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CORONAVIRUS AND SCIENCE-RELATED COMMUNICATION BY POPULIST PARTIES

Abstract

The relation between science and populism has already been investigated by relevant sociopolitical literature. However, the Covid-19 pandemic has produced remarkable changes in how politics, science, and society relate to each other. Therefore, there is a need to explore further what science is to populists and how populist parties have dealt with science in times of pandemic. How much has science-related communication by populist parties changed after the outbreak of Coronavirus? What topics have populist science-related messages been about? Are there differences in the science-related communication of ideologically different populist parties, and between populist parties in government and in opposition? The research tries to answer these questions through a thematic analysis of populist communication on Twitter. The empirical investigation is carried out through topic modelling on a dataset of 1.133 science-related populist tweets. The focus is on a pertinent single case study, Italy. Here there are three different populist parties in terms of ideology, which have been both in government and in opposition during the pandemic. Findings highlight that different populist parties have resorted to different science-related rhetoric and that the two Italian populist parties on the radical right, the League and FdI, have engaged in “counter-science” and “anti-science” communication.

Keywords: Coronavirus, populism, science, populist communication, twitter, thematic analysis, Italian populist parties

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INTRODUCTION

Resorting to an expression of French sociologist Marcel Mauss, the Covid-19 pandemic has been described as a “total social fact”, meaning “an event that affects every single aspect of society” (Alteri *et al.* 2021, 2). There are no doubts that what we still have to get out of properly is not only an unprecedented global health crisis, but also an all-encompassing crisis impacting on politics, economy, society and, of course, science. Moreover, in Europe, this new, unexpected, “sui-generis” crisis (Hubé & Bobba 2021) is grafted onto the long trail of the political consequences of previous financial, eurozone and refugee crises, which have not yet been exhausted.

Therefore, the Coronavirus pandemic has produced remarkable changes in how politics, science, and society relate to each other. Politicians have politicized science more than ever, scientists have over-exposed themselves in the media (both traditional media and social media), and citizens have mobilized both in favor of and against science. Against this backdrop, it should come as no surprise that a scholarly debate on the relation between pandemic and populism has arisen since the early days of the Coronavirus crisis. Populism, in fact, is the political phenomenon that probably most characterized the European political landscape of the 2010s (Gerbaudo 2021), and a strong correlation between crises and populism exists (Hubé & Bobba 2021, 2-8).

Nonetheless, the debate on the impact of the Coronavirus crisis on populism in Europe has thus far focused above all on the electoral consequences of the pandemic for populists, and particularly for populist radical right (PRR) parties (Mudde 2007). Furthermore, scholars have been far from reaching a consensus on the possible state of health of PRR parties after the pandemic. Some have foreseen that the Coronavirus will be an electoral ally of these parties, or of populism more generally (Burni 2020). Others have predicted the opposite, describing populism as the “victim” of the pandemic (Betz 2020a; English 2020; Samaras 2020). According to the broader in scope analysis by Paolo Gerbaudo (2021), the Coronavirus crisis may have even given way to a “post-populist phase”, marked by a neo-statist momentum. Only a few studies within this debate have advanced a cautious, and thus more convincing, interpretation (Wondreys & Mudde 2020).

Beyond that, what is really missing is attention to other aspects of the relation between pandemic and populism, including, above all, the implications of the Coronavirus for how populists relate to knowledge and science. With few notable exceptions (Casarões & Magalhães 2021;

Mede *et al.* 2021; Mede & Schäfer 2020), the way populists have dealt with science in times of Covid-19 is, for now, understudied within Political Sociology and Political Science literature. Or, at best, studies have been superficial, reporting in a rather descriptive manner some cases of populist parties or politicians who have spread conspiracy or fringe theories (Betz 2020b; Samaras 2020). This is even more surprising considering that the relation between science and populism has already been investigated by sociopolitical literature, which has stressed the tension between “common sense” (of “the people”) and “scientific/expert knowledge” (of “the elite”) in populist ideology and communication.

