JOURNAL OF COMMUNICATION

Journal of Communication ISSN 0021-9916

ORIGINAL ARTICLE

Second Screen and Participation: A Content Analysis on a Full Season Dataset of Tweets

Fabio Giglietto & Donatella Selva

Department of Communication and Humanities, University of Urbino Carlo Bo, Urbino, Italy

The practice of using a "second screen" while following a television program is quickly becoming a widespread phenomenon. When the secondary device is used for comments about programs, most discussions take place on popular social media such as Facebook and Twitter. Previous research pointed out the value of these conversations in understanding the behavior of "networked publics." Building upon this background, this article presents the first study on a complete dataset of tweets (2,489,669) that span an entire season of a TV genre (1,076 episodes of talk shows). A content analysis of the tweets created during the season's most engaging moments indicates a relationship between typology of broadcasted scenes, style of comments, and the way participation (audience and political) is played.

doi:10.1111/jcom.12085

Despite the fact that the idea of "interactive television" dates back a couple of decades, a commonly accepted definition of social TV is still lacking. On the one hand, as pinpointed by classic media studies (Katz & Lazarsfeld, 1955), TV viewing has always been eminently social; on the other hand, when social refers to "social media", we observe the emergence of new practices enabled by widespread technologies such as Internet, Wi-Fi, mobile devices, and smart TV sets.

In this article, we deliberately restrict the definition of social TV to the interactions among other viewers and between viewers, the characters, and the producers of the show enabled by the "second-screen" practice. This practice is becoming a widespread phenomenon. While in 2009, 57% of U.S. Internet consumers declared that they watched TV while simultaneously browsing the web at least once a month (Nielsen, 2009), in 2013, 43% of U.S. tablet owners and 43% of U.S. smartphone owners said they used their device while watching TV every day (Nielsen, 2013a). The most common reported activity of these "connected viewers" is using their phones to keep themselves occupied during commercials or breaks in something they were watching. Nevertheless, 11% said that they used their phone to see what other people were saying online about a program they were watching, and another 11% posted their own online

Corresponding author: Fabio Giglietto; e-mail: fabio.giglietto@uniurb.it

comments about a program they were watching using their mobile phone (Smith & Boyles, 2012). Furthermore, a more recent report found that 19% of "connected viewers" read conversations about the program on social network sites (Nielsen, 2013b).

It is, in fact, increasingly common that the authors of a TV program openly invite the audience to express their comments on the show online. Both the Facebook and Twitter official channels of a program are often advertised, and most of the time an official Twitter #hashtag is also proposed as a way to aggregate comments. According to Fred Graver, Twitter's "Head of TV," 95% of public social media conversations about TV happen on Twitter and 25% of the American audience tweets about TV (Graver, 2012).

The relationship between Twitter and television is increasingly symbiotic (Twitter UK, 2012). For instance, Super Bowl 2013, telecast by CBS, drew an average audience of 108.7 million viewers. During the course of the entire game, 5.3 million people sent out 26.1 million tweets. When the lights went out in half of the stadium, the audience turned to Twitter (tweet per minute or TPM picked at a rate of over 200,000 — more than at any other point during the game) — proof positive of the relationship between broadcast events and Twitter activity.

Although less diffused than in the United States, second-screen practices are becoming increasingly common also in Italy, especially around talent shows and political events (Cosenza, 2013). Furthermore, Nielsen recently announced that it will provide, starting in Autumn 2014, its Twitter TV Ratings services also for Italy (Nielsen Italia, 2013c).

While the spread of the phenomenon is carefully monitored and the amount of conversation closely measured, there is a lack of knowledge on the relationship between different typologies of broadcasted content and contemporaneous uses of Twitter. What kind of content drives Twitter engagement during a show? Is the style of Twitter commentaries stable or does it change depending on the typology of contents broadcasted? Are people mainly involved in commenting on the show itself or on the issues addressed by the program?

To answer these questions, this article focuses on the analysis of 2,489,669 tweets collected during the 2012/2013 TV season and containing at least one of the official hashtags of the 11 political talk shows (1,076 episodes) aired by the Italian free-to-air broadcasters from August 2012 to June 2013.

We decided to focus on political talk shows because of the popularity and diversity of this genre in Italian television. The 11 programs selected are, in fact, broadcast by different channels, at different times of the day (early morning, prime-access, prime time, and late night), and with different schedules (daily, biweekly, or weekly). Nine out of 11 are broadcast live, providing the audience a sense of taking part in a shared experience—well described in the notion of "liveness" (Couldry, 2004).

Furthermore, the political talk show is a hybrid format of political communication that combines politics and entertainment (Coleman, 2003). Under this perspective, political talk shows are perfectly situated at the crossroad between political and

audience participation. For this reason, the analysis of conversations around these shows can shed light on the ongoing power struggle between citizens, politicians, mainstream media, and the publics (Carpentier, 2011; Jenkins, 2006).

Finally, the structure of a talk show itself as a genre seems to be a particularly interesting social TV case. Traditionally, the audience present in the studio—a key component of the format—is a representation of the wider and silent TV audience of the show. However, due to the practice of commenting on the show in the semipublic space of social media, the wider TV audience is not silent anymore. Their permanent and searchable comments, opinions, remarks, conversations, questions, and jokes—whether addressed to an imagined audience (Marwick & Boyd, 2010), to the characters on TV in an imaginary peer-to-peer dialogue, or to another specific member of the audience—are potential game changers both for audience studies (Bredl, Ketzer, Hunninger, & Fleischer, 2013) and for the production of a show (Oehlberg, Ducheneaut, & Thornton, 2006). It is therefore not surprising that a growing number of talk shows are attempting—even in the simple way of displaying a selection of the tweets across the bottom of the screen during the broadcast—to make this conversation a visible part of the show itself.

