# Second screen and Political Talk-Shows: Measuring and Understanding the Italian Participatory Couch Potato

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## Abstract

According to several recent reports, the practice of using a 'second screen' while following a television program is quickly becoming a widespread phenomenon. When the secondary device is used to read or contribute to online comments about a watched program, most of the discussion takes place on popular social media such as Facebook and Twitter. The paper presents what is, to our knowledge, the first study on a full season dataset of Twitter conversations about a TV genre. Starting from August 2012, we collected all the Tweets (1,703,064) containing at least one of the official hashtags of the eleven political talk shows (607 episodes) aired by the Italian free-to-air broadcasters. We found a significant correlation between the Tweet-rate-per-minute during airtime and the audience of the show's episode. Furthermore, we demonstrate a technique, based on cluster analysis, aimed at identify key moment in a season. On this subset of contents, we applied qualitative content analysis to identify users' level of participation on the scale of access, interaction and participation.

## Keywords

second screen, social tv, twitter, talk-show

## Introduction

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 the widespread of technologies such as Internet, Wi-Fi, mobile devices, smart TV.

Part of these practices are facilitated by the four properties of networked spaces. While most of everyday conversations are ephemeral, in a networked spaces a growing part of this content become permanent, searchable, replicable and scalable (boyd, 2008). The co-presence of these four properties open up a wide range of new research opportunities for social scientists (Giglietto, 2009; Mazzoli & Giglietto, 2013).

'Second screen' practice is becoming a widespread phenomenon. While in 2009, 57% of US Internet consumers declared to watch TV while simultaneously browsing the web at least once a month (Nielsen, 2009), in 2012, 88% of US tablet owners and 86% of US smartphone owners said they used their device while watching TV (Nielsen, 2012a). Furthermore, a different study carried on during the same year, reports that the 66% (Google, 2012) of the sample used a laptop and TV at the same time. 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% of the sample 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 comments about a program they were watching using their mobile phone (Smith & Boyles, 2012).

It is increasingly common that the authors of a TV program openly invite the audience to express their comments on the show online. Both Facebook and Twitter official program's channels are often advertised and most of the time an official Twitter #hashtag is also proposed as a way to aggregate comments.

Measuring TV audiences is becoming increasingly difficult due to the growing use of digital-video-recorders to watch shows later or order "video-on-demand" from the set-top boxes. At the same time, audiences are also more fragmented with people watching TV on countless websites and on multiple device. The industry is therefore looking for solutions aimed at integrating the traditional method based on panels of families that agree to have a meter in their TV. Not surprisingly, Nielsen recently announced an agreement with Twitter to create the 'Nielsen Twitter TV Rating' for the US market, a syndicated-standard metric around the reach of the TV conversation on Twitter (Nielsen, 2012b).

Moreover, according to a report by Twitter UK, the relationship between Twitter and television is increasingly symbiotic (Twitter UK, 2012). As an instance, Super Bowl 2013 telecasted by CBS, draw an average audience of 108.7 million viewers. During the course of the entire game 5.3 million of 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 231,500 more than at any other point during the game) proof positive of the relationship between broadcasted events and Twitter activity.

Although less diffused than in the US, second screen's practices are becoming increasingly common also in Italy especially around talent shows and political events (in 2013 Italy voted to renew the national parliament). Furthermore, talk shows are situated at a theoretical crossroads between participation and networked publics.

Dataset

This paper focus on the analysis of a complete dataset of 1,703,064 Tweets collected during 2012/2013 TV season and containing at least one of the official hashtags of the eleven political talk shows (607 episodes) aired by the Italian free-to-air broadcasters.

Dataset was collected by filtering the Twitter *firehose* for Tweets containing at last 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 (e.g. 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 eleven political talk shows aired by the Italian free-to-air broadcasters.

From this raw dataset we extracted 1,126,787 observations corresponding to Tweets created during the air-time (plus 15 minutes) of each episode of the shows. Auditel is, since 1986, the main research firm monitoring TV audience and ratings of local and national television in Italy.