Thus, both the relation between pandemic and populism and the one between populism and science have already been sufficiently examined, but there is a need to explore further the triangular link connecting these three elements: pandemic, populism, and science. This is the general aim of the present contribution, which focuses on science-related communication by populist parties, before and during the Covid-19 pandemic. Three main questions guide the research:

[RQ1] How much has science-related communication by populist parties changed (increased?) after the outbreak of Coronavirus?

[RQ 2] What topics have the science-related tweets by populist parties been about?

[RQ 3] Are there differences in the science-related communication of different populist parties (in terms of ideology), and between populist parties in government and in opposition?

The remainder of this contribution is structured thus. The next section illustrates the theoretical framework, clarifying what is meant by “populism”, what we already know about the way populists relate to expert knowledge and science, and how the pandemic could have prompted changes in the relation between populism and science/expertise. Then, I empirically address the three research questions, via a thematic analysis of science-related populist communication on Twitter. After having expounded on the data and the methods, the empirical analysis will be carried out on a single relevant case study: Italy. This country has been selected for two main reasons. The first concerns the role of science in the Italian public and political debate. Before Covid-19, science was already a relevant topic to the Italian public sphere debate. During the last decade, science became a profoundly politicized issue, so much so that the country has been deemed “a strategic case to understand the development, dissemination, and use of public epistemologies” (Brandmayr 2021, 50). For instance, the political debate on vaccines was very strong in the years preceding the pandemic, pitting populist

parties (which were against compulsory vaccines for children and in some cases close to “no-vax” stances), versus mainstream parties (in favor of compulsory vaccines and “pro-vax”) (Brandmayr 2021). Considering this already significant level of politicization of science in Italy, the country appears as a particularly apt context to analyze further science-related communication by populist actors. The second reason, instead, concerns the state of populism in Italy. Several populist parties with different characteristics have risen in the country throughout the last decade. First, there was the sudden success of the “neither left nor right” populism of the Five Star Movement (M5S). Then, from 2018 on, the strengthening of PRR parties – the League and Brothers of Italy (Fdi) – which has changed the balance of power within the right-wing Italian alliance (Albertazzi et al. 2021). Furthermore, during two years of pandemic, two governments – “Conte II” and “Draghi” – have alternated, and these have been backed by different populist parties. In short, the Italian case allows us to examine science-related communication by populist parties of different ideological “types” and that have been one in government (M5S), one in opposition (Fdi), one first in opposition and then in government (League) during the pandemic.

THE PANDEMIC AND THE COMPLEX RELATION BETWEEN POPULISM AND SCIENCE

Populism is one of the most debated concepts in Political Sociology and Political Science literature. However, the definition of populism that has collected the greatest consensus in the last years is that proposed by the “ideational approach”. According to this definition, populism is “an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, ‘the pure people’ versus ‘the corrupt elite’, and which argues that politics should be an expression of the general will of the people” (Mudde 2004, 543).

Such antagonism between the “pure people” and the “corrupt elite” is not confined to the political realm, and the “elite” which is perceived as “corrupt” is not only the political one. While traditional parties and other “political powers” (typically supranational institutions, such as the European Union), are the main populists’ enemies (together with nonnatives in the case of PRR parties), experts, intellectuals and scientists are also considered as part of the despised elite. Therefore, populists usually loathe expert knowledge (Caramani 2017), and a non-secondary populist feature is trusting the “common sense” of the people while distrusting the “specific knowledge” allegedly supported by the elite and considered as

disconnected from practical and ordinary everyday life (Moffitt & Tormey 2014). The connection between “anti-intellectualism” – or distrust of intellectuals and knowledge-based institutions – and populism has already been emphasized by empirical research (Merkley 2020). However, the pandemic has inevitably augmented the penetration of technical-scientific expertise into the political sphere, “obligating” governments to rely more than ever on technical-scientific recommendations. The Coronavirus crisis has also led scientists to expose themselves in the media in a totally unprecedented way. As a backlash, the pandemic may also have made scientists the targets of populist “attacks” more than ever (Brubaker 2020, 2-7; Eberl et al. 2021).