A deeper understanding of the relationship between these conversations and broadcasted TV content could therefore lead to the evolution of the format toward a better integration of the role played by active audiences in the structure of the show itself.

Social television beyond the numbers

Social media constitute an incredible opportunity for researchers because they establish networked public spaces in which distant people can gather in a shared discursive place, interact with each other and with celebrities, and possibly organize for both online and offline collective activities. In addition, most recent trends about audience studies tend to focus on the interplay of different media, both analog and digital, mass and personal (Sorice, 2011), which establish the hybrid media system where public actors operate (Chadwick, 2013).

Not surprisingly, despite being a relatively new phenomenon, a number of studies are addressing the practice of using Twitter as a real-time backchannel for broadcasting thoughts and comments while watching a TV program. Most of these studies focused on the analysis of tweets produced during the airtime of popular live TV events such as sport competitions, political debates, and popular entertainment. The techniques of analysis employed vary from quantitative descriptive statistics, to social network analysis, to manual or automatic content analysis. Doughty, Rowland, and Lawson (2011) analyzed the distribution of a tweet's length belonging to two different corpuses of data retrieved using the official hashtags of two popular UK programs: *The X Factor* and *BBC Question Time*. The authors highlight how tweets containing the #xfactor hashtag were shorter on average than the ones containing #bbcqt, thus suggesting an audience tendency to broadcast shorter messages in response to on-screen actions and contents eliciting reactive emotional responses.

A more in-depth study focused on a controversial episode of BBC Question Time (Anstead & O'Loughlin, 2011) pointed out, among other findings, how most of the tweets were published during airtime as opposed to what was observed for presidential debates (Shamma, Kennedy, & Churchill, 2009). The prime time show The X Factor also attracted the interest of other researchers. In an exploratory and not very well documented study, Lochrie and Coulton (2012) analyzed the frequency over time of tweets sent by mobile devices containing the #xfactor hashtag, finding that the levels of interactions among Twitter viewers correlate with the narrative of the show. This finding is confirmed by a similar study that attempted an automatic topic segmentation through peak detection of the 2008 U.S. presidential debate based on the terms used by commenters on Twitter. The pattern of segmentation obtained by this model was compared with the manual segmentation of the event performed by the editors at C-SPAN, resulting in a high level of accuracy (Diakopoulos & Shamma, 2010). The conclusions of this study highlight the importance of going beyond quantitative analysis and digging into the actual contents of tweets.

A different but potentially complementary approach to the analysis of contents produced on Twitter is the study of the path of interactions and connections among "connected audiences." The structure of Twitter conversations, based on the common practices of mentions, replies, and retweets, makes it relatively easy to calculate, using social network analysis, specific metrics that characterize the graph and therefore the community of viewers of a specific program (Doughty, Rowland, & Lawson, 2012; Highfield, Harrington, & Bruns, 2013; Larsson, 2013). At the same time, it is possible to analyze the ego-networks of subjects involved in these conversations in order to evaluate the impact on network structure of taking part in such public conversations (Rossi & Magnani, 2012).

While the amount of data available often discourages attempts at employing approaches based on manual coding, Wohn and Na compared two datasets of tweets retrieved respectively during the airtime of President Obama's Nobel Prize speech and an episode of the talent show *So You Think You Can Dance* (2011) using a code matrix framed in uses and gratifications theory (Blumler, 1979; Katz, Gurevitch, & Haas, 1973).

Social media uses and gratifications

The uses and gratifications (U&G) approach, by helping to highlight the different uses of a sociotechnical environment constituted in the fringe between social (interactive) media and mass media, appears to be particularly suited to describe the role played by "second-screen" conversations in the consumption of TV and particularly of political talk shows. In fact, those environments expose specific affordances that invite the users to personalize their own fruition experience, that is, choosing colors and images, finding or composing personal reading paths, and thus multiplying the kinds of possible uses.

Most literature about the U&G application to social media studies social relationships and self-representation dynamics (Eastin & LaRose, 2005; Park, Kee, & Valenzuela, 2009; Raacke & Bonds-Raacke, 2008).

Wohn and Na's application of the U&G approach to social television follows the original formulation of the U&G theory. The audience's exposure to media is theorized as dependent upon the satisfaction of five typologies of individual needs: (a) cognitive needs (information); (b) affective needs (emotion); (c) personal integrative needs (credibility and status); (d) social integrative needs (social role); and (e) tension release needs (entertainment and diversion; Katz, Blumler, & Gurevitch, 1973).

A number of studies followed this pioneering project. For example, by analyzing tweets published during the broadcast of a special TV debate on street riots in the UK, Lucy Bennet (2012) points out how viewers tend to comment both on the topics and on the structure of the show itself.

At the crossroad between political and audience participation

Under this perspective, political talk shows as a TV genre become even more interesting when observed as a form of participation (Carpentier, 2011; Carpentier, Dahlgren, & Pasquali, 2013). The process of participation often arises because of a power struggle between the ones wielding the power and the ones requesting access to it. In the cases of conversations around political talk shows, we can observe two different kinds of overlapping power struggles. On the one hand, we have the struggle between politicians and citizens, the latter demanding a more active role on decisions concerning public matters; on the other hand, we observe the struggle between TV authors and a part of the formerly silent public that is now actively demanding to play a more active role in the production of the show (Jenkins, 2006).

