

Intra-party politics in 140 characters

Andrea Ceron

Università degli Studi di Milano, Italy

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Abstract

Scholars have emphasized the need to deepen investigation of intraparty politics. Recent studies look at social media as a source of information on the ideological preferences of politicians and political actors. In this regard, the present article tests whether social media messages published by politicians are a suitable source of data. It applies quantitative text analysis to the public statements released by politicians on social media in order to measure intraparty heterogeneity and assess its effects. Three different applications to the Italian case are discussed. Indeed, the content of messages posted online is informative on the ideological preferences of politicians and proved to be useful to understand intraparty dynamics. Intraparty divergences measured through social media analysis explain: (a) a politician's choice to endorse one or another party leader, (b) a politician's likelihood to switch off from his or her parliamentary party group; and (c) a politician's probability to be appointed as a minister.

Keywords

estimating policy positions, intraparty politics, social media, Twitter, Wordfish

Although some scholars claim that unity is a source of party's strength (McGann, 2002), we hardly ever observe perfect cohesion within political parties (Greene and Haber, 2017; Kölln and Polk, 2017; Somer-Topcu, 2017). The party is by no means a monolithic structure, as it is composed by politicians retaining similar but nonidentical preferences. Those sharing the most similar views often cluster together and form party factions, in order to shape the party strategy and maximize their own share of benefits. Given this premise, the fact that many parties all over the world are factionalized comes as no surprise, particularly because factionalism is not necessarily damaging to the party's fortune (Boucek, 2009).

Scholars started to investigate the impact of intraparty politics showing that factional preferences and the different policy views of individual politicians affect party platform, policy agenda and parliamentary policy-making, coalition formation, and portfolio allocation (e.g. Ceron, 2012; Giannetti and Benoit, 2009; Greene and Haber, 2014, 2017). Furthermore, intraparty differences also explain the voting behavior of MPs, intraparty competition during primary elections, or phenomena like party switch and party fission (Bernauer and Braüninger, 2009; Ceron, 2015; Giannetti and Laver, 2009; Heller and Mershon, 2008; Medzihorsky et al., 2014). Factional affiliation and individual preferences are also crucial to enhance a politician's career.

Despite the relevance of this topic, the research on intra-party politics has remained underdeveloped for many years, mainly because assessing the preferences of politicians and party factions is a difficult task. Recent advances in quantitative text analysis allow to fill this gap and scholars started to evaluate the degree of ideological heterogeneity by focusing on parliamentary speeches (Bäck et al., 2011; Benoit and Herzog, 2017; Bernauer and Braüninger, 2009), debates held at party conferences or party rallies (Greene and Haber, 2014, 2017; Medzihorsky et al., 2014), and documents drafted by intraparty subgroups (Ceron, 2012; Debus and Braüninger, 2009; Giannetti and Laver, 2009).

In this regard, the rise of social networking sites (SNS), such as Facebook and Twitter, represents a new opportunity to extract information on the degree of heterogeneity related to the policy views of party factions or individual politicians and can be of use to answer a variety of questions involving intraparty dynamics.

The present article tests whether social media messages published by politicians are a suitable source of data. The

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Corresponding author:

Andrea Ceron, Dipartimento di Scienze Sociali e Politiche, Università degli Studi di Milano, Via Passione 13, 20122 Milano, Italy.

Email: andrea.ceron@unimi.it

first section reviews the literature on estimating the position of political actors and describes the methodology used herein. The next three sections present three different applications that show how quantitative text analysis of public statements released, by Italian politicians, on social media and SNS can be informative of intraparty politics. In particular, we will illustrate that intraparty differences can explain: (a) a politician's choice to endorse one or another candidate who ran for the nomination in the 2012 primary election of the center-left; (b) a politician's likelihood to switch off from his or her party in the aftermath of 2013 Italian election; and (c) a politician's probability to be deemed as a credible candidate for a ministerial position, by the media, or to be actually appointed as a minister of the Renzi cabinet in 2014. The implications in terms of transparency and accountability are discussed in the last section.

Estimating policy positions from social media

The growth of the internet audience made the web attractive to parties and candidates to inform, mobilize, and cultivate personal votes. Scholars analyze the content broadcast on the official SNS accounts of politicians and parties in order to study electoral campaigns (e.g. Ceron and d'Adda, 2015; Conway et al., 2013). However, SNS data can be interesting even when general elections are faraway. As long as users publish online information on their tastes and opinions, several scholars suggest that the analysis of social media allows to scale—on an ideological axis—the position of citizens and politicians. These studies adopt two different methodologies: some of them follow a network approach (Barberá, 2015; Bond and Messing, 2015; Ecker, 2015; Hanretty, 2011; King et al., 2011; Livne et al., 2011), while others focus on the content of social media posts (Boireau, 2014; Boutet et al., 2013; Conover et al., 2011; Livne et al., 2011; Sylwester and Purver, 2015).

The information available on the web is particularly suitable to estimate the preferences of “hidden actors,” like formal and informal intraparty subgroups or individual politicians belonging to rival party factions, whose ideological viewpoints may be not formally recorded in official documents or displayed through parliamentary behavior.