In this regard, some authors have conceptualized a new “variant” of populism, labelled as “science-related populism”. This is defined as “a set of ideas suggesting a fundamental conflict between an allegedly virtuous people and an allegedly immoral academic elite over who should be in charge of science-related decision-making and over what is deemed ‘true knowledge’” (Mede *et al.* 2021, 274)¹. The new “science-related” populist variant would not stand for a rejection of scientific knowledge in itself, but rather for a contestation of the decision-making sovereignty of established science, aiming to replace it with the legitimate “science-related decision-making sovereignty and truth-speaking sovereignty” of the people (Mede & Schäfer 2020, 484). Thus, “science-related populism” is something more than anti-intellectualism, which, according to Merkley (2020, 26), can be defined as “a generalized suspicion and mistrust of intellectuals and experts of whatever kind”. In fact, what really distinguishes “science-related populism” is considering “the people” as just and superior not only in moral terms (such as in the “traditional” populist ideology), but also in epistemological terms.

The new “science-related populism” conceptualization, which, arguably not by chance, has been proposed in times of pandemic, offers the starting point for problematizing and further reflecting on the relationship between populism and knowledge/science. This call has recently been reiterated also by Ylä-Anttila (2018), who has argued that “the relation between knowledge and populism needs a more nuanced analysis”. Above all, the author has convincingly stressed that populists may rely on two different “strategies” for contesting epistemic authorities. On one hand, there is the more well-known valorization of the “common sense” of “the people” over expertise, which the author labels

1 An only apparently similar concept, introduced before Covid-19, is that of “medical populism”, described as “a political style based on performances of public health crises that pit ‘the people’ against ‘the establishment’” (Lasco & Curato 2019).

“epistemological populism”. On the other hand, there is what the author names “counterknowledge”, that is, “contestation of epistemic authorities by advocating politically charged alternative knowledge authorities” (Ylä-Anttila 2018, 3-4).

Drawing on these insightful arguments, we may wager that during the pandemic populists have made use of two different types of science-related communication. Firstly, “*anti-science*” communication (deriving from the “epistemological populism” strategy); secondly, “*counter-science*” communication (deriving from the “counterknowledge” strategy).

DATA AND METHODS

Parties that can be defined as “populists” according to the ideational approach are listed in the “PopuList”, approved by more than 80 academics (Rooduijn et al. 2019). Four Italian parties appear on this list: *Forza Italia*, *Fratelli d’Italia*, *Lega* and *Movimento 5 Stelle*. However, in this research, we focus on the last three only. Indeed, in recent years *Forza Italia* has “sub-contracted populism and Euroscepticism” to its allies on the radical right and, especially during the pandemic, it has “reinvented itself as a moderate and pro-EU party” (Albertazzi et al. 2021, 12; 2).

The analysis is based on a collection of science-related tweets posted by the official Twitter accounts of these parties. The time span covers from January 1, 2019 to October 1, 2021. The investigation, therefore, comprises the whole pre-Covid year (2019) and more than a year and a half of pandemic crisis. The watershed between the pre-Coronavirus period and the post-Coronavirus period is set at 30 January 2020, the date of the first confirmed infections from Covid-19 in Italy.

Through the Twitter API, I downloaded all the tweets published by the three Italian populist parties in the selected time frame and containing keywords related to science and expert knowledge². After a preprocessing aimed at removing the tweets that – even containing the keywords – were not really centered on expert knowledge and science, the dataset comprised 1.133 tweets: 585 from the League, 449 from FdI, and 99 from the M5S.