Not surprisingly, the word "public" plays a central role in both struggles bringing us back to the concept of networked publics, as defined by danah boyd and Mimi Ito (boyd, 2008; Ito, 2008) and to the bipartition proposed by Sonia Livingstone and Daniel Dayan between audience and public. In Dayan's review of both concepts, audience is defined as the members of a multitude of people in the act of listening, watching, or using media, whereas public "is a coherent entity whose nature is collective; an ensemble characterized by shared sociability, shared identity and a sense of that identity" (Dayan, 2005, p. 46). In other words, social practices among members of the audience, such as conversations and shared rituals, could be the precondition for the development of engaged citizens (Couldry, Livingstone, & Markham, 2007; Livingstone, 2005).

Political talk shows and news programs are thus the temporal and thematic frame in which second-screen practices arise and give expression to the demand for participation. As the hybridization tends to blur the boundaries between TV genres (Eco, 1985), the format of political talk shows becomes more fragmented and contaminated by entertainment. Modern political talk shows consist, in fact, of slightly different subgenres (different types of interviews, group discussions, prerecorded videos, external interventions, and satire). Our hypothesis is that the broadcasted subgenre

may affect the style of Twitter conversations and its focus over audience or political participation.

Therefore, in this study we asked (a) What is the typology of subgenre broad-casted during peaks of Twitter activity? (b) What is the prevalent use (and related form of gratification) behind these messages and across the different typologies of subgenres? Twitter commentaries on political talk shows are situated at the crossroad between political and audience participation. Thus, we asked (c) What is the prevalent form of participation found in these tweets across the different uses and typologies of subgenres?

Method

To answer these questions, we conducted a content analysis of publicly available conversations around 11 political talk shows broadcasted by the free-to-air Italian television during season 2012/2013.

We focused on peaks of Twitter activity over the entire season in the attempt to clarify the relationship between social media commentaries and contemporary broadcasted scenes.

Dataset

From August 30, 2012, to June 30, 2013, we collected 2,489,669 observations by querying the Twitter firehose for tweets containing at least one of the following hashtags: #ballarò or #ballaro, #portaaporta, #agorarai, #ultimaparola, #serviziopubblico, #inmezzora, #infedele or #linfedele, #ottoemezzo, #omnibus, #inonda, #piazzapulita. All the selected hashtags are either official (i.e., advertised on the official Twitter channel of the program or during the TV show) or the most frequently used hashtag related to one of the 11 political talk shows aired by the Italian free-to-air broadcasters during the 2012/2013 season. The dataset was acquired via DiscoverText GNIP importer. In other words, this dataset is a complete collection of all the tweets related to the TV genre of political talk shows during the entire 2012–2013 season in Italy.

The Twitter platform offers three levels of access to its database through its application-programming interface (API). The search/rest API is the least accurate method, because both the maximum number of tweets delivered per each call and the number of calls per hour are limited, resulting in an inevitable loss of data when attempting to follow popular streams. Due to these well-known limits, streaming API is a popular choice among researchers. However, the streaming API is also limited. The maximum number of tweets cannot in fact exceed 1% of the total tweets produced on Twitter. In the past, Twitter allowed some users, especially researchers, to raise this limit to 10%, but this kind of white-list is now closed (although white-listed users are still allowed to use their enhanced access to the streaming API). The full stream of tweets is available only through the so-called firehose. This level of access is available only for Twitter partners. Companies such as GNIP and DataSift allow their customers to access this complete stream of tweets, as well as to retrieve, on request,

tweets from the Twitter archive. In a recent paper, Morstatter and his colleagues compared the streaming API to the firehose access, clearly demonstrating that the contents retrieved from the first could not be considered as a representative sample of the second (Morstatter, Pfeffer, Liu, & Carley, 2013). Most of the inferences based on data acquired from the streaming API (a popular approach among scholars) are therefore potentially biased. On the other hand, as noted by Boyd and Crawford (2012), this policy for data access adopted by many social media platforms risks creating differences among scholars and limits the chance to replicate previous results.

Sample

Time and financial constraints often impose limits to projects based on content analysis of large datasets. This problem is often addressed by sampling the observations. However, the collections of tweets and Twitter users, as shown by previous studies (Java, Song, Finin, & Tseng, 2007; Wu, Hofman, Watts, & Mason, 2010), are rarely normally distributed. To overcome this limit, we developed a strategy based on the analysis of activity per minute and peaks detection. We do not claim that tweets produced during these peaks are representative of the whole dataset. Nevertheless, this process helped us to move from "big" to "deep" data in order to focus on the content related to our research questions.

From the initial dataset of tweets, we calculated, for each minute, the following metrics (Bruns & Stieglitz, 2013): tweets, replies, retweets, unique contributors, reach (total sum of followers for each nonunique contributors), and original tweets, defined as tweets that are neither @reply nor retweet. The resulting dataset consists of 439,204 observations.

Algorithms for peak detection applied to streams of tweets already proved their usefulness in effectively segmenting a TV program (Nakazawa, Erdmann, Hoashi, & Ono, 2012; Shamma, Kennedy, & Churchill, 2010, 2011; Shamma et al., 2009). On this basis, we applied the peak detection algorithm described by Marcus and colleagues (2011) to the stream of original tweets in our dataset, ending up with 286 detected peaks with their respective windows (span of n minutes around the peak). We chose Marcus's algorithm over other options because the source code was available, because it features two parameters aimed at customizing what the algorithm recognizes as a significant increase and balancing local and global peaks detection, and finally because it returns a list of peak windows and not simply the peak itself.

When a significant increase is detected (i.e., the value at minute n is more than three mean deviations from a regularly updated local mean), a peak window is opened and the algorithm starts a hill climbing procedure in order to find the peak. The top of the hill is reached when the value at minute n is smaller than the one detected at previous minute. The window is closed either when the minute counts are back at the level they started or another significant increase is found.

