Tweeted Joke Life Spans and Appropriated Punch Lines: Practices Around Topical Humor on Social Media

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During the coverage of breaking news and broadcasts on social media, journalists and audiences alike share links, comments, and opinions in response to new developments. On Twitter, such content can gain increased visibility by receiving retweets from other users, through automated functions, or by manually republishing and modifying comments. This article studies tweeted coverage of the doping scandal involving Lance Armstrong in 2012 and 2013. Humorous framing is found to be popular in this discussion, and such comments experience different longevity to breaking news tweets. With these patterns come new opportunities for users to modify and appropriate punch lines in attempts to receive increased attention—and for the serendipitous creation of similar jokes—which raise questions of authorship and attribution.

Keywords: humor, Twitter, social media, news and commentary, journalism, breaking news, irreverence

Introduction

Social media have become established channels for news organizations to break and publicize stories. During unfolding events, journalists are able to tweet short, immediate updates that can be shared quickly and widely, making information available without having to develop full stories or wait for publication deadlines. The 140-character limit for tweets encourages the inclusion of the most salient details, concisely expressed, and getting the initial information out, to be supplemented by later reports. Breaking a story before rivals can also give Twitter accounts increased attention and prestige, potentially attracting a wider audience as their updates are retweeted across multiple follower networks and time lines. Audiences also use these same social media for both accessing and engaging with news and other media content. In addition to sharing links, Twitter users post their perspectives on these topics in their own tweets. The commentary offered here may vary from considered responses to news to more irreverent, humorous tweets presenting an alternative interpretation of current events.

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The response to breaking news on Twitter, sharing journalistic reports and humorous remarks alike, raises questions about the extent to which different approaches receive attention from social media audiences. This article analyzes social media practices around topical humor within a breaking news context, from retweeting patterns to the creation and appropriation of irreverent content. The analysis focuses on highlighting practices that may impact upon the presence and longevity of topical punch lines, comparing patterns over a long-running news event. The context for this article is the Twitter coverage of the doping scandal involving the U.S. cyclist Lance Armstrong between August 2012 and March 2013. This period encompasses several key developments in the scandal, from allegations and sentencing to confession. For each of these stages the study examines the types of tweets attracting attention through retweets and the life span of news and humorous comments. The patterns identified provide the context for extended analysis of individual tweets and the presence and contestation of topical humor on Twitter.

Research Context

This research draws on previous work that examines information flows on social media, including studies of tweeting and retweeting practices, and the coverage and presentation of breaking news and humorous content on Twitter. There is a wealth of analysis, both qualitative and quantitative, of how Twitter is used for information sharing and commentary purposes. These earlier studies outline key concepts and methods for this article's analysis of attention patterns around news and humor.

Twitter Information Flows and Practices

Tweets offer multiple ways of interacting with other users and connecting to wider discussions. Hashtags (keywords preceded by the # symbol, such as #tdf for the Tour de France) provide a link between a tweet and other comments on the same topic. Other Twitter practices create more direct connections between users. Mentioning another Twitter user's handle prefixed with the @ symbol (such as @lancearmstrong) creates a link to that account. Users may choose this convention to mention others within tweets and to directly reply to previous comments, which can lead to conversational chains of tweets (see Honeycutt & Herring, 2009); this approach may also be used as shorthand for mentioning public figures by their Twitter account name. Twitter users may also choose to repeat others' comments by retweeting—republishing another's tweet so that it is broadcast to their own followers, increasing the visibility of these views in the process. Retweeting is a reactive act in response to a comment and a gauge of popularity and attention; although retweets do not necessarily imply an endorsement of the original comments, they do demonstrate a desire to rebroadcast these comments.

Twitter users may retweet using Twitter's retweet function (or that of a third-party application), or they can manually retweet and modify comments by quoting within new tweets. boyd, Golder, and Lotan (2010) outlined several practices around retweeting, including posting for entertainment and informative purposes and requesting the further spread of information into more follower networks. These practices are not without their issues, though, as users adding their own comments to a retweeted message may remove some previous information to fit the new tweet into 140 characters. These changes can lead to confusion over authorship, intent, and meaning.

Other studies have looked at the life span of tweets. Bruns (2012) raised conceptual and methodological questions about the strength and longevity of connections made in tweets mentioning other users. Kwak, Lee, Park, and Moon's (2010) study of retweeting, meanwhile, found that half of a tweet's retweets came within an hour of publication, and three-quarters had been received in under a day, suggesting that attention for these tweets is fleeting. Additional factors may influence retweeting patterns and intentions, motivated by reasons beyond informing or entertaining. Paßmann, Boeschoten, and Schäfer (2013) noted the presence of retweet "cartels," or clusters of Twitter users who strengthen their interconnections by using retweets and favorites to improve one another's prominence and prestige on social media. Twitter's later introduction of metrics, where users can see the numbers of views, clicks, and interactions their tweets have received, may inspire further strategizing over tweet styles and topical coverage.

What leads a comment to be retweeted can follow similar mechanisms and reflect similar factors that cause other content to be spread widely online. Nahon and Hemsley (2013) studied the determining factors for making online content go viral—attracting extensive attention in a short period of time, spread beyond an initial audience to a mass public and attracting widespread awareness and recognition of the content. Such content can be political in scope, such as the Invisible Children video campaign against Ugandan warlord Joseph Kony (see Kligler-Vilenchik & Thorson, 2015; Lotan, 2012); respond to breaking news and events; or reflect fund-raising and charity strategies, such as the 2014 Ice Bucket Challenge promoting awareness of amyotrophic lateral sclerosis. Viral content can also originate from mundane or irreverent contexts. Shifman (2012) explored memes and viral content on YouTube, highlighting the differences between the two forms: Media that goes viral is spread widely in its original form without further changes by its audience. For memetic texts, though, the audience is involved not just in sharing the content but in remixing, parodying, mashing up, and otherwise altering and imitating it as part of the process of experiencing the text. For both forms, whether viral or memetic, factors such as humor are key elements that can account for the media content having resonance with a wide audience. Nahon and Hemsley (2013) highlighted several information characteristics that shape whether content might go viral, including humor, novelty, resonance, and quality, while also noting that these are not always applicable—to the same degree as one another—in all contexts. Salience for audiences, where content is of note but also of personal relevance or interest, is also a factor.