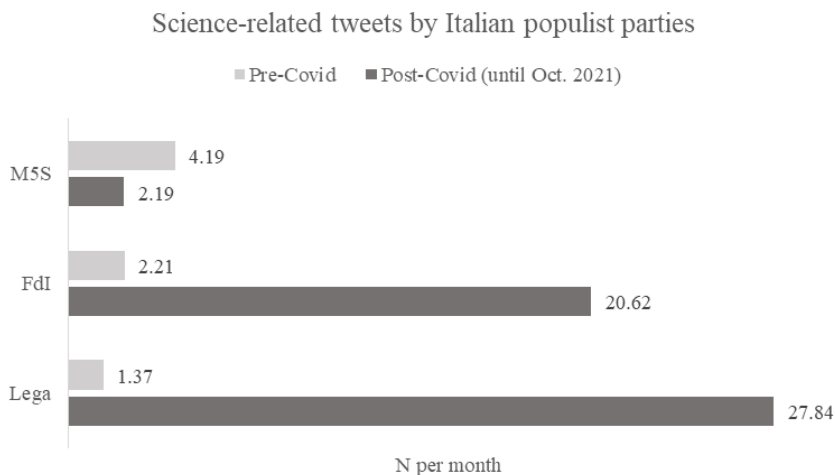
2 *Scienz-a/e; scienziat-o/a/i/e; scientific-o/a/i/che; dottor-e/i; dottoress-a/e; dr.; dott.ssa; virolog-o/a/i/he; immunolog-o/a/i/he; infettivolog-o/a/i/he; epidemiolog-o/a/i/he; burioni; accademic-o/a; professor-e/i; professoress-a/e; prof.; prof.ssa; professoron-e/i; espert-o/a/i/e; ricercator-e/i; ricercatric-e/i*. “Burioni” is the only proper name included in the research as, to the best of my knowledge, he was the only scientist actively involved in the Italian political debate before Covid-19 (Brandmayr 2021).

To conduct the content analysis of these science-related tweets, I relied on T-LAB, a software consisting of a set of linguistic, statistical, and graphic tools for text analysis. These tools can be used in several research methods, including text mining methods, and in particular topic modelling, which I have adopted here. Topic modelling is a method for thematic analysis that realizes an automatic classification of textual units, by finding recurring patterns of word usage in textual material. In other words, through topic modelling, we can detect the groups of words (or the “topics”) that best represents the information deriving from the analyzed text, or, in even simpler terms, “which topics the text is about”. One of the main advantages of topic modelling is that the classification of textual material is carried out through a *bottom-up* and not a top-down approach, meaning that the thematic analysis is not conducted by using categories predefined by the researcher. The researcher gives no input as to how the data should be analyzed. Instead, their only task is to choose the number of topics they want to find in the text. Then, the topic model (the T-LAB software uses one of the most frequently employed topic modelling algorithms, i.e., Latent Dirichlet Allocation, or LDA) provides the topics attributable to specific subsets of the text and consisting of words that often occur in the same topic. At the end of the topic modelling process, the researcher can easily explore the characteristics of every single emerged topic.

RESULTS

First of all, the number of science-related tweets in the pre-Covid and post-Covid periods was observed [RQ1]. In this regard, considering that, in the aftermath of the Coronavirus outbreak, for many months the virus has been the almost only relevant issue in the public debate, it would have been logical to expect an increase in the volume of tweets concerning science from any political actor. Nonetheless, the first noteworthy finding of this research is that the monthly number of tweets concerning science and expertise published by the M5S has been clearly lower during the pandemic than in the pre-Covid year.

Figure 1. Number of science-related tweets by Italian populist parties



Source: the author's analysis

In the pre-Covid period, the M5S's science-related tweets were more than those of the two PRR parties. Since the beginning of the Coronavirus crisis, it has been the opposite. Therefore, science and expertise in time of pandemic have been a quantitatively relevant theme in the social communication of populists on the radical right only. One plausible conclusion is that the M5S has had no interest in politicizing science. It is likely that the M5S, being constantly in government, has preferred not to politicize the (problematic) management of the health emergency and of the public role of scientists [RQ3].

To answer RQ2 and RQ3, topic modelling was performed on three different *corpora*, each composed of the collection of tweets retrieved from the official account of one Italian populist party. The process was set up in such a way as to obtain 10 topics for each *corpus*. Table 1 lists the 10 topics that emerged from the tweets of each party, reporting the percentage weight of each topic within the respective *corpus* of tweets.