194.4

Variable	п	Average Tweets	Average Span (Minute)	Average Tweets Per Minute
Group discussion	135	501	3	163.9
Interview	86	1,876	3	584.6
One-on-one interview	51	768	2.6	288.6
Prerecorded video	5	525	2.8	184.7
Satire	5	258	2.4	176.2

696

5.5

Table 1 Typologies of Scenes Broadcast During Peaks

Table 2 Random Sample of Peaks

External intervention

	Peak Time	Tweets	Origina l Tweets	Span (minute)
Group discussion	11/10/2012, 22:36 hours	123	102	1
Interview	04/02/2013, 21:56 hours	151	103	1
One-on-one interview	20/09/2012, 21:53:03 hours	843	598	7
Prerecorded video	16/05/2013, 21:33:02 hours	828	523	5
Satire	05/02/2013, 21:20:02 hours	819	476	4
External intervention	21/03/2012, 22:59 hours	255	126	1
		3,019	2,017	

The longest window lasts 13 minutes and the shortest 1 minute. The most active contains, on average, 1,500 tweets (941 originals) per minute and the less active 94 (67 originals). We decided to focus on peaks of original tweets following the results of recent studies on Twitter use during crisis events, showing the predominance of this type of content during the critical period of a violent crisis (Heverin & Zach, 2012).

For each peak, we identified the contemporaneous scene on air. While all the show episodes were available on either YouTube or the show website, the process of identifying the exact excerpt proved to be harder than expected due to the lack of commercial breaks in the streaming version of the episodes. While the starting minute of the window and the schedule of the network served to identify the segment broadly, we used the tweets containing quotations to manually fine-tune the process.

Each scene was further classified in one of the following categories: one-on-one interview, interview (with one interviewee and multiple interviewers), group discussion (moderated by the host), prerecorded video, satire, and unexpected external interventions (a phone call from a politician or a celebrity asking to take part in the debate). When more than one category was found in a scene, we picked the prevalent one (Table 1).

Finally, for each scene typology, we randomly extracted one peak for the content analysis (Table 2).

Table 3 Codebook

	Form				
		Objectivity			Subjectivity
Content	Inbound Outbound	Attention seeking Pure information (II)	g (A) Interpretation (I)	Objectivised opinion (OI)	Emotion (E) Opinion (O)

Measures

The codebook we adopted extends and improves the aforementioned existing code matrix framed in traditional media studies and specifically within the uses and gratifications theory (Blumler, 1979; Katz, Blumler, et al., 1973). The original matrix (Wohn & Na, 2011) analyzes tweets depending on two criteria: whether the message is subjective or objective, and whether the message is inbound (about oneself/the author) or outbound (not about oneself—in the case of television, this would be about the television program). The combination of the two criteria produces a 2 × 2 matrix resulting in four different types of messages: Attention-Seeking (an objective message about oneself), Information (an objective message about the program), Emotion (a subjective message about oneself), and Opinion (a subjective message about the program).

As Wohn and Na acknowledge in their study, while most of the contents fell in one category, there were some categories (namely Information and Opinion) overlapping. To address this issue, we extended the original matrix introducing a more detailed range between Information and Opinion (Table 3).

To reduce ambiguity, we created a strict protocol that contains a list of words and sentences assigned to the different categories. Attention-seeking (A) tweets have been easily recognized thanks to the presence of question marks and @ for mentions, which revealed the intention of engaging in a direct dialogue with someone. Emotional (E) tweets contain words expressing feelings such as appreciation, hate, anger, and so on (even bad words) or messages entirely written in capital letters or with multiple exclamation marks.

Opinion (O) tweets were associated with the presence of personal pronouns, especially in opening formulas (such as "I think that," "In my opinion," etc.). An opinion was considered Objectivized (OI) when the message clearly expresses an opinion without openly presenting it as such (lack of any of the previously mentioned opening formulas). Tweets coded as Interpretation (I) are opinions framed by a clear reference (a quote or a description of the scene) to the content broadcasted during the scene. Finally, tweets coded as Pure Information (II) consisted of dry, objective content about the program, often containing quotes (often but not always with quotation marks) or announcements about what is happening or going to happen next.

The hybrid nature of the political talk show as a format of political communication is widely recognized among scholars (Blumler, 2001; Mazzoleni & Schulz, 1999).

In this format, the logic of entertainment often overlaps with political issues (Coleman, 2003; Van Zoonen, 1997). Nevertheless, these hybrid forms of mediatized political communication have been recognized as a practice of participation in politics (Dahlgren, 2009).

Given this hybrid nature of the format, we expected to observe a similar divide in the conversations provoked by political talk shows. For this reason, we replicated the matrix by creating two new categories depending on the typology of participation (Carpentier, 2011; Jenkins, 2006) expressed in the tweet. We therefore coded as political participation the tweets addressed directly to politicians or political actors (parties, movements) and expressly dealing with politics (policy, campaign, or personal issues). Messages in this category express, either openly or implicitly, an attempt by the citizen/viewer to be more involved in the process of political decision making.

We coded as audience participation the case of messages dealing with the show itself or explicitly addressed to the host, the newsroom, the program, the network, or nonpolitical guests, present or not in the studio. Tweets coded as audience participation express, either openly or implicitly, an attempt by the viewer to be more actively involved in the design and production of the program or in the way the episode unfolds. We observed that this model helps to point out the differences among programs and typologies of broadcast content (Interview, group discussion, satire, etc.; Table 4).

Coding procedures

The content analysis involved the two authors who independently coded two peaks not included in the sample. After extensive discussion and comparison, the authors refined the coding protocol in order to better define the codes and enforce mutual exclusiveness. During this phase, we also introduced a requirement for the coder to watch the corresponding scene before starting coding. The scene is in fact the context where conversations arise and it is often impossible to understand some messages without knowledge of this context.