Party competition creates pressure to display cohesion in the eyes of the voters as unity may enhance a party's electoral fortune (McGann, 2002); therefore, members supporting contrasting views about the party line and strategy should try to work out their disagreements before party positions are defined (in party manifestos or in legislative votes).

Whether the solution stems from consensual bargaining and compromise or from loyalty and enforced discipline does not really matter for our purpose, as in both cases,

we would fail to observe disunity and we lack the information necessary to estimate the internal heterogeneity of policy views.

The display of party unity may hide internal division and it does not imply perfect cohesion. But even when we observe conflict and splits, for instance, in roll call votes, the extent of disagreement inside the party could be misestimated.

So far, several sources of data have been used to account for intraparty ideological heterogeneity (for a review: Proksch and Slapin, 2015). Some scholars (e.g. Giannetti and Benoit, 2009) suggest to rely on what intraparty actors say (the declared preferences) instead of on what they do (the actual behavior). Since talk is cheap, heterogeneous declarations are less damaging to the party compared to the cost of noncohesive behavior. This is even more true in the internet age when politicians can take advantage of the new media to spread their ideas and to comment over any political event, virtually in real time. Then, “politicians may often toe the party line while at the same time generating texts that show far less subservience to the mechanisms of party discipline” (Giannetti and Benoit, 2009: 233). The analysis of political texts allows discriminating contrasting preferences even when actors behave in the same manner (e.g. cast the same vote or endorse the same candidate) and, therefore, it is well suited to study intraparty politics.

Accordingly, several studies measured the degree of intraparty heterogeneity by analyzing parliamentary speeches (Bäck et al., 2011; Benoit and Herzog, 2017; Bernauer and Bräuninger, 2009). However, it has been argued that speeches released during legislative debates are the outcome of an interplay between the party leader and backbenchers: Proksch and Slapin (2012: 16) analyzed MPs' discourses showing that they tend to misrepresent ideological polarization, hence are not the best source to catch intraparty divisions. In fact, speeches delivered in public and highly institutionalized arenas (like national parliaments) are easily observable and therefore subject to party whip. Different electoral systems alter the leader's propensity to employ the whip in order to impose discipline and affect MPs' incentives to express their sincere positions during the debate. Since the leader can decide whether to leave the floor to MPs or not, in competitive political systems where the value of party unity is higher (e.g. closed-list PR) she will be more likely to deliver the speech on his or her own or to give way to one of his or her followers. As a consequence, parliamentary speeches are subject to selection effects and ‘may not reflect the true distribution of preferences’ (Proksch and Slapin, 2012: 3) so that the analysis will overestimate party cohesion. Furthermore, selection effects can also occur due to alternative legislative rules (Giannetti and Pedrazzani, 2016).

For these reasons, the analysis of debates held at party conferences or party rallies (Greene and Haber, 2014, 2017; Medzihorsky et al., 2014) or documents drafted by

intraparty subgroups (Ceron, 2012; Debus and Bräuninger, 2009; Giannetti and Laver, 2009) has gained relevance in the literature on intraparty politics. During intraparty debates, the whip should only slightly bind the sincere expression of preferences, compared to the discussions held in the parliamentary arena. Investigating these debates by means of content analysis on texts drafted by intraparty groups could be useful to identify their preferences. Through documents like factional motions, that is, omnicomprehensive policy documents issued by factions during party congresses, any internal subgroup is (almost) completely free to present its idea about how party position and strategy ought to be. Given that their content should be minimally affected by leaders' control, some authors analyzed these programmatic documents that express 'opposing views on the ideological direction of the party' (Giannetti and Laver, 2009: 154) to map the distribution of preferences within the party.

Beside party conferences, social media represent another fruitful source of data on the preferences of individual politicians and intra-party subgroups. Furthermore, these kinds of data also retain some specific advantages. First, social media are unmediated and self-expression oriented tools in which users release unsolicited (and sometimes impulsive) statements: this increases the likelihood that public declarations posted online reflect the true preferences of political actors (Schober et al., 2015), particularly when these statements are perceived as being free preliminary personal opinions not subjected to party whip and not damaging for party unity. Although some statements could be instrumental, the extent of strategic behavior online should be lower if compared to what happens off-line in more formal environments. Texts written online are also more spontaneous compared to the content of interviews released to the media where politicians face direct (and sometimes unwanted) questions to which they must answer.

Second, while the analysis of party congresses display the preferences in a single point in time, social media data allow to record changes that happen between one congress and the following one and therefore is suitable to predict party fission or party switch; this point is particularly crucial in low-institutionalized contexts and inside new or fluid parties where subgroups are not steady and party members often make and break factions, shaping and reshaping the intraparty structure (Ibenskas and Sikk, 2017).

In light of this, the next sections will describe three applications that employ social media data to investigate intraparty dynamics. Focusing on the Italian case, we will use *Wordfish*, an automated scaling technique of text analysis (Proksch and Slapin, 2009; Slapin and Proksch, 2008), to measure the ideological position of politicians and factions as it emerges from the comments published on blogs, or official Facebook and Twitter accounts.

By doing that, we will test whether the ideology of politicians and their agreement with the line of the party leadership affect a variety of real world political outcomes and play a role in events such as primary elections, party splits, and politicians' career.

