

Political anatomy of a digital environmental controversy: Twitter reactions to Ultima Generazione’s protest at the Italian Senate

Massimo Airoidi, Laura Bruschi – University of Milan

Disruptive climate protests ordinarily ignite digital controversies, which can be mapped out to understand whether such actions are effective at mobilising the public toward environmental issues, and why. In the morning of January 2nd 2023, a group of Ultima Generazione activists defaced with orange paint Palazzo Madama, seat of the Italian Senate in Rome. The present paper makes use of computational methods to investigate Twitter users’ reactions to this environmental protest gone viral. We show that a) while UG’s nonviolent action succeeded at giving visibility to climate-related topics, the majority of tweets in our dataset focused on the legitimacy and modalities of the protest; b) the Twitter reception of the protest is very mixed, with a slight majority of positive reactions; c) users who “follow” Twitter accounts close to right and centre-right positions tend to judge the protest in a negative way, and vice-versa. Our results indicate that the discursive surface of this digital environmental controversy is shaped by a deeper space of political position-takings.

1. Introduction

For decades, the ongoing climate crisis was perceived as no more than a series of abstract modelizations featured in scientific reports: rarely commented in general media, largely ignored by politicians and the public, with limited or no consequences on lay citizens’ everyday life, at least in Western countries. It is only in the past few years that those abstract predictions have assumed the much more concrete and frightening form of record average temperatures and extreme drought conditions. In addition to sizable economic consequences on industries like agriculture and farming, indirectly affecting market supply and prices, lay citizens in Europe have started perceiving the nefarious effects of climate change in more direct ways – literally, on their own skin. A growing anguish, fuelled by mediatized climate disasters, gloomy scientific forecasts, ubiquitous greenwashing and, more importantly, first-hand experiences of an ongoing environmental collapse, has driven the individual adoption of more sustainable lifestyles, as well as the collective participation to alternative forms of “green” political mobilization. Groups like Extinction Rebellion and Greta Thunberg’s Fridays for Future took centre stage in late 2018, bringing a new wave of grassroots activism characterized by forms of nonviolent civil disobedience (Boulianne et al. 2020). Nevertheless, large segments of the public continue to question both the need for urgent environmental action by governments and companies, and the scientific agreement on the anthropic causes of global warming. As a result, climate activists gluing themselves to famous paintings or blocking traffic in the attempt of raising ecological consciousness and putting pressure on politicians have so far met mixed (when not plainly hostile) reactions from the general public.

While the European urban youth is increasingly worried by the consequences of climate change, older and less educated citizens tend to be less concerned (Poortinga et al. 2019), with social media displaying a wide circulation of negationist theses – often echoed by conservative political discourses. This is especially evident in the case of Italy, where the climate protests inaugurated by civil disobedience group Ultima Generazione (UG) are making the news despite the poor electoral results of green parties and wide popular support for Meloni’s pro-fossil industry right-wing government.

In a polarised and hypermediatized political field such as the Italian one, where climate change is at the centre of symbolic struggles and conflictual opinions, it is of particular relevance to investigate environmental controversies sociologically. This research topic has gained significant attention in the social sciences in the early 2010s (Aykut et al. 2012), just before the widespread diffusion of smartphones and rampant platformization of public debate. With disruptive climate protests getting viral on social media and attracting millions of comments and reactions, environmental controversies can now be mapped unobtrusively and on an unprecedented scale (Marres and Moats 2015; Boulianne et al. 2020).

The present paper makes use of digital data and computational methods to investigate social media users’ position-takings with respect to nonviolent climate actions. More specifically, we analyse Twitter users’ reactions to a recent protest by a group of UG activists, who in the morning of January 2nd 2023 defaced with orange paint Palazzo Madama, seat of the Italian Senate in Rome (see Figure 1). Studying public controversies ignited by climate protests can contribute to shed light on whether nonviolent demonstrative actions such as this one can be effective or not at raising awareness about environmental issues in the general population and the media. In addition to mapping the distribution of positive and negative opinions about UG’s action at the Italian Senate, this work exploits relational Twitter data to reconstruct the political background of individuals intervening in this specific environmental controversy. Overall, we find that: a) while UG’s demonstrative action succeeded at giving visibility to climate change issues, the majority of tweets in our dataset focused on the legitimacy and modalities of the protest; b) the Twitter reception of the protest is very mixed, with a slight majority of positive reactions; c) users who “follow” Twitter accounts of politicians, media outlets and journalists close to right and centre-right positions tend to negatively judge the protest, and vice-versa.