Following this improved coding procedure, the two authors independently coded two additional peaks not included in the sample in order to reach an acceptable level of reliability (Krippendorff's α < 0.7). After this training phase, we coded the sampled peaks (n = 2,017). In order to account for coder drift, we double coded the first 20% of tweets (n = 386) in each peak. Based on this 20%, we calculated Krippendorff's alpha both for form/content (α < 0.81) and for audience/political participation (α < 0.72). Each discrepancy in the reliability sample was consensus coded and included in the analysis.

Results

Among the 286 peaks of engagement automatically identified by the algorithm, almost half of the peaks happened while the TV shows were broadcasting conversations between guests (politicians, journalists, entrepreneurs, etc.) moderated by

Table 4 Codebook Examples

	Audience Participation	Political Participation
Attention-seeking	#piazzapulita are you eventually going to ask Tremonti why they forced us to budget balance?	@pbersani do you understand the difference between electoral-campaign-promises and project? #piazzapulita @PiazzapulitaLA7
Emotion	Laugh and tears all together while watching Crozza #ballarò	There is not so much to do: I adore #renzi #Ballarò
Opinion	#piazzapulita: a pressing and really interesting interview.This is the kind of journalism I like!	Good Bersani. I am appreciating him. Direct and concrete. #piazzapulita
Objectivised opinion	Crozza/Berlusconi is not so much fun as the original #ballarò	Schifani has been vilified by Travaglio for five years. If he had asked for a reply, they would have cried scandal #serviziopubblico
Interpretation	Also Formigli covertly incites Polverini to resign #piazzapulita	Unexpected lapse of style by the Senate President #Grasso on #serviziopubblico.
Pure information	Formigli asks to Polverini the real question: "Why haven't you fought for cuts before?" #piazzapulita	"We are betting to win for our reliability. I won't do anything else" @pbersani on #piazzapulita #ItaliaGiusta and #pb2013

the host (see Table 1). Interviews (either with one or more interviewers) account for almost all of the other half of the peaks. The percentages of the other subgenres are negligible. Concerning the average tweets-per-minute, we observed a statistically significant difference (p < .001) among the six typologies. A pairwise comparison using t tests with pooled SD confirmed that the interview subgenre is significantly different (p < .5) from all other typologies and that a one-on-one interview is different from a group discussion (p < .5).

The expression of opinions — objectivized, pure, or presented as an interpretation — accounts for more than half of the tweets in the sample (59%). Most of time, opinions are expressed in an objectified (33%) or interpreted (12%) form as to give strength to the expressed point of view. Attention-seeking could be then considered the second most prevalent use of Twitter during TV shows (19%), although there is a remarkable difference between audience (14%) and political (21%) participation (see Table 5). Pure information follows with 15% of the sample, while emotion is undoubtedly the least represented category (5% of all tweets).

The majority of tweets included in the six sampled windows (N = 2,017) contain an inclination toward political participation. This category of tweets accounted for

Table 5 Frequency	uency of Typolo	ogies of Tweets b	y Political and A	Audience Participation
-------------------	-----------------	-------------------	-------------------	------------------------

	Percent of All Tweets $(N = 2,017)$	Percent of Tweet Coded as Political Participation $(N = 1,217)$	Percent of Tweet Coded as Audience Participation $(N = 800)$
Attention-seeking	19	21***	14***
Emotion	5	5	6
Opinion	14	15 [*]	12*
Objectivised opinion	33	30***	40***
Interpretation	12	14***	8***
Pure information	15	14^{**}	18**

Note: Chi-squares were calculated on percentage for tweets coded as audience and political participation in each category.

 Table 6
 Frequencies of Typology of Broadcast Content by Political and Audience

 Participation

	Percent of Tweet Coded as Political Participation $(N = 1,217)$	Percent of Tweet Coded as Audience Participation $(N = 800)$
Group discussion	87***	13***
Interview	83***	17***
One to one interview	87***	13***
Pre-recorded video	61***	39***
Satire	21***	79***
External intervention	29***	71***

Note: Chi-squares were calculated on percentage for tweets coded as audience and political participation in each typology of scene.

60% of the sample (n = 1,217). Audience participation was also frequently present (n = 800), accounting for the remaining 40% of the sample. While political participation is prevalent, the significant presence of audience participation mirrors the hybrid nature of political talk shows as a TV format.

The balance between political and audience participation seems also to vary depending on the subgenres of broadcasted content (Table 6). While, due to the sample size in each subgenre, we cannot claim general conclusions on the entire subgenre, it is certainly striking to observe the polarization of the two forms of participation across the sampled peaks.

In particular, audience participation prevails on political participation only in two cases: satirical content or external intervention (in our sample case, an unexpected

^{*}p < .05. **p < .01. ***p < .001.

^{*}p < .05. **p < .01. ***p < .001.

phone call by the President of the Senate). Those subgenres are perfectly embedded in the spectacular logic: Both the irony of satire and the unexpected *coup de theatre* draw the attention of the audience to the show and its ability to entertain and/or accomplish its mission.

On the other hand, tweets containing a leaning toward political participation mainly occur during group discussion and interviews, thus suggesting that the kinds of TV representation that most focus on politicians have a strong correlation to a demand for political weight, and confirming what was already said about attention-seeking tweets.

Political participation

In this category, the most interesting thing to highlight is the attention-seeking typology of tweets, which accounts for 21% of all typologies in political participation, compared to 14% of all typologies in audience participation. As already noted, here attention-seeking identifies tweets containing specific questions or messages directly addressed to politicians, thus showing how much Twitter is used for engaging in a sort of imagined peer-to-peer dialogue (not always polite) with decision-makers. The same thing can of course be said when dealing with attention-seeking tweets addressed to journalists or other subjects, but it is significantly less represented considering the whole category of audience participation.