Data Analysis

For each episode, we calculated the average Tweet-per-minute (TPM). The programs taken in to consideration, although belonging to the same genre, are very different in popularity and Tweet rate. To address this variance in audience and TPM we calculated an additional variable. This variable, named 'networked publics', is defined as the ratio of average Tweets over average audience of a specific program. This variable should therefore measure the inclination of the audience of a show to be active on Twitter. Audience and average Tweet volume was then normalized, by applying a logarithmic transformation, in order to make this variable suitable for statistical analysis and regression modeling.

Both raw average Tweet volume ($r=0.805$) and TPM ($r=0.863$) appear to be significantly correlated with the audience of the episode (Figure 1).
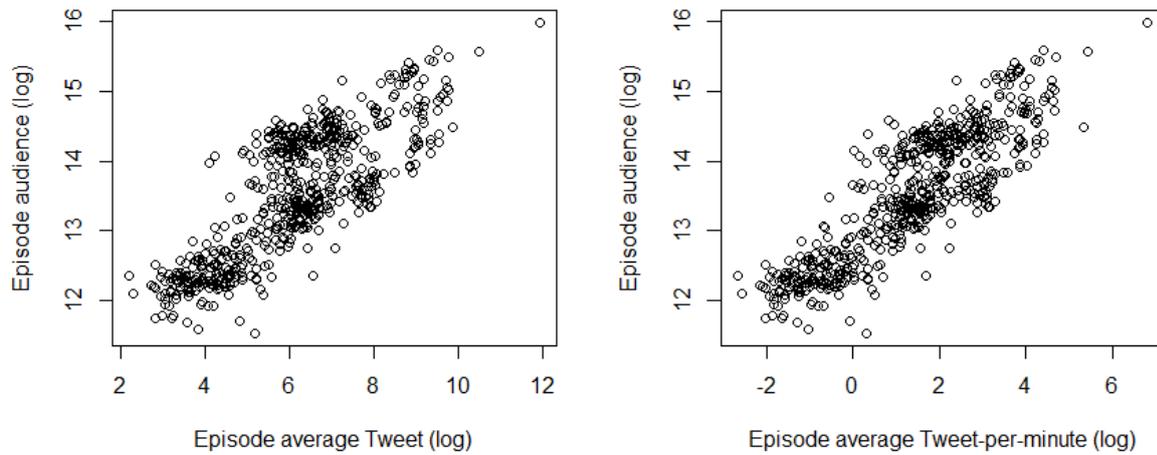
**Figure 1:** Scatterplots demonstrating the level of correlation between episode average Tweet , TPM and audience.

In order to identify key moments in the season, we grouped similar episodes applying first a hierarchical (in order to detect the number of clusters) and finally a kmeans cluster analysis (Figure 2).
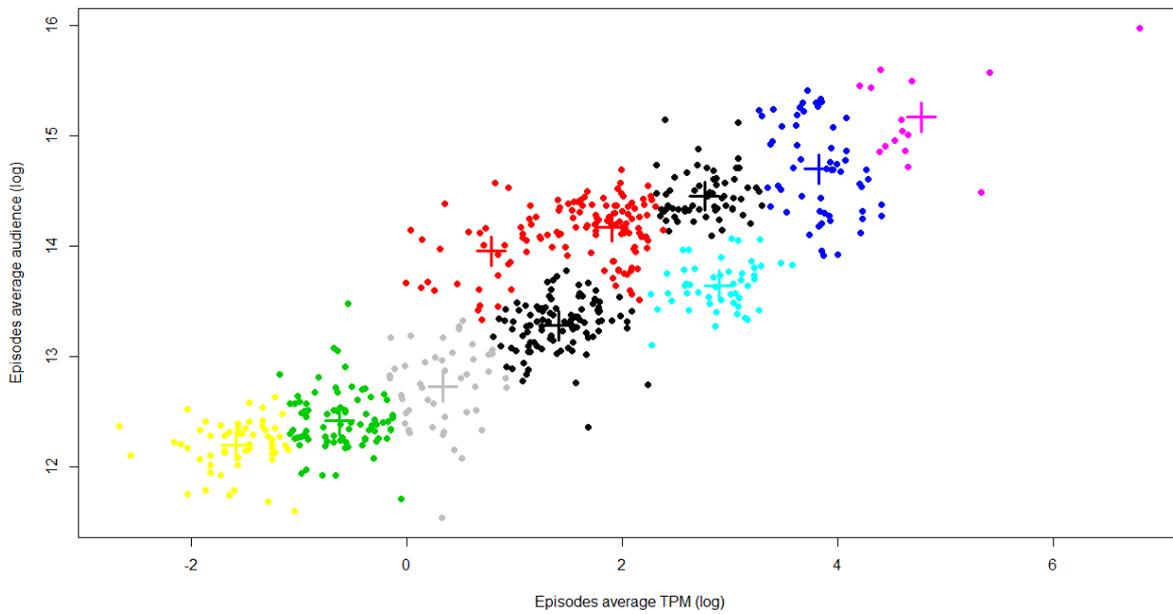