Figure 1 – the façade of Palazzo Madama soiled with orange paint (@UltimaGenerazi1 – on Twitter)



2. Data and methods

In the days immediately after UG activists sprayed paint on the façade of the Italian Senate building, we collected tweets in Italian mentioning keywords frequently occurring in social media discourses about the event, such as: “Ultima Generazione” and “Senato” (with or without hashtag), “ambientalisti”, “vernice”, “clima”, “climatic*”, “pianeta”. By querying Twitter’s APIs through R package twitterR, it was possible to retrieve a total of 43,768 unique tweets posted over three days, between January 2nd and 4th.

This study is organized in three complementary analytical steps, combining computational methods (text mining, network analysis) and a manual sentiment analysis. First, we pre-processed our textual corpus and ran a Latent Dirichlet Allocation, a topic modeling technique aimed at identifying occurring themes and discursive frames in an unsupervised, inductive and relational way (DiMaggio et al. 2013). This way we obtained 11 “topics” - i.e., clusters of terms frequently co-occurring in the corpus, summarized in Table 1 below. The number of topics $k=11$ was selected through a computer-assisted procedure in R, with the goal of maximising both interpretability and statistical validity (DiMaggio, Nag and Blei 2013: 582). Thanks to a manual inspection of the terms and content mostly associated to each topic, we managed to identify those that referred directly to opinions about and reactions to UG’s controversial protest at the Italian Senate (2, 3, 6, 9 and 11, see Table 1 below). The empirical analyses included in this article will mainly concentrate on these five topics, while the remaining six, mostly pertaining to broader debates on climate change and the environment, will be subjected to future examination.

Table 1. *Topic distribution in our subset and 20 terms most associated to the 11 topics (lemmatized). Labels of protest-related topics are highlighted in grey*

| 1- News (19.2% of tweets) | 2- Protest justifications (6.2%) | 3- Protest and paint (10.5%) | 4- Critique-Mixed (4.2%) | 5- Environment and policies (3.8%) | 6- Protest and art (7.6%) | 7- Weather and climate (13.9%) | 8- Planet-Mixed (5.6%) | 9- Activists UG (13.3%) | 10- Climate change (11.7%) | 11- Protest modalities (4%) |
|---------------------------|----------------------------------|------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------|------------------------|-------------------------|----------------------------|-----------------------------|
| senato | protesta | vernice | dovere | fare | capire | clima | pianeta | ultimagerazione | climatico | andare |
| imbrattare | quando | lavabile | essere | cosa | istituzione | anno | solo | attivista | cambiamento | così |
| ambientalista | gesto | muro | potere | volere | ambiente | senza | altro | essereistare | problema | dire |
| palazzo | azione | usare | pensare | dire | bene | gennaio | invece | ragazzo | parlare | chiedere |
| facciata | atto | lanciare | dare | potere | tutto | italia | ora | oggi | sempre | poi |
| parte | governo | casa | mettere | venire | poco | ultimo | terra | avere | causa | primo |
| blitz | politico | acqua | molto | vero | arte | cambiare | salvare | dopo | uomo | quindi |
| roma | politica | via | sembrare | nulla | bloccare | caldo | grande | tre | unico | tanto |
| madama | giovane | sporcare | davvero | modo | quello | grado | nessuno | due | credere | protestare |
| russo | guardare | indignare | stesso | sapere | opera | ancora | vivere | arrestato | certo | volta |
| civile | vandalo | tirare | meno | prendere | difendere | temperatura | paese | arresto | inquinamento | però |
| larussa | italiano | buttare | nuovo | giusto | mondo | visto | persona | fascista | esistere | bastare |
| presidente | attenzione | fuori | secondo | comunque | rispetto | europa | ogni | già | crisi | meglio |
| rossa | chiamare | portone | già | mai | clima | giorno | proprio | processo | estremo | gente |
| video | continuare | secco | qualcuno | vedere | tema | mai | bello | altri | emergenza | vedere |
| costituire | verso | dentro | servire | niente | portare | entrare | distruggere | tornare | globale | prossimo |
| carabiniere | dovere | lavare | danno | ricordare | storia | ecco | futuro | ieri | qualche | volere |
| fermato | tipo | togliere | pure | adesso | strada | medio | grazie | arrestare | piano | arrivare |
| gruppo | vandalismo | nero | mentre | credere | ragione | inverno | povero | leggere | lotta | galera |
| arancione | piacere | significare | trovare | parlare | storico | minimo | umano | rischiare | riscaldamento | veramente |

