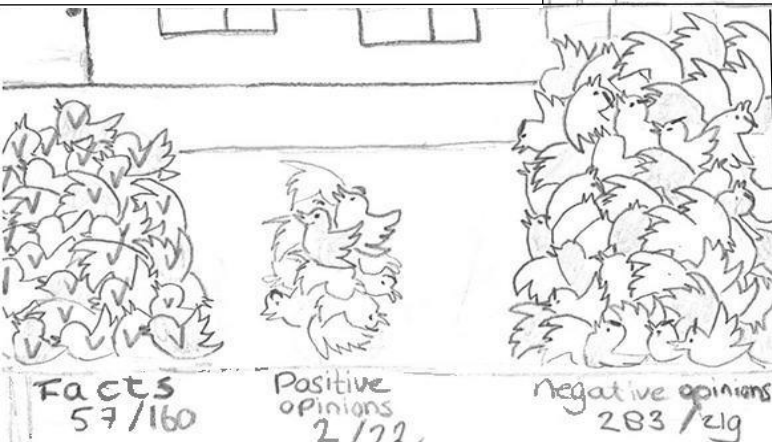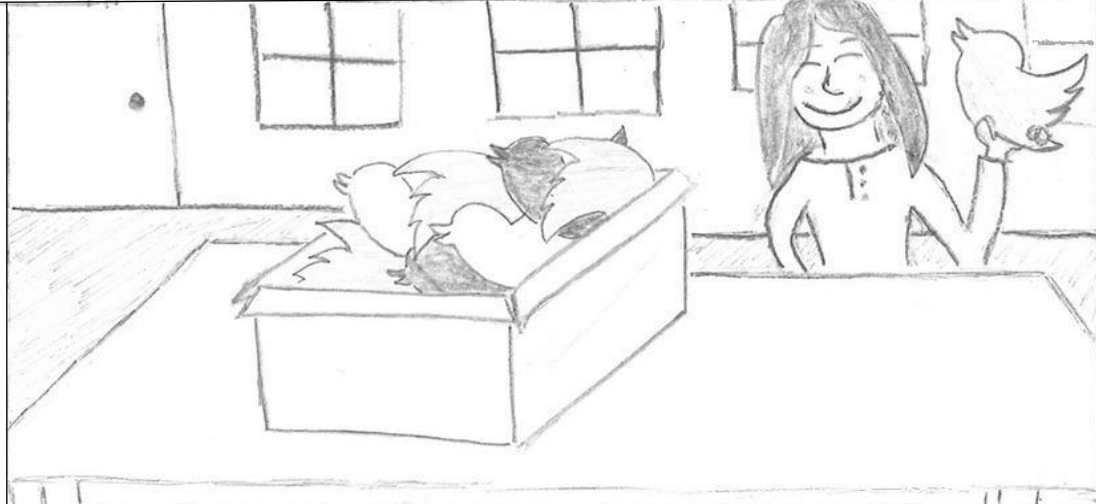
Results

The researchers identified two types of tweet content: facts and opinions. Tweets on facts have no sentiments, but simply state the event. During the 1st peak (right after the launch of the prank video), 57 out of the 342 relevant tweets were categorized as facts, 2 positive opinions and 283 negative opinions. After 2nd peak (right after the launch of the apology video), 160 out of the 401 relevant tweets (39.9%) were facts, 22 positive opinions and 219 negative.

First, after the official corporate apology, the level of negative sentiments dropped from 82.8% to 54.6%. The analysis confirms the expectation of the researchers. The number of actual tweets increased Significantly from 16.7% to 39.9%. Therefore, in Domino's case, the public apology reduced the amount of negative opinions and increased (neutral) facts in Twitter conversations.

When a crisis like this hits a company, they worry not only about their reputation damage but also and probably more importantly about it's impact on sales.

