

From contents to comments: Social TV and perceived pluralism in political talk shows

Abstract

Going beyond source and content pluralism, we propose a two-dimensional audience-based measure of perceived pluralism by exploiting the practice of ‘social TV’. For this purpose, 135.228 tweets related to 30 episodes of prime time political talk shows broadcast in Italy in 2014 have been analyzed through supervised sentiment analysis. The findings suggest that the two main TV networks compete by addressing generalist audiences. The public television offers a plural set of talk shows but ignores the anti-political audience. The ideological background of the anchorman shapes the audience’s perception, while the gender of the guests does not seem to matter.

Keywords

Pluralism, social TV, talk show, sentiment analysis, media bias

Pluralism is a relevant topic for scholars in media studies and for policy-makers (McQuail, 2003; Napoli, 2007). Previous studies evaluated the degree of media pluralism focusing mainly on media sources (Baker, 2007) or media content (e.g. Aalberg and Curran, 2012; Glasgow Media Group, 1976). The present study, however, highlights the importance of considering the role of the audience; focusing on its reaction to media content, we shed light on how that content is perceived and digested by the audience.

Accordingly, we develop an audience-based measure of perceived pluralism by taking advantage of the so-called ‘social TV’ (e.g. Anstead and O’Loughlin, 2011; Deller, 2011; Cameron and Geidner, 2014; Giglietto and Selva, 2014; Guo and Chan-Olmsted, 2015; Himelboim, 2014; Ianelli and Giglietto 2015; Trilling, 2015), i.e. the practice of watching television while using a ‘second screen’ (computer, tablet or mobile) to comment and discuss live on the content broadcast on TV.

For this purpose, we collected and analyzed, through supervised sentiment analysis (Ceron et al., 2014), 135.228 tweets related to 30 episodes of 10 prime time Italian political talk shows, broadcast in the Fall of 2014.

Based on these, we assessed the support or opposition of the audience toward each of the 95 politicians invited to participate in these shows to build a measure of perceived pluralism that focuses on two dimensions: a traditional ideological left-right scale and a pro-establishment/anti-establishment dimension; furthermore, we also

provide additional applications of this technique recording the effects of the ideological bias of the host (Himmelboim, 2014), and potential gaps in the audience evaluation of politicians according to their gender (Hetsroni and Lowenstein, 2014).

The results suggest that RAI and Mediaset (the two main TV networks) compete following a kind of *Downsian* framework, i.e. in order to maximize the audience they adopt moderate positions and tend to ‘converge’ toward the rival network, broadcasting shows addressed to similar wide generalist audiences. Nevertheless, Berlusconi’s Mediaset appeals more to right-wing users while the public television RAI attracts moderate as well left-wing users but gets rid of the anti-political audience, which is catered by the niche network La7. The public television RAI also tends to offer an ideological plural set of talk shows compared to other networks. Finally, the ideological background of the anchorman plays a role as we find differences in the shows presented by left-wing or right-wing journalists; conversely, the sentiment of comments does not seem affected by the gender of the politician suggesting that, compared to men, women guests were not particularly put in a bad light during the shows.

The paper is organized as follows. The next two sections review the literature on media pluralism linking it with the role of the audience; then we present the data and the methodology adopted; finally we discuss the results and the implications of our analysis.

Assessing media pluralism

While critical theory's scholars point the attention to media professionalism rather than pluralism, (e.g. Curran, 2002), others retain that media pluralism is crucial for democracies: it is often considered as a normative and cultural need (McQuail, 2003) and as a sign of media quality (Dahl, 1989; McQuail, 1992). These scholars argue that the media system (as a whole) should cover a variety of topics and ideas, providing room for the opinions of different people. As such, pluralism is considered a benchmark to evaluate media systems (Seymoure-Ure, 1974; Hallin and Mancini, 2004).

In the policy realm, since 1947 the Commission on Freedom of the Press (*Hutchins Commission*) recommended that media should reflect the opinions of relevant groups. In 1977, the Annan committee's report on the future of broadcasting further clarifies the importance of media pluralism. Napoli (2007) enucleates the attempts made by the American Federal Communication Commission (FCC) to assess the effects of rules on content pluralism and in some countries, such as France or Germany, the legal system puts emphasis on pluralist interests as key values to ensure good media performance (Barendt, 2005).

Journalists are interested in media pluralism as well, as it represents a key part of their code of professional ethics (Hafez, 2002). Finally, media companies, especially

Public service broadcasters (Tambini and Cowling, 2004), also aim to evaluate the pluralism of the news they provide.

So far, studies on pluralism focused mainly on source pluralism (pluralism of outlets in the media system) or content pluralism.

On the one hand, the number of television channels and newspapers, the concentration of ownership, the intensity of competition, the balance between public service broadcasting and commercial enterprises, the existence of independent media and the control of advertising revenues (Baker, 2007) were considered as measures of source pluralism.