The three analyses differ from each other with respect to the source of data (Twitter only or all the social media together), the time span (3 months of data for the two most recent analyses vs. 4 years of data for the oldest one), and the unit of analysis (selected accounts of factional leaders, randomly selected accounts of politicians or the whole population of social media accounts of politicians belonging to one party).

In the *Wordfish* analyses (see online Appendix 1 for details), however, some common guidelines have been followed. First, we retained only the posts with a political content, meaning that we excluded "technical" messages that merely announce participation to meetings or television debates (e.g. "tonight I will be interviewed live on public television").

Second, retweets, replies, and (public) direct messages have been analyzed too, under the assumption that the politicians intentionally carried out such actions. For instance, politicians are free to ignore messages sent to them when they are not willing to reply (indeed, the literature illustrates that politicians follow a top-down approach on social media: Larsson, 2013). Analogously, they should retweet messages only when they want to spread the content of the original message or to signal a link with the original author.

Third, no preprocessing (e.g. stemming) has been performed given that in the Italian case preprocessing tends to produce estimates that are highly correlated (Greene et al., 2015). Indeed, in the present article, the correlation between our estimates and the estimates obtained after stemming words is above 0.9.

Endorsing the party leader: Social media in the wake of 2012 center-left primary election

To date, more than 70% of Italian MPs have a SNS account. This share has dramatically grown in the last years, starting from the 2012 center-left primary election when thousands of messages have been posted by politicians, party activists, or common citizens to debate on the campaign.

The primary election was called to select the leader of the center-left coalition in view of the 2013 general elections. Five candidates ran for the nomination but only two had a real chance to win the race: the frontrunner and party leader, Pierluigi Bersani, was challenged by the young mayor of Florence, Matteo Renzi. In December 2012, Bersani won the election and got appointed as leader of the coalition. Bersani and Renzi were the head of two different factions affiliated with the Democratic Party (PD). At that

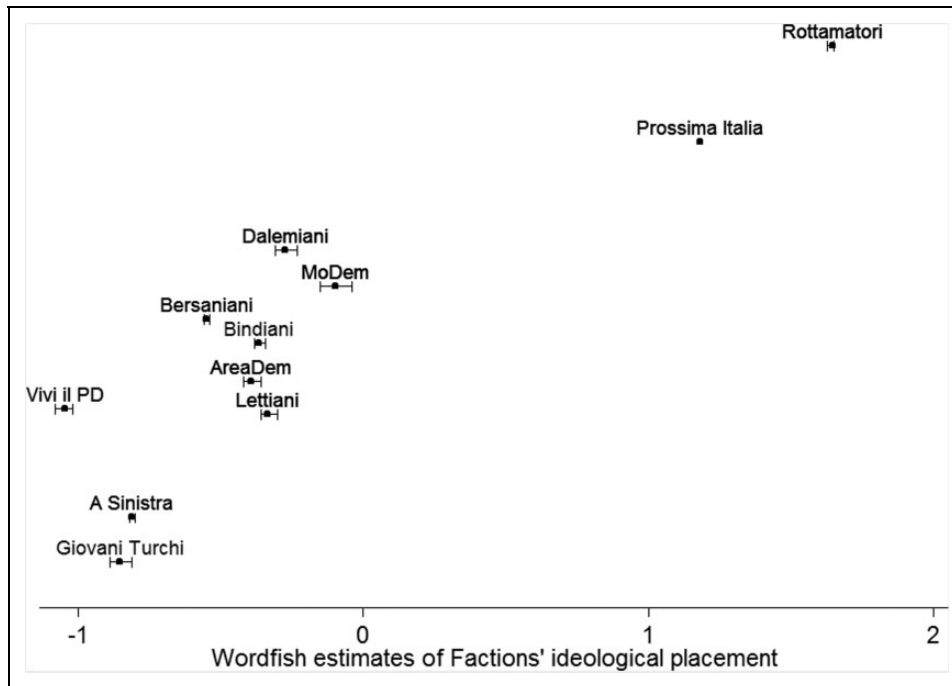


Figure 1. Ideological placement of PD factions at the end of 2012. PD: Democratic Party.

time, however, the internal life of the PD was not that simple.

By defining factions as “subunits which are more or less institutionalized and who engage in collective action in order to achieve their members’ particular objectives” (Boucek, 2009: 468), in 2012, we can classify up to 11 distinct subgroups within the PD: *A Sinistra* (factional leaders: Livia Turco and Vincenzo Vita), *AreaDem* (Dario Franceschini), *Bersaniani* (Bersani), *Dalemiani* (Massimo D’Alema), *Democratici Davvero* (Rosy Bindi), *Giovani Turchi* (Stefano Fassina), *MoDem* (Walter Veltroni and Paolo Gentiloni), *Prossima Italia* (Giuseppe Civati and Debora Serrachiani), *Rottamatori* (Renzi), *Trecentosessantista* (Enrico Letta), and *Vivi il PD* (Ignazio Marino). The policy position of each faction has been measured by applying Wordfish to analyze blogs, Facebook accounts and Twitter profiles of their factional leaders.¹ We downloaded the comments published during the XVI Legislature, between April 2008 and December 2012. When there was no web content available for a leader or when the amount of information was insufficient to carry out a reliable analysis, we compensate using data related to other prominent politicians belonging to the same faction.² Overall, 21 PD leaders have been considered and their individual positions, measured through another Wordfish analysis, are on average strongly correlated with the position of the faction (0.90).³ The placement of words on the latent dimension is in line with their substantial meaning in the Italian political language. Terms like “redistribuire” (redistributing) and “uguaglianza” (equality) are located on the left as well

“disoccupazione” (unemployment). Concerns about “inflazione” (inflation) are instead typical of the right of the party likewise support for the “#agendamonti” (a platform of reforms proposed by the former centrist premier Mario Monti).