Many practices on social media, and within Internet culture in general, have become widespread and established because of these connections through information flows and through harnessing humor and novelty—and replicability—in their presentation. The cultural logics of memes mean that such forms can be repurposed for multiple contexts (see Leaver, 2013; Leavitt, 2013; Shifman, 2014; Wiggins & Bowers, 2014). Through devices such as juxtaposition, incongruity, popular culture references, intertextual content, parody, and irony, social media users can provide irreverent responses to topical discussions; using the affordances of different platforms, these responses can both be participatory, in allowing others to create their own versions, and spreadable, as users share comments of interest across networks of friends and followers (see Jenkins, Ford, & Green, 2013).

Twitter, News, and Humor

Practices around information sharing on social media have professional implications for journalists and organizations attempting to disseminate messages to a mass audience. This includes adopting viral and memetic strategies, from humor, personal resonance, and novelty to "clickbait"-style headlines, to make content appealing for both viewing and sharing. The adoption of social media by journalists and news organizations has been studied across contexts and nations (e.g., Lasorsa, Lewis, & Holton, 2011). Hermida (2010) has argued that Twitter inspired "ambient journalism," where social media are always-on, always-available sources of information, with news being shared and developed constantly. Journalists and news organizations monitor such platforms for sudden developments that might be newsworthy, competing with rival accounts to spread the news and gain a wider audience for their coverage (see Hall, Farrington, & Price, 2013).

The coverage of news on Twitter also allows for alternative means of presenting reports. The immediacy of Twitter, especially in documenting events as they happen, may render tweets as "a first draft of the present" (Bruns & Highfield, 2012, p. 25). Lotan et al. (2011) suggested that determining how news is presented is no longer the role of journalists alone. In the case of the Arab Spring, news on Twitter was co-constructed by journalists, bloggers, and activists. News-oriented tweets might include more personal views, emotions, and lighthearted remarks to provide further perspectives and encourage followers to engage with this content. Tweets from the Egyptian uprising of 2011, for example, combined reporting with personal stories, creating a form of affective storytelling (Papacharissi & Oliveira, 2011). Journalists may incorporate humor into their tweets, which may also strengthen connections between them and their followers (Holton & Lewis, 2011).

Breaking news and unfolding events also provide opportunities for other users to share humorous content as part of the topical coverage. On Twitter, comedians and spoof accounts are particularly active and may be prominent within topical discussions; during riots in the United Kingdom in 2012, accounts parodying the Queen and characters from *Harry Potter* were among the 25 most mentioned Twitter users in topical tweets (Vis, 2013). Major media events may also invite irreverent responses inadvertently or through a popular framing of the event, from comedic reactions to a power outage during the 2013 Super Bowl (Blasiola & Carviou, 2013) to the creation of memes depicting individual elements of broadcasts (such as Left Shark or McKayla Is Not Impressed—for the latter, see Leaver, 2013). Similarly, analysis of live tweeting during the 2012 U.S. presidential debates found that, in addition to the inspiration for memes responding to Mitt Romney's "binders full of women" remark, humor was a common feature of many comments from the Twitter audience (Driscoll et al., 2013; Freelon & Karpf, 2015).

These trends fit into a wider context of social media practices, such as recapping and live tweeting (and subpractices of these, such as hate watching and hate reading); engaging with tropes of media content, making ironic comments, and sharing sardonic remarks (sometimes with the aim of getting content to appear in the broadcast itself) are all part of the social media experience of media events (see, e.g., Highfield, 2013). For major news stories, too, these practices can be observed, particularly as stories evolve and attain resonance for different audiences; the case study of the Lance

Armstrong scandal featured in this article demonstrates the presence of such approaches in responding to new developments and revelations.

Method

The analysis for this article arises from a wider study tracking topical discussions and celebrity on social media. Methods and tools featured here have been used previously to capture Twitter activity across a range of contexts, including political discussions (Larsson & Moe, 2012) and crisis communications (Bruns, Burgess, Crawford, & Shaw, 2012). These approaches have proven applicable for the large-scale capture and analysis of tweeted discussions, although they are not without their limitations, particularly with regard to application programming interface (API) access (for analysis of varying Twitter API results, see Morstatter, Pfeffer, Lui, & Carley, 2013).

Between August 2012 and March 2013, tweets containing the keyword "armstrong" were captured through the Twitter Streaming API using the open-source tool yourTwapperKeeper. The catalyst for the data collection was the recommendation by the United States Anti-Doping Agency (USADA) that the cyclist Lance Armstrong be stripped of his results and titles, including his record-breaking seven Tour de France victories, accusing him of using performance-enhancing drugs during his professional career.

However, the resulting data set extends beyond Lance Armstrong–specific tweets. yourTwapperKeeper works by constantly querying the Twitter Streaming API for a particular term, whether a keyword or hashtag. The term may appear in the text of tweets, in links, or in usernames. Querying for "armstrong" will thus also return tweets from users with "armstrong" in their name, including @lancearmstrong. Similarly, just because the Lance Armstrong case was a major news story at points during the data collection phase does not mean that all the tweets gathered were about this specific Armstrong.

The data collection period for this research spanned August 24, 2012, to March 5, 2013. All dates and times in this analysis are local for the researcher; given the scandal's international attention, no one particular time zone served as the "local" time for this story. The capture was interrupted on several occasions for server maintenance. This study, then, does not present a complete data set of all "armstrong" tweets over this period. However, given the practical limitations for researchers to get unrestricted access to Twitter archives, drawing on partial data sets still allows studies to identify activities of interest and uses of social media that can be analyzed further in follow-up work.

The data set underwent a series of filtering processes, including identifying patterns during specific periods and isolating tweets mentioning "Lance." Quantitative analysis identified the most popular content, in terms of the most retweeted comments, and the most active and most frequently mentioned users within the data set. This allows for the location of news and humor-oriented tweets within the topical data set. Manual coding by the author was carried out for the most retweeted comments during specific periods, denoting each tweet as news, humor, or opinion based on its content, tenor, and apparent intentions. The coding took into account contextual factors, including the user authoring the tweet and his or her other comments, to determine the overall tone of the social media discussions. This was an

exploratory process, providing a guide to popular responses; the categories were not mutually exclusive, and the coding was not extended to the entire data set. Where tweets might fit into multiple categories, this is noted in the discussion. Finally, selected topical humor was studied on an individual basis to determine additions, modifications, annotations, and responses to both the scandal and the tweeting practices examined here.