On the other, scholars gauged pluralism from content analysis of news (e.g. Aalberg and Curran, 2012; Glasgow Media Group, 1976) and, in this regard, Hallin and Mancini (2004: 29) distinguished *internal pluralism* (i.e. the heterogeneity of viewpoints within a single media outlet) from *external pluralism* (differentiation provided by alternative media outlets).

Although pluralism is aimed to serve the needs of media users, so far we did not find explicit or implicit control of media by the public (van der Wurff, 2011; but see: Domingo and Heikkilä, 2012) and the audience is generally excluded from any attempt to evaluate pluralism (except in few advisory and non-compulsory bodies: Napoli, 2007).

To fill this gap, our study proposes an audience-based measure of perceived pluralism.

Social TV, audience and media pluralism

Evaluating pluralism according to the content broadcast by the media might not be sufficient given that different users can perceive the same content in rather different ways. Content pluralism, per se, does not tell anything on how the audience will react to those plural (or not plural) stimuli.

In this regard, starting from Hall (1980) and from the related stream of literature within cultural studies, several scholars posit that exposure to counter-attitudinal information does not imply that citizens will internalize the merit of those arguments (Garrett, 2009; Zaller, 1992). Taber and Lodge (2006) argue that consumption of incongruent information may even generate an oppositional media hostility effect (Arceneaux et al., 2012; Levendusky, 2013), bringing citizens to resist and criticize such information.

Furthermore, by looking at the content alone, we may fail to recognize the ‘slant’ that can be attached to that content (even in a show that respects formal criteria of pluralism); such slant can be better evaluated by looking at the perception of the audience, whose response can mirror the content of the show (Ceron and Memoli 2015;

Tworzecki and Semetko, 2012), but can also denote a reaction to that (and to the way such content is slanted by the medium).

Indeed social media users, through their second screens, react to the content broadcast on TV and comment live on it (Anstead and O’Loughlin, 2011). This means that, in such new convergent environment (Jenkins, 2006), *producers* (Bruns, 2008) can easily and publicly express their point of views, providing original contents that can be consumed by other media users (Cameron and Geidner, 2014). Those live comments can also be useful to enhance media responsiveness, enabling users to have their say and allowing journalists to “feel the pulse” of the audience adjusting the content of the show accordingly (Domingo and Heikkilä, 2012: 273).

In this regard, audience viewpoints become an intriguing, lively and ongoing measure of how users perceive and digest the content of the TV shows and a new source of information on the degree of (perceived) pluralism.

So far, several analyses of social TV practices devoted attention to political debates. Anstead and O’Loughlin (2011) analyzed the *BBC Question Time* and used the term ‘viewertariat’ referring to citizens that “can use social media to publish and learn new information, and engage in discussion” (Anstead and O’Loughlin, 2011: 458). Many other studies focused on electoral campaigns, from the US (Freelon and Karpf, 2015) and Canada (Elmer, 2013) to Europe (Trilling, 2015; Vaccari et al., 2015;

Vergeer and Franses, 2016), proving that social TV tools “enable socially mediated and networked commentary and conversations on live broadcast events” (Elmer, 2013: 19).

By analyzing agenda-setting dynamics during the TV debates for the Dutch 2012 parliamentary elections, Vergeer and Franses (2016) found that the conversations of the *viewertariat* were affected by the issues discussed on TV. Analogously, in the 2013 German elections Trilling (2015) illustrated that people used Twitter to comment on the issues discussed during the TV debate through words related to such debate; furthermore, viewers were also partially able to contribute to the public discourse.

Other scholars focused on talk shows producing similar findings. Larsson (2013: 147) highlighted that the Twitter activity related to a Swedish talk show was “dependent on the broadcasting of the show at hand” and several studies on Italian political talk shows proved that Twitter is indeed used to express the viewers’ personal opinions (Giglietto and Selva, 2014: 273; Iannelli and Giglietto, 2015; Rossi and Giglietto, 2016).

D’heer and Verdegem (2015: 222) investigated comments related to a Belgian current affairs programme claiming that Twitter messages are reactive responses to TV content and argue that “viewers can publically support, refute or ridicule political actors on the TV screen”.

Finally, two studies based on experiments and survey data highlight the fact that TV viewers engage more in social TV when they feel a higher degree of affinity and

involvement with the program itself (Guo and Chan-Olmsted, 2015); furthermore, “the opinions expressed by this ‘virtual’ public can influence the home viewer” (Cameron and Geidner, 2014: 401). This suggests that online comments can reflect the point of view of the audience.

Summing up, as Deller (2011) argues, Twitter provides the opportunity to analyze audience responses to different media stimuli and such information can indeed be suitable to evaluate the perceived level of pluralism.

Taking the cue from this, we propose a method to analyze the tweets published by users during the live broadcast of TV shows in order to gauge pluralism between and within media companies.