Figure 1 displays the placement (with 95% confidence interval) of factions along the latent dimension, which can be interpreted as an ideological left-right scale. The vertical axis represents the mean of the individual positions of factional leaders.

The policy positions of party factions are in line with the expectations. On the left side, we find factions like *Vivi il PD*, *Giovani Turchi*, and *A Sinistra* that usually expressed left-wing positions. The *Bersaniani*, followers of the party leader, are still on the left though on a more moderate position and all the other factions that supported Bersani (*AreaDem*, *Bindiani*, *Lettiani*, and *Dalemiani*) are quite close as well. The position of the *MoDem* is more centrist and statistically different from that of the mainstream factions rallied behind Bersani. Finally, liberals and reformist subgroups like *Rottamatori* and *Prossima Italia* (a splinter group of *Rottamatori*) are on the right wing. The positioning of *Bersaniani* and *Rottamatori* is similar to that based on the analysis of policy platforms presented by Bersani and Renzi during the 2012 primary election.

To double check the validity of the estimates, we also performed content analysis of the textual documents considered and we observed that the distance between the position of each factional leader and the party leader Bersani is positively correlated (0.7) with the number of

Table 1. Logit regression of endorsement.

Parameters	(I)	(II)
Distance	-1.823* (1.058)	-2.377*** (0.590)
Experience	0.011 (0.074)	-0.030 (0.049)
Constant	1.580 (1.216)	2.681*** (0.563)
N	19	85
% correctly predicted	63.2	87.1

Note: Robust standard errors in parentheses.

Significance (two tailed): *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

negative messages written against Bersani and posted online by politicians.⁴

Accordingly, we employ these estimates to test whether the online ideological alignment of factional leaders can explain their offline behavior. We hypothesize that:

Hypothesis 1—The likelihood to endorse one candidate is higher when the position of the politician/factional leader is closer to that of the candidate.

We focus on the choice to openly endorse Bersani in the primary election campaign, drawing information from a list of endorsements made by PD politicians on the media (Seddone, 2012). The list has been gathered considering all the official declarations publicly released in national newspapers in the last weeks before the primary election.

Our dependent variable is *Endorsement*, which is equal to 1 when the politician supports the party leader Bersani, and takes the value 0 when not.⁵ In model 1, we focus on the individual ideological placement of factional leaders considered in the Wordfish analysis and we assess its effect on *Endorsement* through logistic regression. In model 2, we extend this analysis by taking into account also the PD politicians who are included in the endorsement list (Seddone, 2012); factional affiliation of each politician was assessed based on personal biography or membership in one of the rival intraparty associations and we test the impact of their faction's ideological placement on *Endorsement*, through a multilevel logit. Our main independent variable is *Distance*, which records the absolute distance between the policy position of Bersani and that of politician *i* (model 1) or that of his or her faction (model 2). We also include *Experience*, which accounts for the number of years spent in parliament, as a control variable.⁶ The results are shown in Table 1.

The results confirm that the ideological preferences estimated through the analysis of posts published on social media can explain a politician's choice to endorse or not the party leader Bersani in the primary election. Factional leaders whose position is closer to that of Bersani, or PD politicians affiliated with a faction ideologically tied to him, are more likely to openly endorse Bersani in the press and this likelihood decreases as *Distance* grows: from model 1, a change in *Distance* by one standard deviation

from its mean decreases the probability of *Endorsement* by 24.2 points (41.9%). Notice that when considering the effect of the distance from Renzi on the likelihood of endorsing Renzi, we obtain very similar results.

Factions, fission, and switch in the aftermath of 2013 elections

Although parties should try to hide the conflict, they often end up washing their dirty linen in public. This happened, for instance, in the aftermath of the 2013 general elections, when all the main Italian parties were dealing with internal rivalries and dissent between the leadership and the backbenchers. Often, these conflicts became directly observable, through SNS or through debate and interviews made on television and newspapers, and intraparty rivalries often produced a party breakup.

The occurrence of party fissions (Ceron, 2015) has dramatically altered the shape of the Italian party system. Indeed, both small and large parties were (repeatedly) hit by party fissions or by switch of MPs. For example, a splinter group of the left-wing party ('Left, Ecology, and Freedom') broke up to join the PD. Similarly, some MPs belonging to Civic Choice (SC), the new party created by the incumbent premier Mario Monti, rejoined the PD, while others merged with a splinter group of a small centrist party to create a new one. Intraparty divisions also produced the split of one party that has long been considered homogeneous: some MPs tied to a local party leader (Flavio Tosi), in fact, switch off from the Northern League to create their own party. Party switch and party fission also involved the three main parliamentary party groups. Beppe Grillo, the leader of Five Stars Movement (M5S) repeatedly decided to expel some rebels from the party, and in January 2015, a large number of MPs broke away to create an autonomous group. Berlusconi's Forza Italia (FI), which was already hit by two party fissions in 2010 and 2012, broke again in the Autumn 2014 when the Minister of the Interior (Angelino Alfano) contested Berlusconi's choice to withdraw the support to the cabinet and created a moderate party called New Centre-Right (NCD). Forza Italia was hit by two additional party fissions in June and August 2015, when party members loyal to Raffaele Fitto and Denis Verdini split.