Results

The unfiltered data set contains 5.6 million "armstrong" tweets from 172 days (22 additional days returned no data because of the limits noted above). The peak activity was on August 26, 2012, when 1.2 million tweets were captured. This date also accounted for the highest number of contributing Twitter users per day, with 977,444 users. The following analysis focuses on subsections of this activity. The data set was filtered to specific time periods and themes, with particular spikes the focus of this article. The three main spikes in activity—on and around August 26, 2012, October 22, 2012, and January 19, 2013— were used as starting points for the analysis.[2]

August 2012

The first days covered in the data set represent a period of intense attention and discussion around "armstrong." In the aftermath of the USADA's recommendation to strip Armstrong of his results and give him a lifetime ban, August 24 was the second most active day in the entire data set, with 269,001 tweets. This was overshadowed by the activity two days later, where over a million "armstrong" tweets were captured. These days demonstrate the unfocused nature of the original data set, though; while the initial activity on August 24 was predominantly Lance Armstrong–related, the later comments were in response to unrelated news. On August 26, 2012, the death of the astronaut Neil Armstrong was announced; as the first human to set foot on the moon, Neil Armstrong occupied a particularly prominent place in human history and endeavor, and his passing was met with widespread tweets reporting the news and sending out farewells and appreciative remarks.

Although the spike on August 26 reflected increased commenting on Twitter about "armstrong," then, this was not entirely related to the Lance Armstrong case. However, this is not to say that the two stories were completely unconnected; some Twitter users made associations between the two stories in their comments, for humorous purposes or, in some cases, having confused Neil Armstrong and Lance Armstrong. On August 26, 39,000 tweets mentioned "Lance," a not-insignificant number even when compared with 1.1 million mentions of "Neil."

During this period, the 10 most retweeted Lance-related comments (based only on standard retweets, not modified versions) were a mix of breaking news, opinion, and humorous content. These tweets are listed in Table 1. Mainstream media (MSM) accounts, including sports-specific news titles and

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[2] Tweets here are presented without user names, and with mentions of users other than Lance Armstrong redacted. This study does not discriminate between authentic and spam users, including bots, because all these accounts are part of the Twitter landscape.

press agencies, account for three of these comments, and two link to these stories through a breaking news-specific account. Each of these news-related tweets covered the USADA recommendation, and Armstrong's decision not to appeal, and included reports from English- and Spanish-language sources.

The tweets featured in Table 1, and in later tables, represent comments from users with extensive follower numbers and from less well-known accounts; although the size of a user's audience can make high numbers of retweets more or less likely, this is not a given. Some tweets originated from less prominent accounts and were amplified by celebrity Twitter users; this is examined further in the concluding discussion. The analysis did not control for the celebrity status of the accounts featured, since the amplification process is a key mechanism for the sharing of content and opinions on social media. Accounts could have thousands of followers, as international celebrities or global news organizations, or they may be followed by substantially fewer users; less well-known accounts, though, could still use "micro-celebrity" practices within their social media networks, which may shape the role they play in disseminating views through Twitter (see Marwick & boyd, 2011).

Table 1. 10 Most Retweeted "Lance" Comments, August 24–27, 2012.

Tweet	Type	Source	Number of retweets
The number of people confusing Lance Armstrong and Neil Armstrong right now is a testament to how Michele Bachmann is a congresswoman	Opinion	Tech/culture writer	3,302
you suck USADA . @lancearmstrong is a hero—leave the man alone . . . http://t.co/NQ5cWk7Q	Opinion	Actor	3,240
USADA to strip Lance Armstrong of 7 Tour de France titles, ban him from cycling for life [redacted]	News	Breaking news account	3,096
Lance Armstrong perderá los siete títulos del Tour de Francia http://t.co/hWsE4eNX en [redacted]	News	Mainstream media (MSM)	2,334
Lance Armstrong abandons fight against doping charges. Will be stripped of Tour de France titles and banned for life. Story to follow.	News	MSM	2,127
Retweet this, if you have won the Tour De France as many times as Lance Armstrong.	Humor	Parody	1,756
USADA strips Lance Armstrong of Tour de France titles, issues lifetime ban from cycling [redacted]	News	Breaking news	1,544
USADA to strip Lance Armstrong of 7 Tour de France titles, ban him from cycling for life.	News	Press agency	1,430
Lance Armstrong is banned from cycling for life. If you see him on a bike, please knock him off and then shout, "NO!"" right in his face.	Humor	Comedian/ radio	1,354
RT [redacted] if you have as many Tour De France wins as Lance Armstrong.	Humor	Sports/ humor	1,321

News tweets attracted more retweets than humorous comments, which appeared three times in the 10 most retweeted posts; one joke ("Retweet this, if you have won the Tour De France as many times as Lance Armstrong") appeared twice, posted by different sources. However, during this period, neither news nor humor accounted for the most retweeted comments; instead, opinion and commentary from nontraditional sources—a technology writer and an actor, respectively—received 3,302 and 3,240 retweets. Rather than reporting news, these tweets put forward opinions that other Twitter users might share. The first expressed exasperation at people confusing Neil Armstrong and Lance Armstrong, and the second criticized the USADA while maintaining support for Lance Armstrong.

October 2012

The second spike in activity occurred over the period October 16–25, 2012. Immediately prior to this, on October 10, 2012, the USADA released its report on the Armstrong scandal, including statements from former teammates of Armstrong testifying to doping both on their part and Armstrong himself (the immediate reaction to this report is not featured in this data set due to technical outages). A week later, on October 17, Armstrong resigned from his Livestrong nonprofit organization and lost his contract with sportswear company Nike. Meanwhile, the International Cycling Union (Union Cycliste Internationale, or UCI) decided on October 22 that it would not appeal the findings of the USADA report, accepting the recommendations that Armstrong lose his results and titles. This announcement led to two days of increased "armstrong" tweeting. Explicit mentions of "lance" and "armstrong" were found in 93,542 tweets and 83,874 tweets on October 22 and 23, respectively.

The most popular retweets during this period featured humor as a prominent theme, as seen in Table 2. Indeed, opinion did not appear in the 10 most retweeted comments, with six news tweets and four humorous posts receiving the most retweets. Humor was found in the three most popular comments, although the top tweet was an unusual case because it came from a mainstream media source that also had other news-only tweets widely retweeted during this period. The tweet, "Lance Armstrong now has the same number of Tour de France titles as A-Rod," framed a breaking news story as a punch line. Here, it provided a variant on the previous joke about how many titles Armstrong had won by comparing his new level of success with the controversial baseball player Alex Rodriguez ("A-Rod"), who had previously admitted to using performance-enhancing drugs. Although classified as humor, since that is the overall tenor of the tweet, the wider context for this comment demonstrates a mix of news and humor.