Data and methodology

For this purpose, we employ a modern technique of supervised aggregated sentiment analysis (SASA), which produces a better interpretation of social media texts and more reliable estimates (Ceron et al., 2016; Hopkins and King, 2010; Jamal et al., 2015). SASA adopts a two-stage process under the idea that human coders are more effective in recognizing all the peculiarities of the language (irony, jargons, neologisms, etc.), and can handle the problem of spamming, which affects social media conversations (Ceron et al., 2016; Hopkins and King, 2010; Jamal et al., 2015). In the

first stage human coders read and classify a subsample of the documents downloaded (the ‘training set’). In the second stage, the SASA algorithm uses this training set to classify the whole population of texts, providing valid and accurate estimates of the distribution of opinions in the aggregate.

We focus our analysis on the Italian TV system, which has been usually driven by a high level of political parallelism (Hallin and Mancini, 2004). The history of Italian television, in fact, is deeply intertwined with domestic politics. This holds true for both the two main TV networks (which account for around 80 percent of nationwide audience: AGCOM, 2016).

On the one hand, the Italian public television RAI has been always controlled by ruling parties, although the control of one TV channel was usually granted to opposition parties (Mancini, 2009). Spoil system strategies were adopted after every adjustment in the government coalition. This affected the appointments of RAI managers and anchormen, but also the allocation of time among different parties in TV news or shows (Mazzoleni et al., 2011).

On the other hand, the private broadcasting group Mediaset, which is the main rival of RAI, is owned by the founder of the centre-right coalition, Silvio Berlusconi (who served for three terms as prime minister), and therefore Mediaset is tied to politics too.

To evaluate perceived pluralism we monitor Italian political talk shows broadcast in the Fall of 2014 to build a two-dimensional space (Tworzecki and Semetko, 2012). From September to November we analyzed comments published on Twitter that were related to 10 prime time talk shows: *Ballarò* (host: Massimo Giannini), *Di Martedì* (Giovanni Floris), *La Gabbia* (Gianluigi Paragone), *Matrix* (Luca Telese), *Ottoemezzo* (Lilli Grüber), *Piazzapulita* (Corrado Formigli), *Porta a Porta* (Bruno Vespa), *Quinta Colonna* (Paolo Del Debbio), *Servizio Pubblico* (Michele Santoro) and *Virus* (Nicola Porro). Three of them (*Ballarò*, *Porta a Porta*, *Virus*) were broadcast by the three major channels of the public service television RAI (one talk per each channel); other two (*Matrix* and *Quinta Colonna*) were broadcast by Berlusconi's Mediaset; the remaining five (*Di Martedì*, *La Gabbia*, *Ottoemezzo*, *Piazzapulita* and *Servizio Pubblico*) were broadcast by a smaller private television, La7, which offers a wide coverage of political news. We randomly selected one week per month and, during that week, we collected the comments published during the live tweeting (from the beginning until one hour after the scheduled ending of the show). The comments were downloaded through a set of keywords containing the name of the talk show or the hashtags commonly used to comment on it, as well as the names of the presenter and those of the invited politicians.

Tweets have been retrieved from the Twitter search Application Programming Interface (API). Due to the limitations imposed on the Twitter API (at that time there

was a limit of 1,000 tweets delivered per each keyword, in each call) it is hard to gather the whole population of tweets, however, some strategies can partially overcome these limits (Sampson et al., 2015). In detail, repeated calls were formulated by combining the name of the show and the names of the guests. By doing that, and given the relatively low number of tweets published, on average, about each show (Giglietto and Selva, 2014; Rossi and Giglietto, 2016) we can assume that our sample approaches the whole population of comments.

Overall, 30 episodes were considered and 135.228 tweets were collected and analyzed. With respect to the content of these tweets, on the one hand, we found some comments that indirectly express ‘videomalaise’ (Cappella and Jamieson, 1997) suggesting that “*On #Matrix politicians only make a chaotic mess*”; users compared talk shows to a “*chicken coop*” or a “*sheepfold*”, in which “*there is no dialog and it is impossible to understand anything*” because “*politicians are only shouting*”, emphasizing the fact that “*satirical shows like #Gazebo broadcast news while talk shows like #quintacolonna do not and only fuel the worst instincts*”, up to the point that someone complains saying that “*Politics is responsible for such dirty and disgusting things. We’re sick and tired #Quintacolonna*”. On the other hand, however, we also found comments expressing approval for the debate (“*@corradoformigli @ale_moretti @GiorgiaMeloni engaging, interesting and reflective show! What a nice episode #piazzapulita*” and “*burning topic but the episode came together beautifully!*”

#quintacolonna”) and many users directly discussed the issues that were debated during the show.

In particular, the audience reacts to the content of the talk show by agreeing or disagreeing with what has been said (D’heer and Verdegem, 2015) and by supporting or criticizing the different policy stances expressed by the guests of the show (see below). Accordingly, we take into account the support or opposition expressed on social media toward the 95 politicians invited to participate in these shows.