Table 1. Topics emerging from the three corpora containing science-related tweets published by Italian populist parties. Italics signal a proper name.

Five Star Movement (M5S)		The League (Lega)		Brothers of Italy (FdI)	
TOPIC	%	TOPIC	%	TOPIC	%
Researcher(s)	17,03	<i>De Donno</i>	19,31	<i>Gozzini</i>	13,38
Interview	12,62	Professor	12,46	Coronavirus	12,01
Emergency	11,36	Data	11,99	Task Force	11,35
Science	11,04	<i>Conte</i>	10,30	No Curfew	11,11
Health	10,57	Researcher(s)	8,88	Technical Scientific Committee	10,32
Education	8,52	Hydroxychloroquine	8,24	Economy	10,16
Fake news	8,04	No Curfew	8,22	Home	8,45
Job(s)	8,04	Minister	7,82	FdI	8,45
Government	7,26	Virus	7,30	University	7,47
Technical Scientific Committee	5,52	Facebook	5,47	Data	7,31

Source: the author's analysis

A first look at the Table suggests both similarities and differences in the science-related communication of the three populist parties. Starting from the similarities, the predominant topic arising from the tweets of both Italian populist parties on the radical right is a proper name: (Giuseppe) De Donno for the League and (Giovanni) Gozzini for FdI. Who are they and how did the two parties talk about them? First, both are professors. De Donno, who unfortunately died in July 2021, was the first doctor experimenting with treatments against Covid via transfusions of “hyperimmune plasma”: a therapy that involved infusing the appropriately treated blood of people already infected with Coronavirus into other infected patients. This therapy was considered controversial by most of the scientific community from the beginning, and it has eventually been judged not suitable for treating Covid by

established medicine. To explore how the League has spoken about prof. De Donno on Twitter, we can report some text segments (i.e., tweets), that correspond most to the characteristics of the “*De Donno*” topic.

Table 2. Segments corresponding most to the characteristics of the “De donno” topic, sorted by weighed descending order (translation from Italian to English by the author)

Segment	Score
A path of experimentation that is giving excellent results and that deserves all possible support. ++ BURIONI: “THE PLASMA CURE IS EXPENSIVE”, THE REPLY OF PROF. DE DONNO ++ Prof. Giuseppe De Donno: “Prof. Burioni perhaps did the math badly. The plasma is free because it is donated by the people and returned to the people”.	0,64
A nice exchange between Enrico Montesano and prof. De Donno, who shows all the difficulties experienced and the attacks suffered in his meritorious work of disseminating hyperimmune plasma therapy.	0,51
De Donno, a great man 🤝 “My treatment is democratic. For this, they stand against me. Plasma therapy is cheap, it works great, and it doesn’t make billions. And I’m a country doctor, not a Big Pharma shareholder”	0,43

Source: the author’s analysis

As can be seen from these tweets, the League has conducted a resolute Twitter campaign in support of prof. De Donno. His controversial experimentation has been praised and even defended from the criticisms of mainstream scientists, such as prof. Burioni. Hyperimmune plasma treatment has also been described with typically populist tones (“the plasma is free because it is donated *by the people* and returned *to the people*”). The classic populist distinction between the “pure” countryside and the “corrupt” city has been reasserted, but as related to science (De Donno as a “*country doctor*”). Ultimately, supporting the hyperimmune plasma therapy with such motivations can be interpreted as a way of supporting the replacement of official science with a “counter-science” of “the people”.

As regards the main topic of the Fdi’s *corpus*, Gozzini is a professor of history at the University of Siena, who, during a radio broadcast (22 February 2021), insulted the Fdi’s leader, Giorgia Meloni, calling her “a frog with a wide mouth, a cow, a sow”.