Table 2. 10 Most Retweeted "Lance" Comments, October 15–25, 2012.

Tweet	Type	Source	Number of retweets
Lance Armstrong now has the same number of Tour de France titles as A-Rod.	Humor / news	Sports news (MSM)	5,274
En un día todos hemos pasado a tener los mismos Tours que Lance Armstrong y el teléfono de Paula Vázquez. No está nada mal.	Humor	Suspended account	4,666
BREAKING NEWS: Lance Armstrong disqualified from cheating cancer death. Stripped of remaining testicle. Too Soon? #cycling #justinbieber	Humor	Comedian	4,558
Lance Armstrong steps down as chairman of his Livestrong charity & Nike terminates its endorsement deal w/ the former cyclist.	News	Sports news (MSM)	1,915
BREAKING NEWS: Lance Armstrong stripped of his seven Tour de France titles & banned from cycling for life by the UCI. More reaction on #SSN	News	Sports news (MSM)	1,749
In a way the Lance Armstrong doping scandal proves exercise leads to cheating.	Humor	Comedian	1,456
ÚLTIMA HORA: La UCI le quita los siete Tours de Francia a Lance Armstrong. Más información: http://t.co/Ojy98JGG	News	Sports news (MSM)	1,344
Lance Armstrong stripped of his 7 Tour de France titles (1999–2005), banned for life by UCI » http://t.co/oRvN8M6p	News	Sports news (MSM)	1,335
Lance Armstrong stepping down as chairman of his Livestrong cancer-fighting charity [redacted]	News	Breaking news account	1,236
International Cycling Union strips Lance Armstrong of 7 Tour de France titles. http://t.co/f8MB9g4J	News	MSM	1,074

January 2013

The final spike occurred during the period January 17–21, 2013. In a two-part interview with Oprah Winfrey broadcast on January 17 and 18, 2013, Lance Armstrong admitted to doping during his career. The interviews led to the highest activity in the data set after the initial August peaks, with more than 200,000 tweets initially captured on both January 18 and 19, 2013 (corresponding with the broadcast times in the United States on January 17 and 18); filtered to "lance" tweets, these figures were reduced to more than 130,000 and 150,000 tweets.

However, this spike showcases different responses to the Armstrong story than were evident in the previous spikes. The January 2013 tweets accompanied a development that was still unknown, although highly suspected, but that unfolded through a televised broadcast rather than a breaking news alert. The tweeting patterns here are in response to the news, but they also reflect other uses of social media, including as backchannel for commenting on television (Harrington, 2013).

The most retweeted comments demonstrate the audience for humor as well as news, as shown in Table 3. Humor was the main intention of half of the tweets; of these five tweets, though, two offered the same punch line, and a third covered a similar theme (which is examined later). A popular comedic tweet, and many other comments posted during this period, also offered commentary on other current sports news as Twitter users connected stories in attempts to construct topical punch lines.

Table 3. 10 Most Retweeted "Lance" Comments, January 17–21, 2013.

Tweet	Type	Source	Number of retweets
Thank you, Lance Armstrong, for sitting down with Oprah last night. I missed the interview, but I heard it was dope. #ThankYouNoteFriday	Humor	Comedian	7,193
We should have known better about Lance Armstrong http://t.co/kusHrvNJ [redacted]	News/ op-ed	Entrepreneur	5,074
Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal.	Humor	Writer	4,804
Lance Armstrong is a pussy.	Opinion	Sportsperson	4,033
Lance Armstrong should be applauded for being able to ride on bike so well on drugs. I tried it once & hit a dog and fell into a canal.	Humor	[Since deleted]	3,205
Lance Armstrong's worldwide web of lies http://t.co/iRo69G0F [redacted]	News/ op-ed	Entrepreneur	3,152
Top weekend sports news: 1. Manti Te'o 2. Lance Armstrong 3. Your kid's basketball game. . . . 42. NHL season debut	Humor	Parody	2,615
After years of lying to my face, Lance Armstrong apologizes in an email. He can keep it. My column: http://t.co/KGzyv4hp	News/ op-ed	Sportswriter	2,608
Can't we give Lance Armstrong a break? I tried riding a bike once on drugs. If anything it was a lot harder. I was in a hedge within seconds	Humor	Musician	1,901
Lance Armstrong; Oprah Winfrey; confess— http://t.co/7YQ7XzU1	News	Entrepreneur	1,800

News and opinion accounted for the remaining most retweeted comments. These tweets contained links to analysis of the interviews and to commentary on Armstrong's behavior—including his relationships with, and years of maintaining his innocence to, journalists. The sources for these stories included traditional mainstream media and sports-specific accounts, reflecting the scandal moving from being a sports-only story to a major international media event. Not all popular tweets offered extended analysis in their commentary, though; there were 4,033 retweets of a message that simply offered the author's personal view that Armstrong was "a pussy."

Discussion

The Life Cycle of Retweets

As the most retweeted comments in each of the three spikes demonstrate, both standard news and humorous content receive attention from Twitter users. However, do these types of message follow similar patterns of attention? To answer this question, five specific tweets were isolated from the wider data set. These comprise two news-oriented tweets, two humorous tweets, and one mixed news/humor tweet. All five messages appeared in the top 10 most retweeted comments during one of the above spikes:

Retweet this, if you have won the Tour De France as many times as Lance Armstrong. (August 2012; 3,061 instances) **humor**

Lance Armstrong steps down as chairman of his Livestrong charity & Nike terminates its endorsement deal w/ the former cyclist. (October 2012; 2,119 instances) **news**

Lance Armstrong stripped of his 7 Tour de France titles (1999–2005), banned for life by UCI » http://t.co/oRvN8M6p (October 2012; 1,743 instances) **news**

Lance Armstrong now has the same number of Tour de France titles as A-Rod. (October 2012; 6,069 instances) **mixed news/humor**

Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal. (January 2013; 5928 instances) **humor**