In the first stage a total number of 17.800 tweets, around 600 per episode, have been codified in order to create the training set, which has been used to estimate the distribution of opinions in the whole population of tweets.¹

As first, we create a measure of the average political/ideological views of the audience, i.e. something that resembles the traditional left-right scale.

Despite the rise of the anti-establishment Five Stars Movement (M5S), in the Fall of 2014, Italian political talk shows were still based on a bipolar format. Only politicians belonging to the main left-leaning (e.g. Democratic Party, PD) or right-leaning (e.g. Forza Italia, FI) parties were invited and little or no room was available to third-parties, including to representatives of the M5S, whose participation in TV shows was forbidden by the M5S leader, Beppe Grillo. Accordingly, we classified politicians in two categories, left and right, based on their political affiliation.

To distinguishing talk shows that are addressed to a left-leaning audience from those addressed to a right-leaning audience we measured the share of positive, negative and neutral sentiment expressed toward each of them.² For instance, we considered as expression of agreement (positive sentiment) tweets such as “*concerning the battles to fight in the European Union, well done Moretti! She made a concise but very clear comment on taxes and bureaucracy*” (supporting Alessandra Moretti, PD, during *Piazzapulita*) or “*I’ve just listened to the only relevant speech on Europe by @GiorgiaMeloni, well done!!!*” (supporting the right leaning Giorgia Meloni, during the same show) and “*The passionate @BiancofioreMiky demolished the polite @simonabonafe on the TV ring of Quinta Colonna where Miky confirmed she is determined and competent*” (supporting Michaela Biancofiore, FI, during *Quinta Colonna*).

Conversely, we classified as expression of disagreement (negative sentiment) comments such as “*Oh My God!! #Toti just said that Spain reaps the benefits of Rajoy’s labor market reforms! That’s untrue, unemployment has increased #matrix5*” (criticizing Giovanni Toti, FI, during *Matrix*) or “*Giorgia Meloni on Quinta Colonna talks about how to solve the problems of social housing... But she is subservient just like anyone else*” (criticizing Meloni during *Quinta Colonna*) and “*@orfini @RaiBallaro unfortunately @orfini doesn’t know the difference between job insecurity and equal treatment*” (criticizing Matteo Orfini, PD, during *Ballarò*).

Per each talk, we subtracted the average share of positive sentiment of left-wing politicians from the average share of positive sentiment of right-wing politicians: positive values indicate that right-wing politicians obtain, on average, a higher degree of positive sentiment compared to left-wing politicians; negative values indicate that the audience expresses more support for left-wing politicians.

The traditional left-right scale is still important to discriminate policy positions and to evaluate the degree of pluralism, but it may not be the only relevant dimension of conflict. For instance, in the Italian context (but also in other political systems), a second dimension can be useful to detect anti-political and populist attitudes represented by anti-establishment parties such as the M5S. Such dimension evaluates the closeness or distance of the audiences from the political system as a whole, measuring the legitimization they attribute to politics and politicians (indeed negative comments accused politicians of being deceitful or unqualified person and criticized their policy views by showing them – sometimes all of them – in a bad light). As such, we can sketch the degree of pluralism also in terms of lower and higher opposition to the political system.

To discriminate between media outlets on this second dimension we focused on the share of negative sentiment. We measured the average value of negative sentiment expressed by the audience towards all the politicians' opinions and performances. Lower values indicate a low degree of negativity towards politics and distinguish talk

shows whose audience is supportive of the political system. Higher values indicate a heightened degree of negativity and allow distinguishing talk shows preferred by an anti-political audience.

Results and findings

Figure 1 displays the standardized position of the audience of each show on the two dimensions. The positioning of the audience is coherent with previous studies on the slant of TV networks: the show with the most left-wing audience is *Servizio Pubblico* (La7) hosted by Santoro, one of the most tenacious anti-Berlusconi journalists (Hibberd, 2007; Stille, 2006). But also *Ottoemesso* (La7) and *Ballarò*, broadcast by RAI 3, the public channel traditionally considered as left-leaning (Durante and Knight, 2012; Hibberd, 2007; Stille, 2006) appear to attract a left-wing audience. On the left, we find the audiences of other two La7 shows, *Piazzapulita* and *Di Martedì*, which were respectively presented by Formigli (former colleague of Santoro) and Floris (former anchorman of *Ballarò*). Conversely, on the right side we find the audiences of two shows transmitted by Berlusconi's Mediaset, which is right-leaning network (Anderson and McLaren, 2012; Durante and Knight, 2012; Hibberd, 2007), as well as that of *Porta a Porta*, which is broadcast by RAI 1, the public channel traditionally more supportive of moderate and conservative views (Durante and Knight, 2012).