Second, we extracted a subset of 673 tweets presenting the five selected topics as “prevalent” ones (see DiMaggio et al. 2013). This computational procedure allowed us to create a smaller sample of user-generated texts, suitable to be analysed in a qualitative fashion. We then manually classified this subset of tweets based on their positive, negative, or neutral sentiment with respect to UG’s protest at the Italian Senate.

Last, through R package *rtweet* we retrieved metadata about Twitter accounts “followed” by each of the 593 authors of tweets included in the subset above. For each author, we gathered about 1000 “followings”, resulting in a large dataset comprising celebrities, influencers, media outlets, politicians, as well as lay Twitter users. We then filtered these accounts and kept only verified (i.e., very popular) accounts with bio in Italian (n=1213). With the goal of reconstructing the political background of our 593 authors, we subsequently reconstructed their “following” relationships with these accounts, by building and visualizing a network in Gephi (figure 2). This network analysis allowed us to relate lay users’ positive, neutral or negative reactions to a broad relational space of political and cultural affiliations, looking for clusters and overlaps.

3. Mapping the political climate

Table 1 presents the results of the Latent Dirichlet Allocation, showing how the Twitter controversy that followed UG’s action at the Italian Senate is composed of multiple discursive facets. As the terms mostly associated to the eleven topics indicate, an important part of the discussion gravitates around the modalities, motivations and implications of the nonviolent protest (topics 2, 3, 6, 9, 11). If we classify tweets based on their prevalent topic¹, we see that such protest-related discourse characterizes 41.5% of the corpus. Only about 35% of the online discussion directly concerns climate-related challenges and solutions (topics 5, 7, 8, 10), while the rest comprises news-related or thematically mixed Twitter content (topics 1 and 4).

Here we focus on the five protest-related topics highlighted in Table 1. Topic 2 is characterised by a strong support for Ultima Generazione and a shared agreement on the importance of the protest (a). It is marked by a recurrent and popular metaphor (b) and related responses (c), which become a central frame through which users discuss the protest. The metaphor, employed both by lay Twitter users and news outlets, seems to be an attempt to move the debate to a more critical, yet supportive, position.

- (a) “I don’t like the gesture, but why is everyone criticising a reversible act like this one? I don’t see such a strong opposition to climate change, which can create famine, destruction and actually is irreversible”.
- (b) “Remember the story of the wise man pointing at the moon and of the fool who looks at the finder? Well, it works the same with the story of the paint and climate emergency: based on what you’re looking at you know who you are in the story”.
- (c) “The moon will fall on us and when it will, it will run over even those who have limited themselves to look at the finder. Then it will be too late to do something, assuming time has not yet expired”.

Topics 3, 9 and 11 focus on the protest and its specific modalities. Other than ironically explaining the meaning of “washable paint” (d), tweets in these topics are characterized by various political boundary works. Pro-protest users engage in a more open and direct critique of those outraged by the action (e) and parliament members (f), whereas tweets directly

¹ To be considered as “prevalent”, a topic must account for 15% of a tweet’s textual content. Since only a minority of tweets presents a single prevalent topic, the present analysis concerns only a subset of the whole corpus. However, by adopting this threshold, we retain only significant classifications, thus leaving out mixed and likely inaccurate ones.

attacking the leftist defenders of Ultima Generazione’s protest are rarer (g), as rightist users tend to retweet news and share politicians’ points of view instead.