Finally, in the highly heterogeneous PD, factional conflicts erupted when the leader of the minority, Matteo Renzi, won the congress and became the new party leader. The divisions inside the PD became particularly sharp after the labor market reform and the school reform, when a few MPs (including some factional leaders like Fassina and Civati) switch off the PD as a sign of disagreement.

Scholars highlighted the link between the policy views of politicians and their propensity to leave the party (Ceron, 2015) or switch off from the parliamentary party group (Heller and Mershon, 2008). Accordingly, we want to assess whether the declarations published by MPs on social

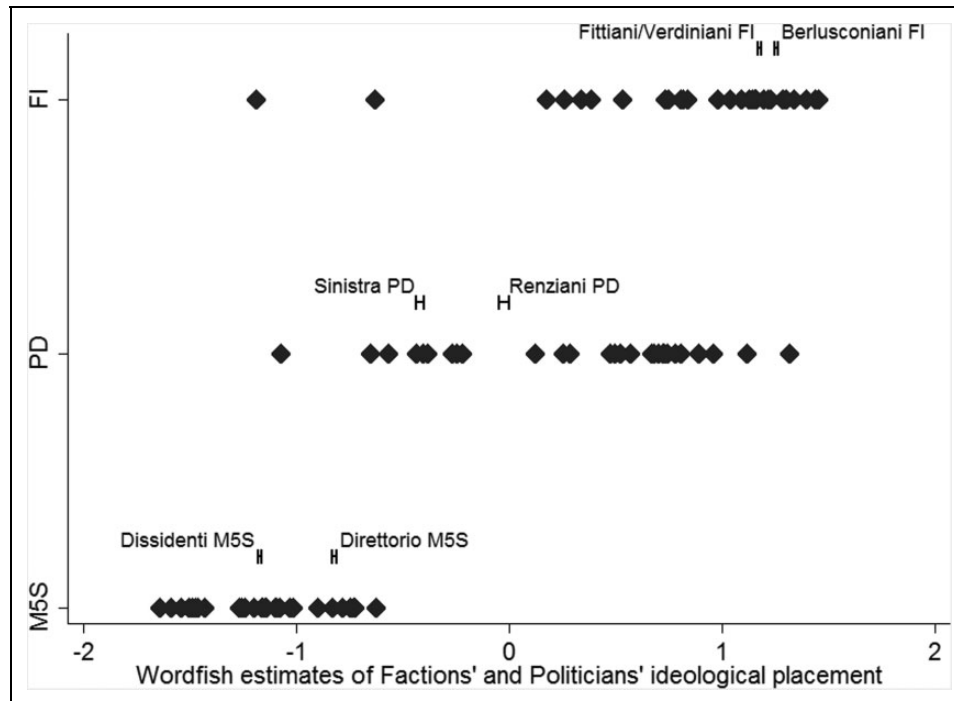


Figure 2. Ideological placement of politicians and factions at the end of 2014.

media allow to predict the occurrence of a party switch. We hypothesize that:

Hypothesis 2—Politicians located far away from the party leader are more likely to leave the party.

Focusing on the three main parliamentary groups, PD, M5S, and FI, we collected and analyzed the tweets written by 90 randomly chosen politicians, belonging to these parties. Per each party, we selected 15 politicians representing the majority of the party (respectively: *Renziani* faction, within the PD; members of *Direttorio* loyal to the leader Beppe Grillo, within the M5S, and *Berlusconiani* inside FI) and 15 politicians belonging to minority groups (in detail: *Sinistra PD* and *Civatiani*, within the PD; *Dissidenti* within the M5S⁷; *Fittiani* and *Verdiniani* within FI). We gathered tweets published in the official Twitter accounts during the last 3 months of 2014, and we tried to predict switches occurred in 2015. Tweets were analyzed through Wordfish. All the tweets written by the same politician were pooled together to produce an estimate of the individual position of that politician. In addition, we also pulled together tweets written by MPs belonging to the same subgroup in order to estimate the ideological placement of these six groups: *Renziani*, *Sinistra PD* and *Civatiani*, *Direttorio M5S*, *Dissidenti M5S*, *Berlusconiani*, and *Fittiani-Verdiniani*.⁸ Once again, the placement of words on the latent dimension is in line with their substantial meaning in the Italian political language: indeed, left-wing words (e.g. “redistribuire”/redistribution, or hashtags, such as “#giustiziasociale”/

social justice and “#democraziapartecipativa”/participatory democracy) have been discriminated from right-wing ones (e.g. “chiesa”/church, “patria”/motherland, or hashtags like “#bastatassesullacasa”/stop house tax). This seems to confirm that the political language is largely ideological in nature, even on Twitter, and can be used to detect ideological differences (Sylwester and Purver, 2015).