On the second dimension, *La Gabbia* has the most anti-political audience, while *Porta a Porta* has the least anti-political one.³

FIGURE 1: HERE

Figure 2 displays the position of the audiences of the three TV companies. Here we distinguish the ‘reservation area’ of each network (the area in which we collocate the TV users that are more willing to watch the shows broadcast by that network).

For this purpose, we report a Voronoi diagram (Okabe et al., 2000), which is a partition of the space into regions such that each region is associated with a unique ‘generating point’ and any point in the region is closer to that region’s generating point compared to the generating point of any other region. In our case, the generating points are the average positions of audiences of the three TV companies, and the set of points in each region are the positions of hypothetical TV users. Any TV user in a given region is closer to the position of that region’s TV network than to any other TV network and therefore more willing to watch the shows broadcast by that network.

FIGURE 2: HERE

This diagram reveals how media outlets have shaped the market. Although we observe a multi-actor competition in a two dimensional space, a context which lies apart from the assumptions of Downs' (1957) theory, this picture suggests that RAI and Mediaset (the two main TV networks) compete following a kind of *Downsian* framework: they tend to converge toward the rival network, adopting moderate positions (on average they are slightly conservative and slightly pro-system), and are indeed located close to each other in both dimensions. This scenario of competition is coherent with Auditel data on the viewership, according to which RAI and Mediaset are two giants of similar dimensions that control a wide majority of viewership (Durante and Knight, 2012). Conversely, La7 is a niche network which retains a small share of the market (around 3-4%) and indeed La7 seems to address niche TV users that are located away from the centre of the two-dimensional space. In particular, La7 attracts an audience which is more left-wing or anti-political, while overall RAI and Mediaset tend to broadcast show addressed to similar generalist audiences.⁴ Even so, RAI gathers the interest of left-wing and centrist TV users and Berlusconi's Mediaset attracts right-wing ones.

These results can also shed light on the degree of perceived pluralism that exists within each media company and in the whole media system. First, the public service broadcaster RAI is perceived to present a pluralist offer on the left-right ideological spectrum, ranging from left (*Ballarò*) to right (*Porta a Porta*). Conversely, on the first

dimension, each of the two other networks presents shows addressed to very similar audiences and does not try to cover the whole spectrum of political views. Indeed, the range between the most left-wing and right-wing shows is markedly higher for RAI (2.53), compared to La7 (1.04) and Mediaset (0.40). However, on the second dimension, RAI does not try to attract the anti-political audience at all and offers shows perceived as pro-system oriented. On this latter dimension, a degree of pluralism within the media system is provided thanks to La7, which appeals to anti-political media consumers and allows critical voices to be heard in the media system. The impact of La7 in terms of audience share is obviously lower than Mediaset and RAI. Nevertheless, La7 provides room for different ideas and opinions. On the whole, regardless of broadcasters' ratings, it seems that media users perceive the existence of pluralism as they can find, across networks, a number of shows addressed to different audiences.

Comparison with other data

Our results are in line with the traditional tendency of RAI to cover the whole spectrum of political parties (Hallin and Mancini, 2004; Mancini, 2009) offering a variety of contents. Our findings are also coherent with a recent survey on the political attitudes of the audience of TV networks (Barisione et al., 2014), which reveal that La7 attracts a more left-wing audience as well as an anti-political one, Mediaset attracts a

right-wing viewership (but also anti-political TV users), while RAI seems more moderate (except RAI 3, which has a left-wing audience).

Measuring pluralism by simply counting the difference between the number of left-wing and right-wing guests invited by each TV network would reveal some similarities too: La7 invited more left-wing than right-wing politicians (24 against 18), while RAI (13 against 16) and Mediaset (10 against 12) were more balanced, though with a slight prevalence of right-wing guests. This more traditional measure of left-right pluralism is somewhat correlated ($r = 0.65$) with the results of sentiment analysis. However, we also notice a few important discrepancies. For instance, *Ballarò* and *Ottoemzzo* formally respected pluralism criteria as they invited a balanced number of guests retaining different ideological views. Despite this, left-wing oriented audiences are more attracted by the content of these two shows confirming that objective criteria to evaluate pluralism do not necessarily mirror audience perceptions. This is even more evident if we consider that, despite the lack of any anti-establishment guest in the Fall of 2014, political talk shows also catered to an anti-establishment audience. This highlights a very important consequence that underpins our approach, suggesting that it can allow us to monitor a variety of perspectives: going beyond the mere content broadcast by the TV program it catches how that content has been perceived and digested by the audience.

The role of editors and anchormen

Overall, our results suggest that, in addressing the audience, talk shows follow the interests of the network and those of the owner/editor (Anderson and McLaren, 2012), as Berlusconi's Mediaset appeals to right-wing users and the public television RAI is perceived as avoiding anti-political contents.