Table 3. Segments corresponding most to the characteristics of the “Gozzini” topic, sorted by weighed descending order (translation from Italian to English by the author)

Segment	Score
Offenses to Giorgia Meloni, Caiata (FdI): I ask for the immediate removal of Prof. Gozzini from his role. Faced with the despicable insults addressed to Giorgia Meloni by professor (title undeserved) #Gozzini, there is only one thing to do: removing Gozzini from the chair he occupies at the University of Siena.	0,69
Prof Giovanni Gozzini addressed these insults to Giorgia Meloni and the silence of women on the left is deafening and shameful. The University of Siena pays the salary to a certain professor Giovanni #Gozzini who on the radio calls Giorgia #Meloni “a cow”, “a sow” guilty of not having voted the confidence on #Draghi.	0,51
In a democracy, no criticism must ever degenerate into violence. Come on Giorgia! It is shameful that a university professor who should deal with the education of young excellences uses words of contempt and violence against a woman, the president #Meloni. From #Gozzini, rantings full of that rancor typical of certain left-wing intellectuals.	0,39

Source: the author’s analysis

As table 3 displays, the FdI Twitter account has been very committed to defending the leader Meloni from the insults addressed to her by prof. Gozzini. However, the party has also taken the opportunity to extend its “counter-attacks” against all “left-wing intellectuals”.

We have so far found that the main topics emerging from the *corpora* of the two Italian PRR parties are related to a “counterknowledge/counter-science” rhetoric (Lega) and to an “anti-knowledge/anti-science” rhetoric (FdI), respectively. As already mentioned, the former aims to challenge established epistemic authorities by supporting politically charged alternative knowledge authorities (Ylä-Anttila 2018), such as prof. De Donno. The latter aims instead to directly attack (or counter-attack) intellectuals or experts/scientists, revealing a more generalized anti-intellectualism.

To gauge whether these types of rhetoric are present within other topics of the two PRR parties, we can take a deeper look at the words that are more characteristic of each of the topics. For instance, another important topic in the science-related tweets of the League is “Hydroxychloroquine”. By exploring the words that make up this topic most, we can highlight that, in addition to “hydroxychloroquine” (which

has the greatest percentage weight within the topic, even if it is shared with other topics), another relevant word is “*Cavanna*”. This is another proper name. Luigi Cavanna is an Italian scientist who promoted both the use of hydroxychloroquine as an effective therapy for Covid, and the domiciliary management of patients with Covid (thus “domiciliary” is another important word within the “Hydroxychloroquine” topic). In the words of Professor Cavanna retweeted by the League’s account, hydroxychloroquine has only two “major flaws”: “it costs very little, and Trump likes it”. By supporting prof. Cavanna, the League has sponsored the use of hydroxychloroquine despite the contrary opinion of both the AIFA (Italian Medicines Agency) and the WHO. Therefore, the League has used similar rhetoric to those of other PRR actors - primarily Bolsonaro and Trump - who have united to promote hydroxychloroquine in spite of contradicting recommendations by official medicine. This reinforces the interpretation that “hydroxychloroquine has been an integral tool of medical populist performance in the context of the COVID-19 pandemic” and that “medical populism addressing the coronavirus crisis has led populists to build an alt-science network” (Casarões & Magalhães 2021, 199).

Other evidence that the League has engaged in counter-science rhetoric comes from the analysis of the “Virus” and “No Curfew” topics. Within the “Virus” topic, relevant words are “Wuhan”, “laboratory” and “Chinese”. This is because the League has often remarked on the foreign, Chinese, origin of the virus, linking the issue of the health emergency to one of its electoral “strong points”: immigration. In addition, the League has promoted the thesis that Covid-19 came out of a Chinese laboratory in Wuhan, although this argument remains strongly contested. Finally, the League has often reiterated through its tweets the futility of some anti-contagion measures supported by the mainstream scientific community and implemented by the Italian government, such as the quarantine and the curfew. Indeed, “no curfew” and “quarantine” are the most important words within the “No Curfew” topic. This may appear surprising, considering that the League has been in government since February 2021, thus throughout the period in which the curfew has been in force in Italy. Arguably, the League has nonetheless criticized the curfew to distinguish itself from the other governing partners and continue to wink at “counter-science” stances.