Interpretation in political participation counts for 14%, which has to be summed up with objectivized opinion (30%) because they are similar typologies of tweets, both diverging from the extreme poles of pure information and subjective opinion. Those results compared with the analog in audience participation (8% interpretation and 40% objectivized opinion) do not show any statistical importance.

Audience participation

The most frequent typology of tweets in audience participation is objectivized opinion (40%), as in political participation even if much less (30%), followed by pure information (18%). It seems that in the category of audience participation tweets tend to be more objective in general, at least in form, even when dealing with personal opinion. In addition, the higher rate of pure information messages such as quotes, anticipations, or descriptions of what TV is broadcasting, confirm Twitter as a social network site for the exchange of news among users.

Discussion

This study sought to clarify the relationship between TV political talk shows and related comments on social media. It is based on a complete full season dataset of tweets created around a TV genre. In particular, we explored the most engaging moments of the season, focusing our attention on the prevalence of various uses of Twitter and the different subgenres present in the format of political talk shows.

Interviews (either with one or multiple interviewers) and group discussions account, respectively, for almost half of the 286 identified peaks in Twitter engagement. However, these two subgenres are also the most frequently present in the format of political talk shows. On average, interviews are associated with the highest levels of TPM, thus suggesting an important role played by the interviewee in provoking the engagement of the viewers. This result indirectly supports the hypothesis formulated by different scholars in the field of political science and communication, who have associated the emergence of hybrid genres and subgenres of contemporary telepolitics to the "celebritization" and "personalization" of politics (Marshall, 1997; Street, 2004; West & Orman, 2003).

The use of Twitter to express the viewers' personal opinions on the show is the most frequent in our sample. Opinions are often addressed to a nonspecified imagined audience (Marwick & Boyd, 2011) but sometimes are directly addressed to the episodes' guests, the host, or the Twitter account of the show as in an imagined peer-to-peer dialogue (Marwick & Boyd, 2011). Interestingly the latter is significantly more frequent for tweets centered on political than audience participation.

Forms of expressing opinions are also present in the other typologies of uses: Even purely informative tweets can carry a subtle form of expressing opinion, as in the case of viewers deliberately reporting exact sentences pronounced by supported politicians and mistakes or *faux pas* of others. Proposing a personal point of view as a fact is a well-known strategy aimed at strengthening the force of the opinions. However, it is, at the same time, also a strategy to avoid expressing opinions in a more direct and risky way. Presenting opinions as a form of "interpretation" is, in fact, more common when dealing with political issues. At the same time "objectivised opinion" — a more direct form of opinion sharing — is more frequent when the sharing includes personal views on the show or the way the episode unfolds.

Political and audience participations are thus strategically played in a different way. At the same time, the engagement around these two forms of participation seems also to be provoked by different kinds of TV content. While—due to the size of our sample for each category—we cannot make general inferences on single subgenres, our data point out a strong polarization. Political participation is, in fact, more common during interviews and group discussions while audience participation prevails when the spectacular component of the television talk show hybrid format (satire and unexpected events) prevails.

The issue of sample size for each subgenre is not the only limitation of this study. First, our choice to focus on political talk shows prevents us from extending our conclusions to other TV genres. Second, while, on the basis of previous studies, we can be confident regarding the generalization of results to other countries, the study clearly draws on data bound to the Italian national context.

The attempt to find subgenres correlated to the highest peaks of engagement is also somewhat limited. From a methodological point of view, it might have been ideal to have data on the distribution of minutes dedicated to different subgenres broadcasted during the analyzed episodes.

Despite these limitations, the study points out the effects of celebritization of politics, confirms the coexistence of different and interlinked forms of participation (with political prevailing on audience participation), and, finally, by pointing out the way opinions are expressed, describes how different forms of participation are carried out.

The most recent literature both in the field of audience and political science highlights the hybrid and mediatized nature of participation. The space of Twitter conversations around political talk shows is the natural field to observe how those trends unfold. At the same time, by analyzing for the first time a complete dataset of Twitter conversations around an entire season of a TV genre, this study contributes to a growing literature that seeks to understand, mainly from a quantitative point of view, the phenomenon of social television. Under this perspective, the study presents a method aimed at studying large quantities of data with content analysis in the context of social television. Finally, both the method and results of this study provide opportunities for comparative studies based on different national contexts or TV genres.

References

- Anstead, N., & O'Loughlin, B. (2011). The emerging viewertariat and BBC Question Time: Television debate and real-time commenting online. *The International Journal of Press/Politics*, **16**(4), 440–462. doi:10.1177/1940161211415519.
- Bennett, L. (2012, November). Transformations through Twitter: The England riots, television viewership and negotiations of power through media convergence. Participations. *Journal of Audience and Reception Studies*, **9**(2), 511–525. Retrieved from *Participations* website. Retrieved from http://www.participations.org/.
- Blumler, J. G. (1979). The role of theory in uses and gratifications studies. *Communication Research*, **6**(1), 9–36. doi:10.1177/009365027900600102.
- Blumler, J. G. (2001). The third age of political communication. *Journal of Public Affairs*, **1**(3), 201–209. doi:10.1002/pa.66.
- boyd, d. (2008). *Taken out of context: American teen sociality in networked publics*. Doctoral dissertation, Berkeley, CA. Retrieved from http://www.danah.org/ (UMI No. 3353116).
- boyd, d., & Crawford, K. (2012). Critical questions for big data. *Information, Communication & Society*, **15**(5), 662–679. doi:10.1080/1369118X.2012.678878.
- Bredl, K., Ketzer, C., Hunninger, J., & Fleischer, J. (2013). Twitter and social TV:
 Microblogging as a new approach to audience research. In G. Patriarche, H. Bilandzic, J.
 L. Jensen, & J. Jurišić (Eds.), Audience research methodologies: Between innovation and consolidation (pp. 196–211). London, England, and New York, NY: Routledge.
- Bruns, A., & Stieglitz, S. (2013). Towards more systematic Twitter analysis: Metrics for tweeting activities. *International Journal of Social Research Methodology*, **16**(2), 91–108. doi:10.1080/13645579.2012.756095.
- Carpentier, N. (2011). *Media and participation: A site for ideological-democratic struggle*. Bristol, England: Intellect.
- Carpentier, N., Dahlgren, P., & Pasquali, F. (2013). Waves of media democratization: A brief history of contemporary participatory practices in the media sphere. *Convergence: The International Journal of Research into New Media Technologies*, **19**(3), 287 294. doi:10.1177/1354856513486529.