But the ideological background of journalists matters too (Baron, 2006). We classified journalists in two categories (left-leaning and right-leaning hosts), according to their political affiliation or past activism/work in newsmedia clearly slanted to the left/right (Himmelboim, 2014).⁵ We find a statistically significant difference (99% level of confidence) between the average left-right position of the shows presented by left-wing (-0.55) or right-wing (0.83) hosts. This means that the anchorman's ideology slants the content and therefore has an impact on the public's perception, shaping the composition of the audience.

The fact that talk shows are, to a certain extent, ideologically slanted also emerges from a more qualitative reading of the tweets as some of them explicitly criticize the anchorman (or the show itself) for not being neutral; for instance, with respect to left-leaning anchormen/shows we find comments wondering whether *"shouldn't #ballarò be neutral? It's more pro-government than the premier Renzi himself. Giannini is opening the way to the PD"* or arguing that *"#MassimoGiannini and the whole #Ballarò newsroom just aim to put FI in a bad light"*. The same holds for

right-leaning anchormen/shows as Twitter users notice that “*Del Debbio was the first to let the crowd speak? But #quintacolonna didn’t do that when Berlusconi was in power, you figure out why*” and “*only simpletons or unsavory people can believe in the racist propaganda broadcast by shows like #quintacolonna*”.

These results highlight, once again, the weaknesses of objective measures of pluralism that do not take into account the slant of media and the audience’s subjective perception of such slant.

Additional applications: The gender of guests

The same analysis can also allow us to discuss other potential dimensions of pluralism such as those related to the representation of gender roles in the media or the fairness of the portrayal of ethnic groups to assess whether there is a bias in the sentiment expressed toward minorities. Here we will show a further application focusing on the gender of politicians. A mere count of guests highlights that men (66) outnumber women (28), though the share of women (30%) is consistent with their share of seats in the National Parliament. As such, one can argue that talk shows are balanced and they only perpetuate gender inequalities that exist elsewhere (Baitinger, 2015). However, our data go further and illustrate that there is no bias in the perception of the audience about the representation of gender roles portrayed by talk shows. Despite talk shows have occasionally been accused of devaluing the role of women in politics (for a

review: Hetsroni and Lowenstein, 2014; for a recent example about Italy: Cruccu, 2014) and despite the fact that there is a prevalence of males commenting on them, we did not find any statistically significant difference in the tone of the comments related to male (22.9% of positive sentiment) or female (20.8% of positive sentiment) guests (for a similar result: Hetsroni and Lowenstein, 2014). This suggests that audience's perceptions are not affected by the gender of the guest; according to the judgment of Twitter users, women guests were not put in a bad light during the shows (compared to men) and this seems to imply the existence of a gender balance.

Conclusion and implications

Using the practice of social TV, this paper has investigated the degree of perceived pluralism provided by Italian political talk shows in the Fall of 2014 focusing on the live reaction of audience to the content broadcast during the shows. We collected and analyzed the comments published on Twitter by the audience of 10 prime time talk shows during 30 different episodes. This information has been analyzed through supervised sentiment analysis in order to estimate the average position of the audience.

By analyzing the degree of positive and negative sentiment expressed toward the 95 politicians that were invited in the shows, we managed to build a two-dimensional space (Tworzecki and Semetko, 2012) measuring whether each talk addressed a left-

wing or right-wing audience (on the left-right scale) and a pro-political or anti-political audience (on the pro-system/anti-system scale).

In line with a recent surveys (Barisione et al., 2014), our results depict a media system in which the two main giants, RAI and Mediaset, compete according to a *Downsian* framework by broadcasting, on average, generalist talk shows. The main difference between the two is that RAI ends up attracting a more left-wing audience, while Mediaset focuses on the right-wing one. RAI also tends to offer an ideologically plural set of talk shows. Conversely, the offer of the smaller private network, La7, is more oriented toward an anti-political audience.

Our results suggest that, across media networks, there exists a variety of shows appealing to different audiences, though we also notice that – for some shows – reaching objective criteria of pluralism was not sufficient to produce analogous perceptions within the audience. With respect to left-right political views, it is the public service broadcaster RAI that fulfills the task of guaranteeing pluralism. Conversely, on the pro-system/anti-system dimension, the niche network La7 allows anti-political voices to be heard and provides talk shows suitable for such anti-system audience. This result is partially in contrast with two widely used press freedom indexes that criticize the Italian media system.⁶ Conversely, our research underlines that – even in the highly concentrated mainstream TV field and despite the political control exerted on Italian

television (or partially also due to that: Mancini, 2009) – there is room for a significant *external pluralism* (that also includes anti-establishment views).

Finally, our results also suggest that the host of the talk show can play a role, as we find a statistically significant difference in the left-right placement of talk shows presented by left-wing or right-wing journalists; conversely, the gender of politicians did not affect the perception of the audience.