These comments, their retweets, and modified retweets were isolated within the wider data set using a series of keyword filters. For each tweet's filtered data set, hourly and daily metrics were calculated to determine how much attention each tweet received and for how long. Each tweet's hourly metrics were compared to evaluate patterns in retweeting and differences between news and comedic comments. These patterns are shown in Figure 1, which charts the hourly retweets from the first hour in which each tweet was originally published.
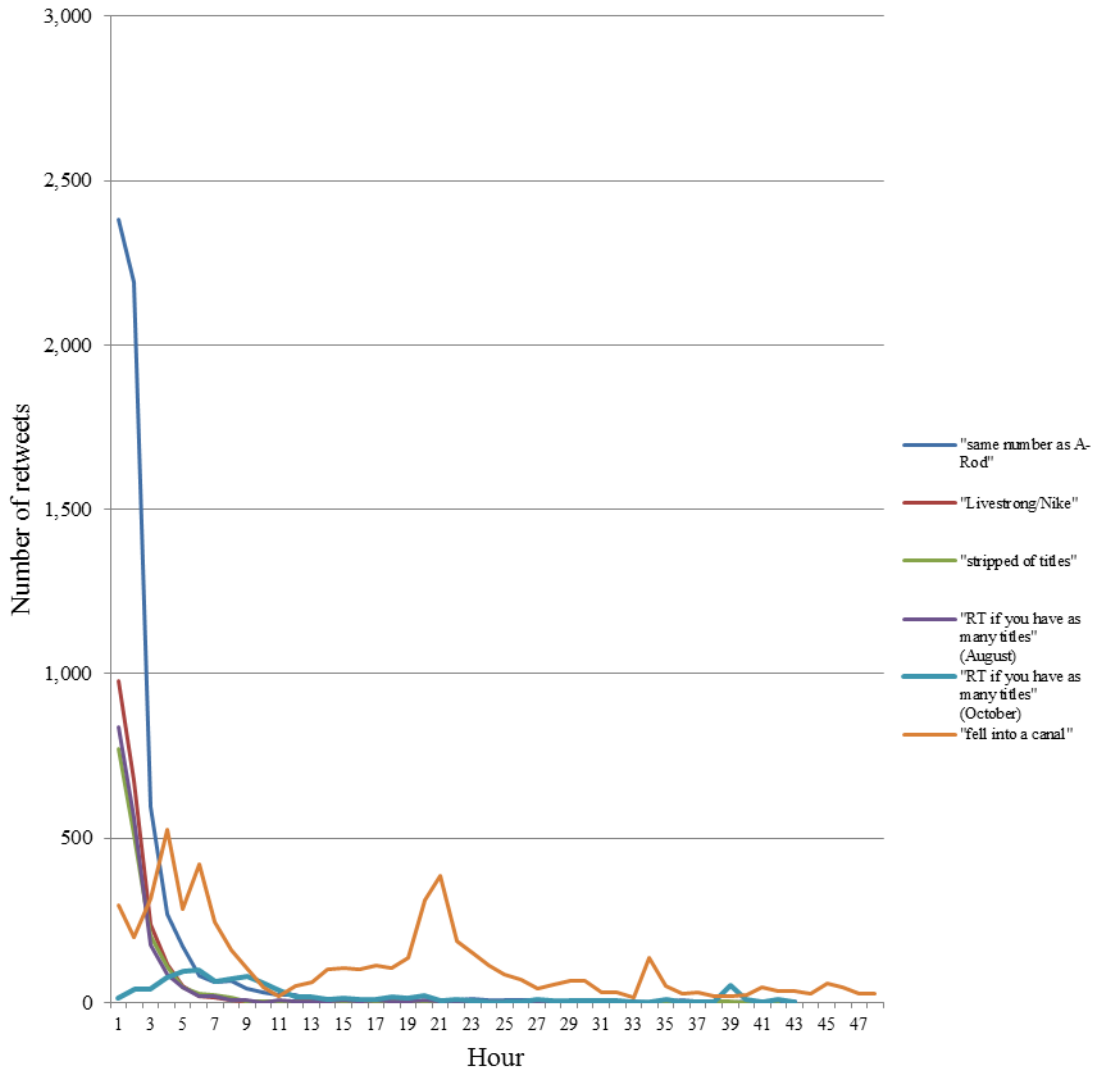
Figure 1. Hourly retweet patterns for selected tweets.

The three news-related tweets (all from the same account) analyzed here followed a regular pattern of an initial spike in attention following the tweet's publication, then a sharp decline until, after a few hours, only minimal retweeting was occurring. The "RT [retweet] if you have as many titles" tweet initially followed this pattern in August 2012; however, it experienced a resurgence in October 2012 following the UCI's decision not to challenge the USADA's suggestions. On reexamination of the data and the posting account, it was found that this joke was posted a second time—as a separate tweet—in October. The following discussion treats the August and October tweets separately. Finally, the tweet from January 2013 followed a different pattern, as initial spikes were followed by a plateau of attention before a secondary spike in retweeting a day later. Of the five tweets, this joke experienced the longest initial life span: This tweet was still receiving more than 20 retweets per hour two days after its publication, after some 5,500 retweets and modified retweets to that point.

The news-specific tweets had a much shorter life span. The tweet about Armstrong leaving Livestrong and being dropped by Nike attracted nearly 1,000 retweets in the hour of its publication. However, five hours later, it was receiving fewer than 20 retweets per hour. In total, 90% of the retweets for this comment came in the first three hours of its publication, and 98% in the first seven hours. Similarly, the tweet about the UCI decision saw 90% of retweets within the first four hours of its publication and a decline to single-digit hourly retweets within nine hours.

This finding is unsurprising: Breaking news gets supplemented by follow-up posts and expanded analysis as more details are revealed. As more people become aware of the news, the need for the initial tweet dwindles as attention on the part of interested readers moves to updated discussions. Once breaking news ceases to be "new," its spread is limited. Furthermore, since the responsible account was not the only one reporting this news, any tweet on the topic is competing with other comments from other accounts covering the story and, in the case of news publications, attempting to get readers to follow them and click through to their journalists' analyses.

Not all tweets from news sources are straight reporting, though; the final news-related tweet featured here reported Armstrong's loss of his titles, but framed it in a more jocular manner. This tweet attracted the highest initial attention of the five selected comments, with 2,381 retweets within the first hour of publication. As with the other news tweets, most retweets occurred within a few hours—90% of retweets were generated within five hours. However, there is a longer plateau of attention than seen with the news-only tweets; although retweeting only occurred at a rate between 22 and 82 times per hour, there was still ongoing activity at or above the double-digit level for 12 hours. Furthermore, the tweet received at least two retweets per hour for 33 hours following its publication, whereas the news-only tweets both saw a maximum of 14 consecutive hours of retweets.