- (d) “‘washable, washable, washable’. Where I come from, ‘washable paint’ is paint that WITHSTANDS WASHES, and therefore can be washed without being removed from the wall”.
- (e) “Those outraged by the paint on the Senate façade are the same ones who did not recognise the devastation of the CGIL’s headquarters, led by those who sit in the Senate. We don’t care about the weather, do we?”
- (f) “The dirt lies within the Senate and its walls, outside there’s just colourful paint”.
- (g) “Of course the left is defending these vandals... we should make them remove the paint with their tongues”.

Topic 9 also shares some elements with topic 6, whose content is largely adverse to the protest. Hostile positions are characterised by an inimical language, as it can be seen in examples (h) (i) and (j). Activists are called “vandals”, “shamans”, “fake environmentalists” and a “cult”, and conspiratory-like theories are often used to justify these observations.

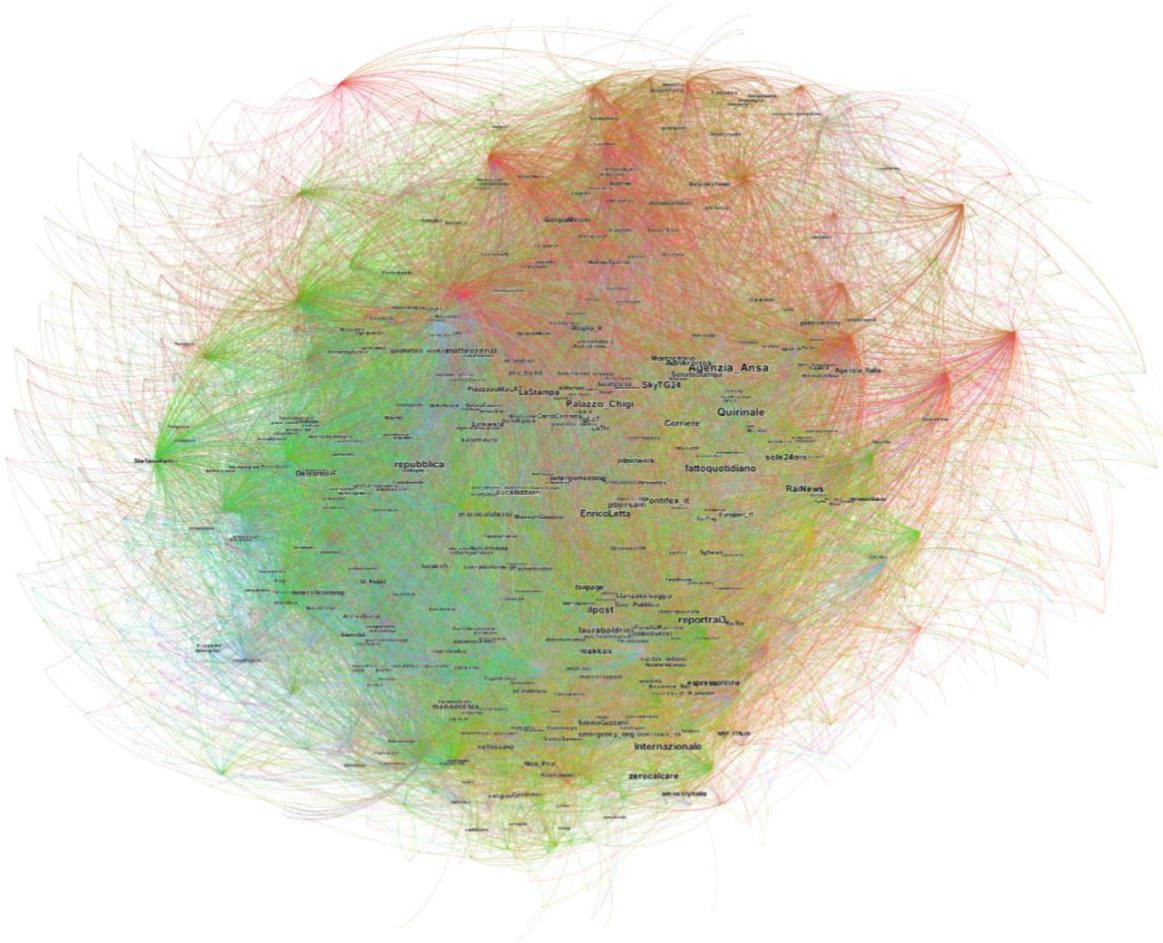
- (h) “This is not activism, it’s pure ignorance. There are many ways to express beliefs, but blocking streets and defacing buildings cannot be the answer. It’s an incentive for us to hate you and not take you seriously”.
- (i) “The environmentalists of the Senate protest are free already, it’s the judge’s decision... SHAME ON YOU! 🤬”.
- (j) “The Climate Emergency Fund/A22 Network/Ultima Generazione operate through a terror regime, because a scared individual can be manipulated more easily”.