Figure 2 displays the position of 90 individual politicians on the latent dimension, along with the placement of the six groups (95% confidence interval of the estimate).

The policy positions of these subgroups are in line with the expectations⁹: the minority faction of the Democratic Party (*Sinistra PD*) stands on the left of *Renziani* and it lies quite far away. The difference between the supporters of Grillo and the dissidents of M5S is quite large as well; the leadership of M5S appears to be slightly more conservative on the latent scale, while the dissidents seem more left oriented. This is in line with the expectations: so far, the elected officials of the M5S tend to be more leftist than the leadership and the party leader Grillo complained about this. The reason is that, due to internal rules of candidate selection, only early party activists (who were more left-oriented: Pedrazzani and Pinto, 2015) got access to the party list in 2013. Conversely, the distance between the subgroups of FI is very tiny, and this might suggest that the difference between the two factions is not primarily related to policy issues. What is more, the alignment of the three parties is coherent ($r = 0.93$) with the analysis of 2014 parliamentary debates (Ceron and Curini, 2014), with the RILE scale ($r = 0.99$) provided by the Comparative

Table 2. Logit regression of Switch.

Parameters	(I)
Distance	1.936** (0.870)
Experience	−0.051 (0.251)
Constant	−1.299*** (0.438)
N	87
% correctly predicted	73.6

Note: Robust standard errors in parentheses. Party dummies embedded. Significance (two tailed): *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Manifesto Project (Lehmann et al., 2015), with the left-right economic scale ($r = 0.89$) from Chapel Hill (Bakker et al., 2015) expert survey and with many other data sources (see online Appendix 3). Accordingly, we can interpret the latent dimension as a left-right scale.

Based on this, we measure the *Distance* between each politician and the party leader (Matteo Renzi, Beppe Grillo, and Giovanni Toti) to assess whether it affects a politician's choice to *Switch* off the party. The dependent variable *Switch* is equal to 1 when the politician decides to switch and equal to 0 when not (we observed 25 switches in our sample); we also control for the level of parliamentary *Experience*, and given that observations are nested within parties, we include party dummies.

The results confirm that the ideological preferences estimated through social media analysis are informative of the occurrence of a party switch (see Table 2; for a similar result: Ecker, 2015). The higher the distance from the party leader, the stronger the probability that a politician leaves the party: a change in *Distance* by one standard deviation from its mean increases the probability of *Switch* by 16 points (59.2%).

Ministerial selection in the age of Twitter: The formation of Renzi cabinet in 2014

The last application focuses on ministerial selection. Taking the cue from recent studies (Fleisher and Seyfried, 2015; Kam et al., 2010), we want to analyze whether the distance between a politician ideal point and the core of the party impinges on his or her political career and on the likelihood to be appointed as a minister (or junior minister). We hypothesize that:

Hypothesis 3—Politicians closer to the official party position are more likely to be appointed as minister/junior minister (and to be deemed “ministrable” by the media).

To test this claim we focus on the PD during the formation of the Renzi cabinet, in February 2014. We considered the party in central office (PCO), which was renewed in December 2013 after that Renzi won the direct election and became party leader, and therefore, constitutes a suitable

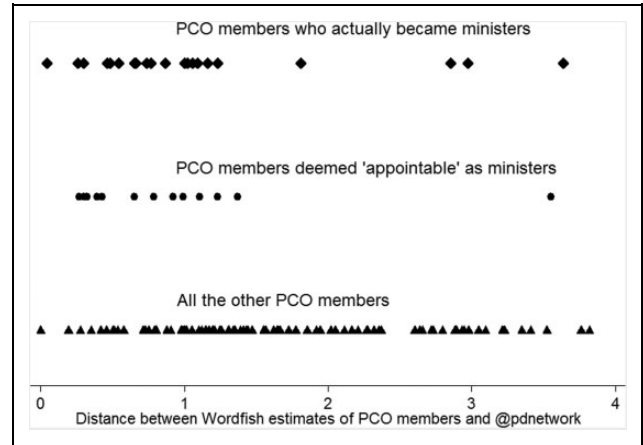


Figure 3. Distance between the estimates of PCO members and the PD Twitter account. PD: Democratic Party; PCO: party in central office.

“recruitment pool.” We gathered data on 122 of 179 members of the Executive body of the PD (*Direzione*), that is, the whole population of members that retained a Twitter account (68% of PCO). We downloaded all the tweets published by PCO members between December 8, 2013 and February 22, 2014. Furthermore, during the same time lapse, we collected all the tweets published by the official Twitter account of the party (@pdnetwork).¹⁰ These documents have been scaled through Wordfish in order to produce a matrix of similarities between PCO members and the @pdnetwork account, which lies at one extreme of the scale.

Based on this, and under the idea that nowadays, Twitter can be a device to signal its own loyalty to the party by broadcasting the party line as much as possible to the followers, we argue that the latent dimension can provide insights on how strong is a politician's loyalty toward the official party line. Such interpretation is confirmed when looking at the discriminating power of each word. The list of words used to express loyalty, reducing the distance between the MP and the party account, includes references to the party itself (“partito”/party and “democratico”/democratic) to its social media accounts (the Twitter account “@pdnetwork” or “youdem,” the online TV channel of the party), to its leadership (the Twitter account “@matteorenzi” or the Twitter question time “#matteoreisponde”) as well as terms mentioning other institutional party arenas, such as the PD assembly (#assembleapd) or the PD executive body (#direzionepd). These words suggest that the MPs are closer to the party account when they broadcast the party line to spread the party message rather than expressing personal views and, by doing this, they can signal their loyalty and their willingness to cooperate once in office.