The combination of news and more humorous or snide overtones extends the life span of tweets; once the news is broken, an original or alternative interpretation of the story may attract continued attention beyond the reporting of the initial facts. Encouraging user reactions can also cause increased activity if the strategy is successful. The first humorous comment actively sought retweets in noting that Armstrong now had zero Tour de France titles. User interest varies, though. The August tweet followed similar attention patterns to the news tweets, with retweets peaking in the first hour and declining to

minimal hourly engagement after seven hours. This may be due in part to the state of the story, as Armstrong had not officially lost his titles at that stage. When the USADA's suggestions were accepted and the responsible account reposted the joke in October 2012, a longer plateau of attention over 20 hours was achieved (because of technical issues with the data set, initial responses to the tweet are absent from the data set; however, ongoing engagement is still apparent here).

The one-liner posted in response to the first part of Armstrong's interview with Oprah Winfrey confirms the longer life span for humorous content. Unusually, the peak for this tweet came in the fourth hour of its publication, as the joke spread across Twitter. This may be due to the lower profile of the tweet's author than the accounts of major news media or professional comedians. With fewer initial followers to see the original tweet, continuous retweeting and ongoing attention relied on the comment reaching followers of followers.

Additional attention can be garnered by prominent accounts sharing original comments; in this case, for example, the comedian Tim Minchin spurred further retweets from his followers by retweeting the joke himself. Finally, the life cycle for this tweet also reflects the nature of the story at this point, as a secondary spike in attention coincided with the broadcast of the second part of the Armstrong interview. However, the humorous intentions of the tweet also gave it longer-lasting relevance for the Twitter audience than an update simply reporting the breaking news that Armstrong had confessed to doping during his career.

Appropriated Punch Lines

The longevity of comic tweets may increase their likelihood of becoming appropriated and plagiarized (see Driscoll et al., 2013). As a joke attracts more attention, other users may look upon these tweets as a means to receiving additional retweets and followers themselves. Similarly, the continued relevance of some punch lines means that they can be repeated and reused in new tweets over time. To analyze these patterns and practices around retweets and topical humor, two punch lines were tracked throughout the "armstrong" data set. The two initial jokes chosen were "Retweet this, if you have won the Tour De France as many times as Lance Armstrong" and "Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal." However, the analysis was expanded to identify any similarly worded and copied versions. This is not to say that these initial tweets were original constructions; the accounts featured here attracted the highest number of humor-specific retweets but were not necessarily the first to post these gags. Queries and criticisms around tweet authorship appearing in the data set are also noted here.

". . . won as many Tour de France titles as Lance Armstrong."

The first joke revolved around users commenting, or retweeting earlier posts, that they now had as many victories as Lance Armstrong. Although the version noted above requested retweets, variations on this theme include framing the joke as a personal observation ("You all doubted me, but the day has come. I have officially won as many Tour de France titles as Lance Armstrong."), and expanding the joke

to comment on other points about Armstrong ("I woke up today and realized I had as many tour de France wins as Lance Armstrong. And twice as many testicles.").

There was an initial wave of tweets around this theme in response to the USADA announcement in August 2012. However, as shown in Figure 2, this punch line had recurring interest in response to the various developments in the Armstrong scandal. The UCI decision in October 2012, for instance, was accompanied by more than 1,000 tweets providing variations on this joke, and even larger spikes followed the Oprah Winfrey interviews in January 2013.
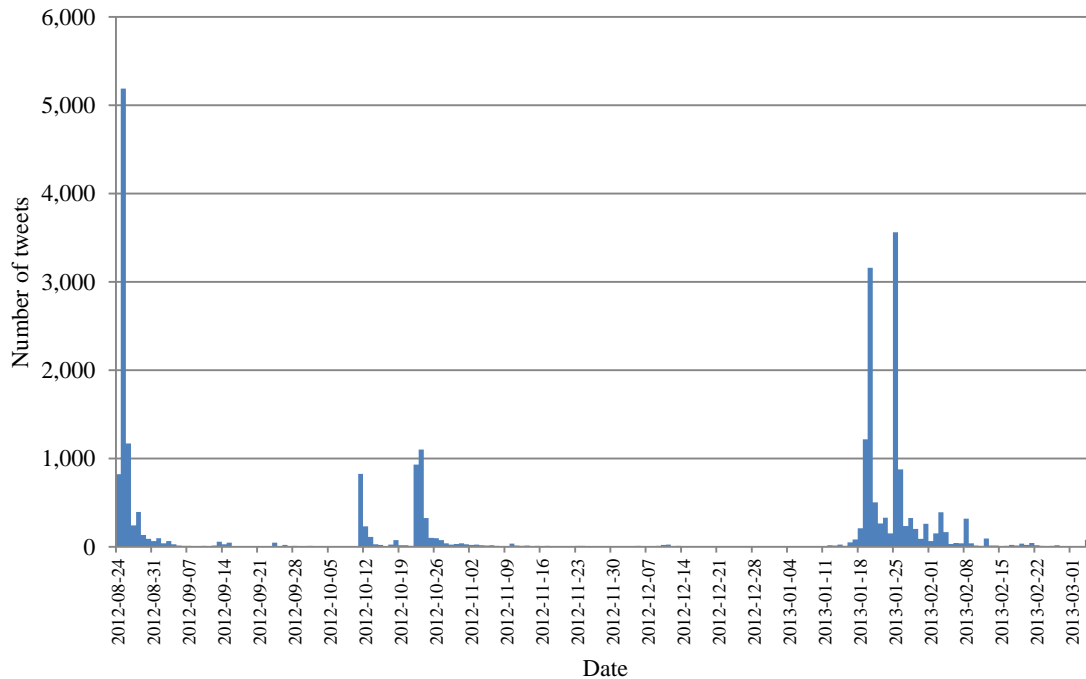
Figure 2. Tweets per day containing variations on
"won as many Tour de France titles as Lance Armstrong."

The continued audience for this joke, despite its repetition, is reflected in the number of retweets the variations received. The 10 most retweeted versions combined were shared 11,448 times between August 2012 and March 2013. Indeed, over this period, 60 tweets containing this joke were retweeted 16,678 times, without taking into account modifications of these posts. Some users framed the joke around other topics or events of interest. The actor Joshua Malina joked during the 2012 Emmy Awards in September 2012 that he had as many Emmy nominations as Armstrong had Tour de France wins (34 retweets). However, such alternative framing forms the minority among the most retweeted comments.