Compared to other methods commonly used to evaluate pluralism, the technique proposed in the present paper presents some peculiar features. First, it is entirely based on the people's perception of the content broadcast by the shows; therefore it is suitable to assess the effect that media produce on the audience. In this regard, it becomes an alternative way to look at media pluralism. This point is rather important in light of the concepts of 'oppositional media hostility' (Arceneaux et al., 2012; Levendusky, 2013) and 'motivated skepticism' (Taber and Lodge, 2006). In fact, these studies suggest that the content spread by the media (and the pluralism of such content) is no longer the only relevant thing to care about; conversely, we should also look at the reaction of the users to observe how media consumers perceive and digest such content: indeed in our analysis we found a few comments written by users that resisted and criticized the information broadcast on TV highlighting a certain degree of oppositional media hostility.

The technique here proposed is not time consuming and can provide results almost in real time (Elmer, 2013), thereby allowing TV networks to adjust the frame of the show live, providing room for participatory practices (Bruns, 2008; Jenkins, 2006) that have the potential to generate an empowerment of the audience. Journalists, in fact, can profitably use such indicator of the perceptions of TV users to “feel their pulse” and, by including Twitter audience’s feedback into the program (Cameron and Geidner, 2014), they can enhance media responsiveness (Domingo and Heikkilä, 2012).

By evaluating how the audience reacts to the content of the talk shows (also in terms of who has been invited), this technique can be useful to public authorities that want to monitor perceptions on media pluralism, or private companies interested in the opinions of consumers.

The present study has implications for the analysis of media bias (e.g. Groseclose and Milyo, 2005) or audience fragmentation (e.g. Webster, 2005). It also contributes to the academic and non-academic debate on the potential polarizing effect of cable television (e.g. Iyengar and Hahn, 2009), which lowers the incentives to offer catchall talk shows.

In line with the literature on social TV (Anstead and O’Loughlin, 2011; Elmer, 2013; Freelon and Karpf, 2015; Larsson, 2013; Trilling, 2015; Vergeer and Franses, 2016), we observed that Twitter users commented live, expressing personal opinions that were related to the content of the show itself (D’heer and Verdegem, 2015;

Giglietto and Selva, 2014; Iannelli and Giglietto, 2015) and therefore seems to represent a fruitful source to analyze the perception of the audience and its reaction to that content.

However, based on the content of tweets, we also noticed that some users dislike the image of politics broadcast by talk shows; this can generate negativity and cynicism among the audience. On the whole, however, the existence of a certain degree of criticism toward politicians seems partially compensated by several positive comments. In this regard, future research could employ SASA to focus more deeply on videomalaise and political trust (Cappella and Jamieson, 1997) investigating to what extent these TV debates can generate distrust.

The study has some limitations though. The main one is represented by the fact that Twitter users may not be representative of the whole audience of talk shows. On Twitter there is a prevalence of younger, highly-educated males, concentrated in urban areas that are more politically active and more interested in politics (Vaccari et al., 2013). More politically interested citizens, however, are also more likely to consume news (Strömbäck, Djerf-Pierre and Shehata, 2013) and watch political talk shows commenting on Twitter (Vaccari et al., 2015); this fact can partially attenuate the socio-demographic differences with the audience. Nevertheless, it could be argued that, being more engaged in politics, Twitter users are also more extremists and polarized. However, our results suggest that – despite the ideological differences between the

audiences of each show – on the whole we do not find many fringe shows that are watched only by a wide extremist audience. Furthermore, we know that although Twitter users are not representative of a country's population, they can act like opinion-makers (for a discussion of the potential influence of social TV: Cameron and Geidner, 2014) becoming representative of larger streams of conversations. In this regard, previous studies have shown that TV viewers engage more in social TV when they feel a higher degree of affinity and involvement with the program itself (Guo and Chan-Olmsted, 2015). This seems to suggest that those commenting on Twitter can indeed be representative of the viewpoints of the 'core' audience of the show. What is more, the analysis of social media comments will become more and more interesting as the number of viewers engaged in social TV will grow.

The choice to dichotomize the political affiliation of the guests into 'left' and 'right' and to simplify the reaction of the audience distinguishing between 'agreement' and 'disagreement' can be a limitation too. However, SASA also allows to consider the intensity of positive and negative comments; analogously, in more polarized contexts, the opinions of the audience can be weighted according to more fine grained measures of the political ideology of the guests.

The analysis is based on a single case study and this represents another limitation. As such, future research could investigate differences across media systems (Hallin and Mancini, 2004) to expand the generalizability of our findings and to shed

light on the role played by public television compared to free private networks or pay TV in other countries. This method can also be applied to analyze the reaction and the perceptions of the audience in countries with a less free media environment, in which we could expect to find a higher degree of hostile media bias compared to the present case.