Figure 3 displays the placement of each PCO member and his or her distance from the position of @pdnetwork.

Table 3. Logit regression of “appointability” and ministerial appointment (with or without imputation).

Parameters	(I)	(II)	(III)	(IV)
Distance	−0.399*** (0.144)	−0.279** (0.139)	−0.364*** (0.126)	−0.235** (0.117)
Experience	0.498*** (0.182)	0.615*** (0.189)	0.445*** (0.144)	0.527*** (0.139)
Renziani faction			−0.768 (0.501)	0.492 (0.567)
Constant	0.856* (0.520)	−1.639*** (0.564)	−0.727 (0.622)	−2.062*** (0.727)
N	122	122	179	179
Imputations			5	5
% correctly predicted	82.0	84.4	84.9	83.0

Note: Robust standard errors in parentheses.

Significance (two tailed): *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Observations are clustered in three different groups: those who were deemed as potential ministers by the media (circle),¹¹ those who actually became ministers (diamond), and those who were not judged appointable neither by the media nor by the premier (triangle).

The distribution of ministers and potential ministers is closer to the party compared to that of all others politicians. The distance between each politician and the party is slightly correlated (0.4) with the results of a content analysis performed on the tweets of a subsample of politicians, made to assess the share of sentences written to support the new party leadership.

We then evaluate whether the variable *Distance*, normalized on a 0–10 scale, affects one of the two following dependent variables: (a) *Ministerial Appointability* (model 1), a dummy variable equal to 1 when the politician is considered as a favorite for ministerial appointment (also for a junior position), and equal to 0 when not; (b) *Ministerial Appointment* (model 2), a dummy variable equal to 1 when the politician has been actually appointed as minister (or junior minister), and equal to 0 when not. Table 3 displays the results of the logistic regression, while controlling for the degree of parliamentary *Experience*.

Once again, the results confirm the role of social media analysis as a source of information and highlight the potential role of Twitter as a “signal,” useful to boost a politician’s career. The higher the distance from the content of the official PD Twitter account, the lower the probability to be considered as a potential minister or to be appointed in office: a change in *Distance* by one standard deviation from its mean decreases the probability of *Ministerial Appointability* by 7.7 points (48.1%) and that of *Ministerial Appointment* by 5.2 points (37.2%). This finding applies only to politicians active on Twitter therefore, in models 3 and 4, we extend the analysis to all the 179 members of the Executive body. To evaluate the impact of *Distance* when considering also politicians without a Twitter account, we imputed missing data (King et al., 2001) estimating what would have been their value of *Distance* if they had had a Twitter account. In addition, to control for alternative explanations, we assessed factional membership of each politician to evaluate whether they belonged to the

Renziani faction or not, and we include this dummy variable into the model.¹² The results confirm that, net of factional affiliation, the probability to be appointed or to be deemed appointable decreases with the *Distance* from the party, while factional membership, per se, has no effect. Finally, it could be argued that the decision to be active on Twitter is subjected to a self-selection that can produce a sample bias. Actually, we did not find any difference between the two groups (with or without a Twitter account) concerning gender, education, factional membership, or *Experience*, except for a (slight) difference related to age. Nevertheless, to take into account this issue, we estimated a probit selection equation and we included the inverse Mills ratio drawn from such model in new probit regressions built as in models 3 and 4. By doing this, we can control for the hypothetical bias in Twitter usage. Once again, our results hold the same.¹³

Discussion

The present article evaluates whether social media messages published by politicians are a suitable source of data on intraparty politics and tests whether the ideology of politicians (expressed online) as well as their agreement with the line of the party leadership allow us to anticipate the behavior of political actors in real-world political events, such as primary elections, government formation, and party splits.

By exploiting data available on SNS to extract information on the ideological placement of political actors like parties, factions, and individual politicians, this article confirms the promising results obtained by previous studies (e.g. Barberá, 2015; Bond and Messing, 2015; Ecker, 2015) and provides a further contribution by showing that the content of comments published online is highly informative too (see also: Sylwester and Purver, 2015).

Three applications of automated text analysis to the posts published by Italian politicians on blogs, Facebook and Twitter, between 2008 and 2014, have been presented. The results shed light on how online measured intraparty heterogeneity can explain several intra-party dynamics and in particular: (a) a politician’s choice to endorse one or

Table 4. Summary of the analyses.

	Endorsement	Switch	Ministerial appointment
Party	PD	PD, M5S, FI	PD
Source	Blog, Facebook, Twitter	Twitter	Twitter
Time span	4 years	3 months	3 months
Case selection	Selected accounts	Random	Population
Validity of estimates	0.7	0.9	0.4
Significant effect	***	**	***
Magnitude of impact	41.9%	59%	37%–48%

M5S: Five Stars Movement; PD: Democratic Party; FI: Forza Italia.