Parody accounts were major sources for the most retweeted posts. These include accounts parodying (in name) news organizations (@BBCSporf, @TheFakeCNN), sports people (@TheTimmyTebow, @BWGotHeem), and characters from television shows and films such as *The Hangover* (@AlanHungover) and *Anchorman* (@RonTheAnchorman). Parody accounts are popular on Twitter (Highfield, 2015), with successful accounts attracting thousands and millions of followers. However, in the case of the Armstrong tweets, the accounts featured are essentially parodies in name alone; whereas other popular parody accounts will frame comments within their own sphere of interest or fictional context, the accounts mentioned here provide more generic, nonspecific humor. The parody names act as a hook for enticing followers but are not necessarily reflected in the accounts' tweets. Indeed, several accounts used the same basic structure of the joke without embellishment or reframing, or even the same wording. This may be a result of accounts run by the same users or around the same characters, especially if accounts get renamed, blocked, or suspended; new accounts may make the same jokes to regain followers. It may also be reflective of accounts noticing trending jokes and appropriating them for their own purposes.

The "won as many Tour de France titles as Lance Armstrong" joke is an example of a punch line reappearing on the same Twitter time lines; unlike news tweets, humor can be repeated days and months later without having concerns over accuracy (or originality). If the joke works in response to new topical developments, or indeed is effective independent of any news context, then there remains an audience for these recurring punch lines. The @AlanHungover account, for instance, published a version of the joke in January 2013, and also posted it in new tweets in October 2013, December 2013, and January 2014; each of these attracted more than 700 retweets, the latter within 48 hours. Although beyond the initial scope of this study, such approaches might also reflect the gamification of social media activity: posting content designed solely to get retweets and favorites, to improve an account's standing on ranking services such as Klout, and to increase the prominence of an account (Paßmann et al., 2013).

". . . should be applauded for being able to ride a bike so well on drugs"

The second one-liner is an example of a joke topically specific to the later developments in the Armstrong scandal, which provided the opportunity for new punch lines to gain traction. Published after the first part of the Oprah Winfrey interview, the tweet "Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal." attracted some immediate attention. At the same time, though, other users posted their own versions of this punch line. Some used the original text verbatim; others replaced key words so that the user was crashing into a cat and falling into a river, for example. However, the general structure of the joke remained consistent.

Other humorous tweets published around the same context covered similar themes but with more noticeably different wording. The musician Tim Burgess, for instance, tweeted "Can't we give Lance Armstrong a break? I tried riding a bike once on drugs. If anything it was a lot harder. I was in a hedge within seconds" (receiving 5,404 retweets). Unlike the "as many titles as" one-liner, though, the initial attention for the "ride a bike so well on drugs" joke and its variants did not translate into recurring sharing beyond the interview contexts. Although very low but regular levels of retweeting took place throughout February and into March 2013 (averaging 14 tweets per day), there was not an additional spike of activity during this period. This second punch line may be less adaptable outside of its initial setting. Furthermore,
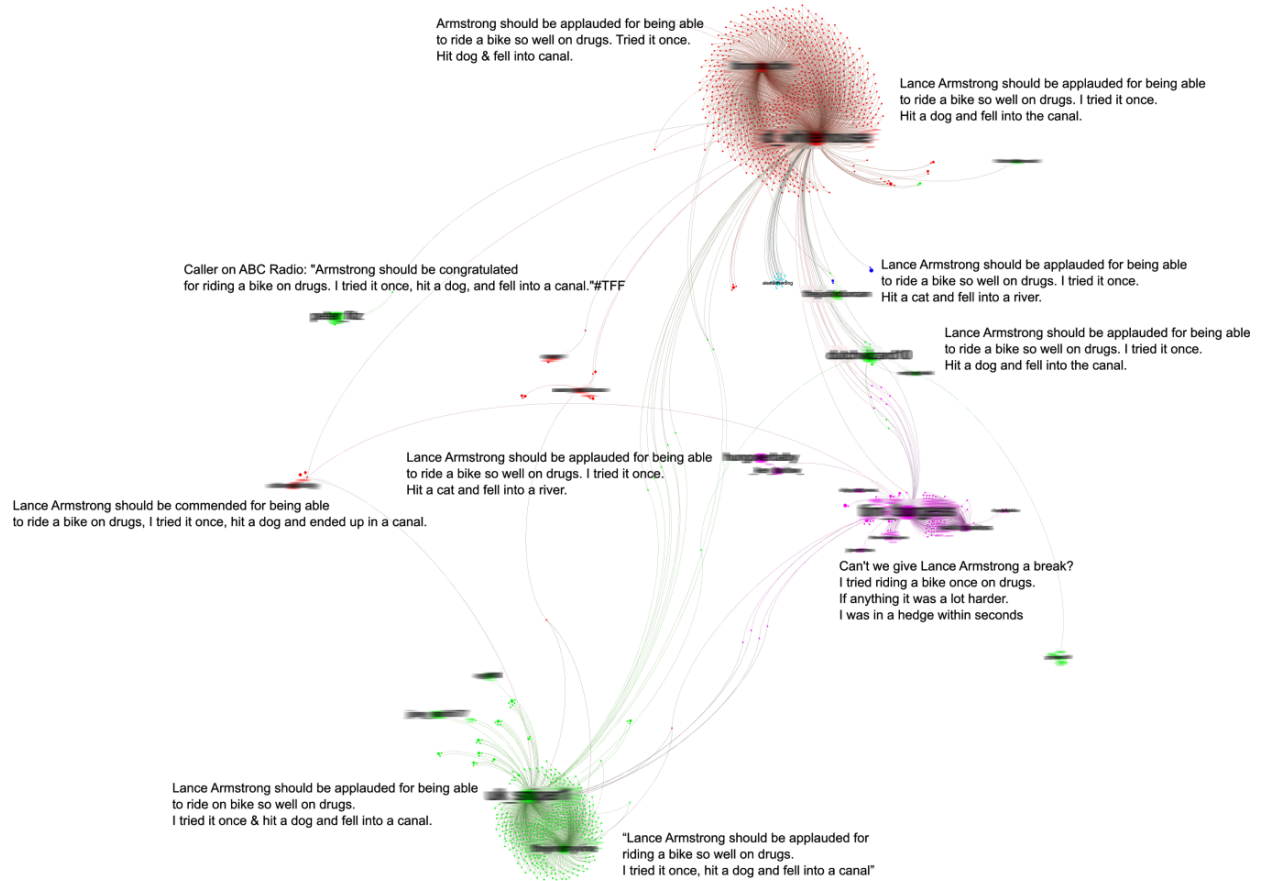
it does not lend itself to audience participation as much as the earlier joke, which in various forms encouraged retweets.