- Chadwick, A. (2013). *The hybrid media system: Politics and power*. New York, NY: Oxford University Press.
- Coleman, S. (2003). A tale of two houses: The house of commons, the big brother house and the people at home. *Parliamentary Affairs*, **56**(4), 733–758. doi:10.1093/pa/gsg113.
- Cosenza, V. (2013, January 14). Social TV: Le trasmissioni italiane di maggior successo in Rete. *Che Futuro!* Retrieved from
 - http://www.chefuturo.it/2013/01/social-tv-le-trasmissioni-di-maggior-successo-in-rete/.
- Couldry, N. (2004). Liveness, "reality," and the mediated habitus from television to the mobile phone. *The Communication Review*, 7(4), 353–361. doi:10.1080/10714420490886952.
- Couldry, N., Livingstone, S. M., & Markham, T. (2007). *Media consumption and public engagement: Beyond the presumption of attention*. Basingstoke, England: Palgrave Macmillan.
- Dahlgren, P. (2009). *Media and political engagement: Citizens, communication, and democracy.* Cambridge, England: Cambridge University Press.
- Dayan, D. (2005). Mothers, midwives and abortionists: Genealogy, obstetrics, audiences and publics. In S. Livingstone (Ed.), *Audiences and publics. When cultural engagement matters for the public sphere* (pp. 43–76). Bristol, England: Intellect.
- Diakopoulos, N. A., & Shamma, D. A. (2010). *Characterizing debate performance via aggregated Twitter sentiment*. Proceedings of the 28th international conference on Human factors in computing systems CHI 2010, pp. 1195–1198, New York, NY, Association for Computing Machinery.
- Doughty, M., Rowland, D., & Lawson, S. (2011). *Co-viewing live TV with digital backchannel streams*. Proceedings of the 9th international interactive conference on Interactive television EuroITV 2011, pp. 141–144. New York, NY: Association for Computing Machinery.
- Doughty, M., Rowland, D., & Lawson, S. (2012). Who is on your sofa?: TV audience communities and second screening social networks. Proceedings of the 10th European conference on Interactive TV and video EuroiTV 2012, pp. 79–86. New York, NY: Association for Computing Machinery.
- Eastin, M. S., & Larose, R. (2005). Alt.support: Modelling social support online. *Computers in Human Behavior*, **21**(6), 977 992.
- Eco, U. (1985). Sette anni di desiderio: Cronache 1977 1983. Milan, Italy: Bompiani.
- Graver, F. (2012). *90 days at Twitter: What I learned from the inside*. Ad Age Social Engagement/Social TV Conference, Los Angeles, CA.
- Heverin, T., & Zach, L. (2012). Use of microblogging for collective sense-making during violent crises: A study of three campus shootings. *Journal of the American Society for Information Science and Technology*, **63**(1), 34–47. doi:10.1002/asi.21685.
- Highfield, T., Harrington, S., & Bruns, A. (2013). Twitter as a technology for audiencing and fandom. *Information, Communication & Society*, **16**(3), 315–339. doi:10.1080/1369118X.2012.756053.
- Ito, M. (2008). Networked publics. Cambridge, MA: MIT Press.
- Java, A., Song, X., Finin, T., & Tseng, B. (2007). Why we Twitter: Understanding microblogging usage and communities. Proceedings of the 9th WebKDD and 1st SNA-KDD 2007 workshop on Web mining and social network analysis, pp. 56–65. San Jose, CA: Association for Computing Machinery.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.