During the first peak, a category on negative purchase intent emerged containing the following three representative types of opinions:
1. **Future intent**: Some users showed that in the future they will not to eat at Domino's.
2. **Persuasion**: Some recommended others not to eat at Domino's.
3. **Perception**: Some tweets confirmed people's past negative purchase intent towards Domino's.
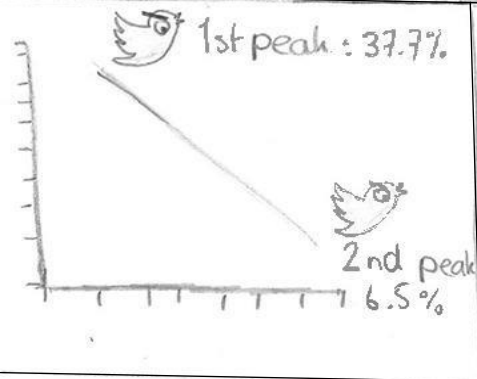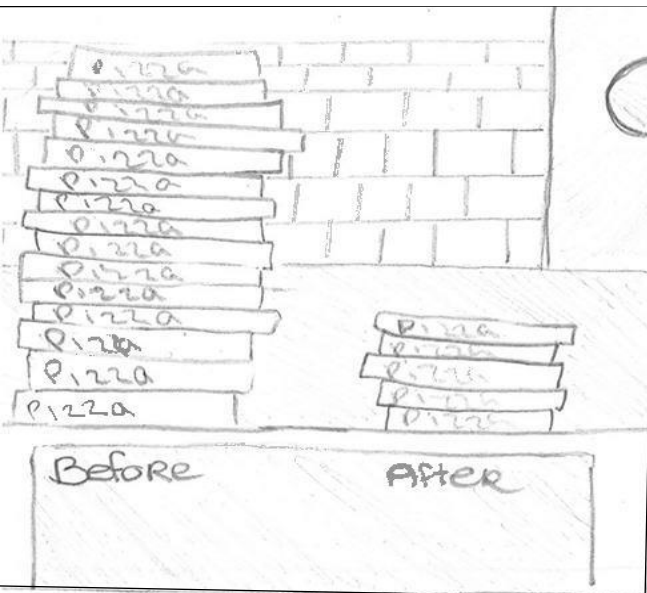
The researchers counted the negative purchase intent in two peaks. It significantly dropped from the 1st peak with 129 tweets (37.7%) to the 2nd peak with 26 tweets (6.5%).
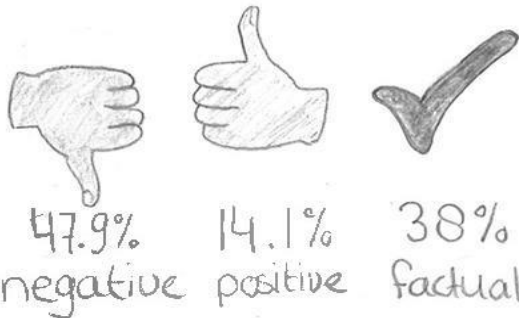
Finally, the analysis confirmed that not all tweets mentioning the CEO's apology had a positive sentiment. A total of 71 tweets (17.7%) talked about the apology, out of which 34 of them (47.9%) exhibited negative sentiments. Ten tweets (14.1%) were positive, while 27 tweets (38%) were factual rather than being opinionated.

Conclusion

When bad news spread, we could not find any statistically meaningful influence of sentiments taking place at the social network level. However, when users interacted with each other, their sentiments changed significantly. People spread and retweeted bad news with negative sentiment, but interacted with other through mentions with relatively positive sentiment. We provide one possible explanation for this result. As people interact with others in social media, they share their feelings and this act could reduce the negative sentiments. From our qualitative analysis, the negative purchase intent emerged as a major negative sentiment category. The CEO's YouTube apology caused a significant decrease in negative sentiments.

Implications & Future research

This study has practical implications for crisis managers in businesses. First, when a company makes a mistake and bad news starts to spread in social media, crisis managers should react quickly, admitting mistakes and apologizing appropriately. Several recent work confirmed the positive effect of CEO's apologies in social media, Twitter and YouTube, both in the US and in Korea (HCD b; Efthimious 2010; Park et al. 2011). Second, companies should start conversations in social media during normal times, not just after a crisis hits the organizations. Third, considering the speed at which bad news spreads, companies should prepare to respond within hours, not within days.