**Figure 2:** Groups of similar episodes identified with cluster analysis.

Focusing on the "high-activity" cluster in the top right of the chart represented in Figure 2, we identified key moments in the TV season (Figure 3).
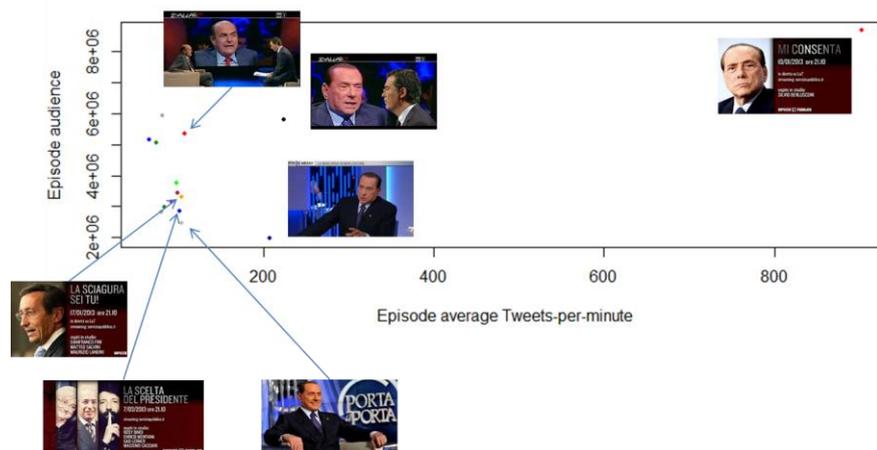
**Figure 3:** Most of the episodes in the "high activity cluster" share a common denominator in the presence of a Silvio Berlusconi as a guest of the show.

The average audience of the 10 episodes in the "high activity" cluster range from a minimum of 1,968,000 to a maximum of 8,670,000 (mean=4,180,933). A first look at this cluster clearly pinpoint the presence of Silvio Berlusconi (he was a guest in four of the top five episodes), as a common denominator of this group of episodes.

Clustering algorithms can therefore successfully be used to identify key moments in the dataset. For a deeper understanding of social dynamics behind user's behaviour on Twitter, a form of content or discourse analysis of this moment is needed. While automatic and semi-automatic algorithms aimed at categorizing/code contents are improving, manual coding is still researchers' favourite option in humanities. However the amount of data easily collectable today via social media, call for techniques, different from traditional sampling strategies that, traditionally, could successfully applied to normally distributed variables.

The Tweets published during key moments will be therefore manually coded. The code matrix is developed with the aim of mapping different Twitter activities (read, reTweet, reply, original Tweet) on the scale of three level of participation (access, interaction and participation) developed by Carpentier (2011). The aim is to focus on the ongoing "power struggle" between authors of the show and active audiences that will leads to new and more flexible TV formats.

**Note**

All the data in the abstract is updated at the time of writing. The dataset collection is in progress and will stop in June 2013.

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