¹ The supervised analysis allowed us also to get rid of the noise produced by the staff of politicians and by the official accounts of the shows. These tweets, which were generally just a propagation of the exact statements pronounced by the guests without any additional original content, have been classified in an ad-hoc *Off-topic* category (i.e. tweets not relevant with respect to the analysis). The same applies to *noise* due to retrieval of hashtags and keywords that are also common words (e.g. *Matrix*). The *Off-topic* category represents approximately the 50% of the training set.

² The accuracy has been assessed on a subsample of 8000 tweets related to 7 guests (Alfano, Cofferati, De Micheli, Meloni, Moretti, Orfini, Toti). Compared to handcoded documents, the root mean square error of the estimates is on average 2.8%.

³ These results seem reliable too: *Porta a Porta* is almost considered as an institutional arena and the show is also called “the third Chamber”, while *La Gabbia* adopts a sort of populist format, in which politicians are put in the middle of the room, in a kind of cage, and are subjected to the judgment of the public.

⁴ Considering the unstandardized positions of the TV networks produces the same results: RAI's and Mediaset's talk shows are addressed to generalist and centrist audiences (though RAI also catches the left-wing audience and Mediaset the right-wing one), while La7 deviates from the centre of the space to cater to an anti-political audience.

⁵ We classified as left-wing anchors Santoro and Grüber (former members of the European Parliament affiliated with the Party of European Socialists), Telese (former head of the official newspaper of the Communist Refounding Party), Giannini (former head of the left-wing newspaper La Repubblica), as well as Floris and Formigli, self-defined as 'left-wing journalist' (for a similar operationalization: Himmelboim, 2014).

⁶ See Freedom House (<https://freedomhouse.org/report/freedom-press/2015/italy>) or Reporters Without Borders (<https://rsf.org/en/italy>).

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Figures

Figure 1: Placement of the audience of each talk on the two-dimensional space

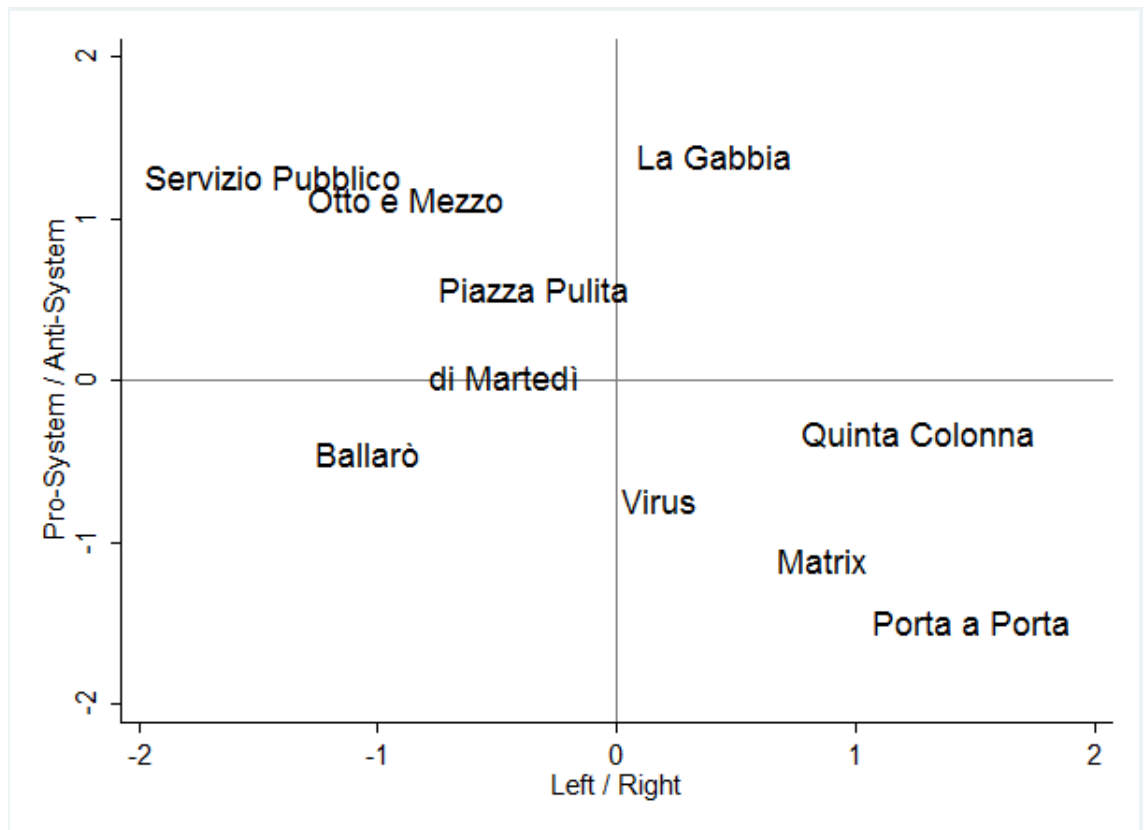


Figure 2: Average placement of the audience of TV networks and 'reservation area' of each network