- Katz, E., Blumler, J. G., & Gurevitch, M. (1973a). Uses and gratifications research. *The Public Opinion Quarterly*, **37**(4), 509–523. doi:10.2307/2747854.
- Katz, E., Gurevitch, M., & Haas, H. (1973b). On the use of mass media for important things. *American Sociological Review*, *38*(April), 164–181. Retrieved from http://repository.upenn.edu/.
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal influence: The part played by people in the flow of mass communications*. Glencoe, IL: Free Press.
- Larsson, A. O. (2013). Tweeting the viewer: Use of Twitter in a talk show context. *Journal of Broadcasting & Electronic Media*, 57(2), 135–152. doi:10.1080/08838151.2013.787081.
- Livingstone, S. (Ed.) (2005). *Audience and publics: When cultural engagement matters for the public sphere.* Bristol, England: Intellect Books.
- Lochrie, M., & Coulton, P. (2012). Sharing the Viewer Experience through Second Screens. Proceedings of the 10th European Interactive TV Conference EuroITV 2012. Berlin, Germany, 10th European Interactive TV Conference.
- Marcus, A., Bernstein, M. S., Badar, O., Karger, D. R., Madden, S., & Miller, R. C. (2011). Twitinfo: Aggregating and visualizing microblogs for event exploration. Proceedings of the 2011 annual conference on human factors in computing systems — CHI 2011, pp. 227–236. New York, NY: Association for Computing Machinery. doi:10.1145/1978942.1978975
- Marshall, P. (1997). *Celebrity and power: Fame in contemporary culture*. Minneapolis: University of Minnesota Press.
- Marwick, A. E., & Boyd, D. (2010). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, **13**(1), 114–133. doi:10.1177/1461444810365313.
- Marwick, A. E., & Boyd, D. (2011). To see and be seen: Celebrity practice on Twitter. *Convergence*, **17**(2), 139–158. doi:10.1177/1354856510394539.
- Mazzoleni, G., & Schulz, W. (1999). "Mediatization" of politics: A challenge for democracy? *Political Communication*, **16**(3), 247 261. doi:10.1080/105846099198613.
- Morstatter, F., Pfeffer, J., Liu, H., & Carley, K. M. (2013). *Is the sample good enough? Comparing data from Twitter's streaming api with Twitter's firehose.* ICWSM 2013. Retrieved from Cornell University Library. Retrieved from http://arxiv.org/abs/1306.5204.
- Nakazawa, M., Erdmann, M., Hoashi, K., & Ono, C. (2012). Social indexing of TV programs: Detection and labeling of significant TV scenes by Twitter analysis. 2012 26th International Conference on Advanced Information Networking and Applications Workshops, pp. 141–146. Fukuoka, Japan. doi:10.1109/WAINA.2012.188
- Nielsen. (2009, September 2). Three screen report: Media consumption and multi-tasking continue to increase across TV, Internet, and mobile. *Nielsen Wire*. Retrieved from http://www.nielsen.com/us/en/newswire/2009/three-screen-report-media-consumption-and-multi-tasking-continue-to-increase.html.
- Nielsen. (2013a). The cross-platform report: A look across screens. *Nielsen Wire*. Retrieved from http://www.nielsen.com/us/en/reports/2013/the-cross-platform-report--a-look-across-screens.html.
- Nielsen. (2013b). Action figures: How second screens are transforming TV viewing. *Nielsen Wire*. Retrieved from http://www.nielsen.com/us/en/newswire/2013/action-figures-how-second-screens-are-transforming-tv-viewing.html.

- Nielsen. (2013c). Nielsen Twitter TV ratings sbarca in Italia. Retrieved from http://www.nielsen.com/it/it/news-insights/comunicati-stampa/2013/nielsen-twitter-tv-ratings-sbarca-in-italia.html.
- Oehlberg, L., Ducheneaut, N., & Thornton, J. (2006). *Social TV: Designing for distributed, sociable television viewing*. Proceedings EuroITV 2006—Beyond usability, broadcast, and TV. Retrieved from Best Berkeley. Retrieved from http://best.berkeley.edu/~lora/Publications/SocialTV EuroITV06.pdf.
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior*, **12**(6), 729–733. doi:10.1089/cpb.2009.0003.
- Raacke, J., & Bonds-Raacke, J. (2008). MySpace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyber Psychology & Behavior*, 11(2), 169–74. doi:10.1089/cpb.2007.0056.
- Rossi, L., & Magnani, M. (2012). *Conversation practices and network structure in Twitter*. International AAAI Conference on Weblogs and Social Media. Retrieved from AAAI website. Retrieved from http://www.aaai.org/ocs/index.php/ICWSM/ICWSM12/paper/view/4634.
- Shamma, D. A., Kennedy, L., & Churchill, E. F. (2009). *Tweet the debates: Understanding community annotation of uncollected sources. In* Proceedings of the first SIGMM workshop on social media, *3–10.* New York, NY: Association for Computing Machinery.
- Shamma, D. A., Kennedy, L., & Churchill, E. F. (2010). Tweetgeist: Can the Twitter timeline reveal the structure of broadcast events?. Retrieved from CSCW Horizons, Savannah, GA, Association for Computing Machinery. doi: 978-1-60558-795-0/10/02
- Shamma, D. A., Kennedy, L., & Churchill, E. F. (2011). *Peaks and persistence: Modeling the shape of microblog conversations*. Proceedings of the Acm 2011 Conference on Computer supported Cooperative Work, pp. 355–358. doi:10.1145/1958824.1958878
- Smith, A., & Boyles, J. L. (2012). *The rise of the "connected viewer.*" Washington, DC: Pew Internet & American Life Project. Retrieved from Pew Research Centre website. Retrieved from http://pewinternet.org/Reports/2012/Connected-viewers.aspx
- Sorice, M. (2011). La comunicazione politica. Rome, Italy: Carocci.
- Street, J. (2004). Celebrity politicians: Popular culture and political representation. *The British Journal of Politics and International Relations*, **6**(4), 435–452. doi:10.1111/j.1467-856X.2004.00149.x.
- Twitter UK. (2012). Tune in with Twitter: Driving discovery and engagement with TV. Retrieved from Twitter official blog. Retrieved from https://tweet.twitter.com/TVbook.
- Van Zoonen, L. (1997). "Finally, I have my mother back": Politicians and their families in popular culture. *The Harvard International Journal of Press/Politics*, **3**(1), 48–64. doi:10.1177/1081180X98003001005.
- West, D., & Orman, J. (2003). *Celebrity politics*. Upper Saddle River, NJ: Prentice Hall. Wohn, D. Y., & Na, E.-K. (2011). Tweeting about TV: Sharing television viewing experiences via social media message streams. *First Monday*, **16**(3). doi:10.5210/fm.v16i3.3368.
- Wu, S., Hofman, J. M., Watts, D. J., & Mason, W. A. (2010). Who says what to whom on Twitter categories and subject descriptors. Proceedings of the International ACM World Wide Web Conference 2011, Hyderabad, India, Association for Computing Machinery. Retrieved from Stanford University Institute for Research in the Social Sciences website. Retrieved from https://iriss.stanford.edu/sites/all/files/dsi/Duncan%20Study%201.pdf.