We conducted a sentiment analysis by manually coding tweets in our subset². After excluding off-topic content, our sample consisted of 183 neutral tweets, 222 negatives and 251 positives. This small-scale analysis provides a first indication about how mixed the political “climate” surrounding UG’s protest is. Subsequently, we examined the “following” network of the authors, looking for clusters as well as overlaps between socio-political affiliations and position-takings with respect to UG’s protest. Figure 2 below presents a spatialization of a portion of this network, composed of 20,156 directed edges linking authors to popular “followings” with bio in Italian. Interestingly, the accounts followed by the authors of tweets in our subset cluster based on their political proximity: while at the bottom of the graph we have left-wing politicians like Laura Boldrini, surrounded by accounts close to that very same cultural universe, toward the centre and left-hand side of the map there is a cluster of “centrist” politicians and media, and in the upper-right side mainly right-wing nodes, including the Twitter account of prime minister Giorgia Meloni. Edges in figure 2 are coloured based on the sentiment of the source (green=positive, red=negative, blue=neutral). It is evident how users who follow accounts close to left and centre-left positions tend to support UG’s protest, while negative opinions are clearly associated to centre-right and right-wing political affiliations.

² We categorised as “positive” tweets that: a) supported Ultima Generazione, even if they did not necessarily agree with the act of throwing paint; b) recognised Ultima Generazione’s intent to reach mainstream news; c) considered Ultima Generazione’s act as “non-violent” and as a rightful way to protest; d) feared the arrest of Ultima Generazione’s activists and the application of heavy penal sentences. Conversely, we categorised as “negative” posts that: a) highlighted Ultima Generazione’s lack of respect of the Senate and its members; b) considered Ultima Generazione’s activists as vandals or bullies; c) stated that these kinds of acts are not helpful to the cause; d) wished for Ultima Generazione’s activists to be condemned to life-sentences; e) published conspiratory-like content. Finally, we considered as neutral news posts and retweets without further comments, and posts discussing the meaning of the term “washable paint”.

Hence, the discursive surface of this digital environmental controversy is shaped by a deeper space of political position-takings.

Figure 2. Following network. Edge colours indicate authors' sentiment toward UG's protest.



4. Conclusion

UG's demonstrative action at the Italian Senate on January 2nd, 2023 generated a furious debate on Twitter. Here we have attempted to draw a political anatomy of this digital environmental controversy, using computational methods and sentiment analysis to map its discursive facets and political roots. If UG's protest boosted the visibility of climate-related topics, most of online conversations about the action focused on its content rather than wider environmental goals. The sentiment of protest-related tweets in our dataset is mixed, but slightly more positive than negative. A network analysis of users' Twitter followings revealed a clear overlap between positive/negative opinions toward the protest and left/right-wing political sympathies. In conclusion, this study shows how the reception of nonviolent climate protests by the Italian public is a) multifaceted and b) rooted in different ideological positions underlying the opposing discursive frames constituting the controversy. Future research should exploit platform data to investigate in a more qualitative and fine-grained way the justifications and boundary works deployed by citizens confronted with climate protests, as well as the social representations of nature, sustainability and the environment circulating online.

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