The question of authorship and attribution is apparent in the context of the "ride a bike so well on drugs" joke. When other users started posting the joke as their own, the original author tweeted about this practice, attempting (unsuccessfully) to regain ownership over the material. Although the original tweet received more than 6,500 retweets (including as part of retweet chains with attribution maintained), other users plagiarizing the joke also attracted attention. Figure 3 depicts the clusters of retweets around different instances of the joke or similar punch lines. One user received more than 4,000 retweets (including retweet chains), despite being the subject of an accusatory tweet from the joke's original author. With prominent public figures on Twitter retweeting the copy—without necessarily knowing that it was a contested comment—the joke spread further through follower networks, making policing these copies and restricting their movement more difficult. That is not to say that even the original tweet was attributed correctly, though; inconsistent retweeting practices remain, particularly when reaching a secondary level of retweet. There were instances of the joke, both original and plagiarized, being attributed to the celebrity accounts through which additional users became aware of it. As retweet chains grow, user names might get removed, possibly erroneously, when attempting to maintain full citations.

The analysis of the responses and practices around topical humor provides a foundation for future studies into the social media coverage of breaking news and discursive events. Although Twitter and other platforms are popular sources for sharing updates as they happen, linking to extended coverage on other sites, and posting opinions and critiques, these spaces also encourage more irreverent responses to topical developments. The social media news ecology is a mix of serious or on-topic, factual content, personal opinions, and humor. These practices overlap. As the analysis of tweets about the Lance Armstrong doping scandal has shown, mainstream news sources will post humorous tweets as part of their presentation of breaking news, incorporating mockery into their commentary. This may be a strategy reflecting what Lewis, Holton, and Coddington (2014) conceptualize as "reciprocal journalism," where the relationship between journalists and audiences demonstrates increased engagement, participation, and interaction on both sides of this dynamic. Humor may attract additional responses and inspire additional forms of engagement with news stories, their subjects, and their sources.

These practices highlight the need for studies to be aware of the presence of humor in topical data sets and related practices by diverse social media users. Topical humor may be presented for various reasons, from being the work of professional comedians to attempting to provide an alternative and original take on breaking news to deliberately trying to attract new followers and attention. The extended life span for tweeted humor as opposed to news comments, though, suggests that incorporating punch lines into social media commentary might be a strategy for increasing the potential spread of a tweet. Providing an interpretation of a news story that is different from what other sources are saying by using comedic framings may allow a tweet to both stand out and be shared alongside more serious comments. Not all topics or contexts will warrant humorous framing, and not all will be appropriate settings for mainstream news organizations to use comedy. What the Armstrong coverage suggests, though, is that incorporating humor and supplementary material, such as images and videos, into news coverage may

help to develop an account's own style and reputation. These practices may then provide accounts with stronger connections and resonance with their audiences.

Armstrong should be applauded for being able to ride a bike so well on drugs. Tried it once. Hit dog & fell into canal.

Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal.

Caller on ABC Radio: "Armstrong should be congratulated for riding a bike on drugs. I tried it once, hit a dog, and fell into a canal."#TFF

Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a cat and fell into a river.

Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a dog and fell into the canal.

Lance Armstrong should be applauded for being able to ride a bike so well on drugs. I tried it once. Hit a cat and fell into a river.

Lance Armstrong should be commended for being able to ride a bike on drugs, I tried it once, hit a dog and ended up in a canal.

Can't we give Lance Armstrong a break? I tried riding a bike once on drugs. If anything it was a lot harder. I was in a hedge within seconds

Lance Armstrong should be applauded for being able to ride on bike so well on drugs. I tried it once & hit a dog and fell into a canal.

"Lance Armstrong should be applauded for riding a bike so well on drugs. I tried it once, hit a dog and fell into a canal"

Figure 3. Network map depicting distribution of retweets for variations on "should be applauded for being able to ride a bike so well on drugs."

Conclusion

The practices around retweeting and topical commentary identified in this study highlight important considerations for research into public discussions and information flows on social media. While established and official news media sources remain popular accounts from which to obtain breaking news, humorous topical comments will also attract attention from social media users. This mix of information and humor in topical discussions is reflected in the most retweeted comments throughout the various stages of the Lance Armstrong scandal.

However, breaking news tweets have different life spans than topically relevant tweets with humorous intentions. As would be expected, breaking news attracts the most attention, in terms of retweets from other users, in the immediate aftermath of its publication when the story is new. Even taking into account the evolving nature of breaking news, when additional details are provided to develop the story, the decline in attention for these initial tweets is particularly marked: Within a matter of hours, any remaining retweets are minimal. The story has moved on, and the initial information has been spread sufficiently (including by other sources) that the breaking news is now common knowledge.

In contrast, humorous tweets follow slightly different patterns of attention. Their longevity remains dependent on the topic at hand, and on the joke's ability to make sense without the topical context. Yet humorous tweets are also not beholden to the same time pressures as breaking news. A joke might receive an initial spike in retweeting and then an immediate decline in attention, but it may also receive renewed responses hours, days, or months later, without needing to be reframed or reworded. For ongoing discussions, a topical punch line may remain a constant presence, receiving regular retweets without necessarily having any noticeable spikes or lulls.

The prominence and longevity of humor also invite practices of appropriating other users' content. In some cases, similarly themed jokes may occur out of serendipity, both receiving attention without necessarily being copies of one another. Other tweets may be blatant copies, though, taking others' words and either reposting verbatim or changing a few nouns while keeping the structure consistent. How to address these concerns effectively remains to be seen; although individual users may be reported and blocked, when the practice reaches the level of dozens of popular parody accounts using the same joke (and reposting it at different times), what impact does that have on authorship and attribution on social media?[3]

This study has provided an examination of retweeting practices and news and humor content within topical coverage. Retweets are one way of gauging attention, but they are not the sole or primary means of determining what content is popular on Twitter. Additional data points, including how many times a tweet is favorited, the number of replies a tweet receives, and the followers for individual users,

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[3] At the time of proofing, Twitter had started withholding tweets accused of plagiarised content, including copied jokes (Parkinson, 2015).

may also be taken into account. These data sources serve different purposes, but together they can provide more detail about user interaction and attention and about how information travels through social media.

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