Note: Significance (two tailed): *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

another candidate during primary election, (b) a politician's likelihood to switch off from his or her party, and (c) a politician's probability to be deemed as a credible candidate for a ministerial position, by the media, or to be actually appointed as a minister. Indeed, the ideological distance from the party leadership explains a politician's decision to support the leader in a party primary and to switch to another parliamentary group, as well as her or his probability to be appointed as minister/junior minister.

In this regard, as politicians take clear positions on SNS, intraparty dynamics become less hidden and the gears of political systems may appear more transparent. In turn, politicians and political actors can be made accountable for their actual behavior, in light of the positions expressed online.

Table 4 summarizes the features and the results of the three analyses.

The selection of cases varies, ranging from the choice of selected accounts (those of factional leaders) to the random selection of accounts (with a mix of leaders and backbenchers representing both the majority and the minority faction of the party), up to the attempt of analyzing the whole population of PCO members with a Twitter account. In all the three analyses, we tried to validate our estimates through a comparison with hand-coding and manual content analysis (for a similar approach: Klüver, 2009), finding a proper correlation in each analysis and reaching a satisfactory validation of data in at least two cases. Several statistical analyses show that the degree of intraparty heterogeneity measured through social media analysis has indeed an effect on a variety of topics and the magnitude of such effect seems quite relevant. Although social media are affected by some limitations and could not be able to substitute other types of data, these results suggest that social media can be a promising and precious sources of information on intraparty politics. Future research should investigate whether text analysis techniques can be profitably mixed with other methods based on network analysis in order to provide more valid estimates that can enhance

our understanding of intraparty dynamics. Furthermore, future studies could attempt to continuously monitor the evolution of ideological preferences over time; by providing data on the preferences of individual politicians, the analysis of SNS can contribute to study political careers (and allows us to perform cross-country comparisons). Finally, social media analysis should be extended to study internal polarization across parties and countries, in a comparative perspective. In light of this, social media data can also be used to estimate the position of citizens and influent opinion makers, like bloggers, journalists, and media, in order to assess the congruence of preferences between parties, activists, voters, media, and interest groups.

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Supplemental Material

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Notes

1. Until 2012, the use of social networking sites (SNS) by Italian politicians was still in its infancy. Politicians were active on different SNS and it was difficult to focus on a single one. Therefore, we relied on all the available sources of data. Furthermore, for the sake of maximizing the length of texts, we extended the range back to 2008. Conversely, in the rest of the article, we will analyze only Twitter (which seems to have a less "personal" content compared to Facebook).
2. For instance, to supplement Enrico Letta, we analyzed declarations issued by Francesco Boccia (who can be considered his "man-Friday") and similarly, to account for the position of Dalemiani, we retained texts written by Nicola La Torre, the "spokesman" of Massimo D'Alema.
3. In both analyses, the number of unique words is 31,015. Given the long time frame of data collection (4 years) and the fact that we also collected long texts like blogs, the average number of words per document is quite huge: 20,465 words when considering the 21 individual documents and 39,070 when considering the 11 factional documents.

4. Here is an example of a negative messages written against Bersani: “We can’t travel to the future with Bersani who has never written a single page talking about the future in the last years.”
5. Bersani and Renzi have been excluded from the analysis. Note that a few politicians explicitly declared their nonendorsement for both candidates.
6. We control for *Experience* in all the three applications. Note that our results remain robust when including additional control variables like age or gender (See online Appendix 2 for descriptive statistics).
7. Members of *Dissidenti* were identified from a list of MPs who did not fulfill the obligation to render account of their parliamentary expenses (the list was made available on the blog of the party leader, Beppe Grillo, <http://www.beppegrillo.it/tir-indiconto.it/trasparenza/>). The *Direttorio* includes the five MPs selected by the party leadership as members of the executive party body and a random sample of 10 MPs who did not appear in the previous list.
8. The number of unique words is 24,135. On average, each politician’s Twitter account includes 2015 words, which is large enough to perform a reliable analysis. The six textual documents of subgroups contain approximately 30,218 words each.
9. The position of each group and the average position of the politicians belonging to that group are strongly correlated (0.95).
10. The number of unique words is 17,167. Each politician’s Twitter account, on average, is 1032 words long.
11. To assess which PD politicians were deemed appointable by the media we scrutinize newspapers (both in paper and digital edition) as well as newswire agency’s data from the resignation of the Letta cabinet (February 14th) until the announcement of the Renzi cabinet (February 22nd). All the main newspapers (*La Repubblica*, *Il Corriere della Sera*, *Il Fatto Quotidiano*, *Quotidiano.net*, *Il Sole 24 Ore*, *Il Giorno*, *Il Giornale*, *Liberio*, *Il Tempo*, and *La Stampa*) and newswire agencies (*Agi*, *Asca*, *Ansa*, *Adnkronos*, and *Italtpress*) were considered.
12. Excluding this variable from the analysis does not alter the results.
13. Data available on request. Notice that all the datasets and replication files will be available at <http://andreaceron.com>

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Author biography

Andrea Ceron is assistant professor in Political Science at the Department of Social and Political Sciences, Università degli Studi di Milano. His research focuses on intraparty politics, quantitative text analysis, and social media. His recent publications include articles in the *British Journal of Political Science*, the *European Journal of Political Research*, the *Journal of Computer-Mediated Communication*, and the *International Journal of Press/Politics*.