Before moving on to the other PRR party, it should be mentioned that, although it mostly resorted to a “counter-science” rhetoric, the League has also used an “anti-science/experts” communication. This is signaled by the many proper names of scientists which are present

among the more characteristic words of several League's topics. Roberto Burioni, Andrea Crisanti and Massimo Galli, mainstream scientists who have over-exposed themselves in the Italian media during the pandemic crisis, have been attacked repeatedly by the League's tweets.

However, more than the League, the party that employed "anti-science" rhetoric most was Brothers of Italy. This is evident by analyzing the "Technical Scientific Committee" and "Task Force" topics. Many attacks by FdI have precisely been against the members of the Technical Scientific Committee (CTS) and the experts of the task forces that have backed both Italian governments in the management of the health emergency. These technicians ("technician" is the most important word within the "Technical Scientific Committee" topic) and scientists have been blamed for making decisions "without any scientific basis", aimed at implementing "control mechanisms" over the people. In a typical populist and conspiracist manner, members of the CTS have also been accused of keeping the results of their scientific reports "secret" (another relevant word within the "Technical Scientific Committee" topic) from the Italian people. Also, similarly to the League, Burioni and Crisanti have been targets of many rhetorical attacks by FdI's tweets. Meloni's party has also resorted to "counter-science" rhetoric, albeit to a lesser extent than its radical right-wing ally. It is telling in this regard that a topic labelled "No Curfew" has emerged from the thematic analysis of both the League's and the FdI's *corpora*. The curfew, as well as other anti-contagion measures, have been described by FdI as "useless", "illogical", and "absurd" measures to be "abolished" (all words that are linked to the "No Curfew" topic).

Therefore, both Italian PRR parties have engaged in "counter-science" (the League more) and "anti-science" (FdI more) rhetoric. However, this is not to say that the whole of their science-related communication on Twitter has been devoted to these ends. Both parties have employed neutral and more rarely positive references to science too, and part of their science-related communication has been aimed at "self-promotion". For instance, there is a "Facebook" topic emerging from the League's tweets because many of them have advertised science-related FB posts from the party leader Salvini, the "Captain". And there is a "FdI" topic emerging from the FdI's tweets and containing words that reveal, once again, FdI's efforts to defend itself from "attacks" by intellectuals or professors, such as prof. Simon Levis Sullam from the Cà Foscari University.

What about the other Italian populist party, the Five Star Movement? Compared to the two populist parties on the radical right, the

M5S's science-related communication has appeared as characterized by more positive and decidedly more "institutional" tones. This is arguably a consequence of the fact that the M5S has always been in government throughout the pandemic, managing the health emergency during two consecutive cabinets [RQ3], firstly together with the Democratic Party as member of the Conte II government, and then with all the parties supporting the "national unity" government chaired by Mario Draghi. It is significant that the M5S's preponderant topic is "Researcher". This topic has also emerged from the communication of the League, but with completely different characteristics. As regards the League, text segments with both positive, neutral and negative tones belong to this topic (that is, researchers are sometimes praised, sometimes criticized, and still others only mentioned). As for the M5S, instead, the references to researchers and research within the "Researcher" topic are only positive. Above all, the M5S has emphasized its commitment to improving the "recruitment" (a very important word within the "Researcher" topic) of researchers in the Italian educational system and to open up science, by promoting Open Access methods of publications. Close to these issues are those of another relevant topic in the M5S's communication, i.e., "Education".

The M5S's Twitter communication has also appeared to be aimed at combating fake news and "counter-knowledge/science". This is what can be detected by analyzing the "Fake News" and the "Health" topics. The M5S has invited citizens to beware of "fake news" and "hoaxes", reminding them how these have been refuted by the experts of the Ministry of Health and of the Higher Health Institute. This finding is remarkable and, in some sense, surprising, since many M5S's exponents (including the founder Beppe Grillo) endorsed some "anti-science" positions, and in particular "no-vax" positions, in the past. The pandemic could have provided a chance to re-politicize the debate on science and vaccines in a populist key. But evidently, the strategy of the governing M5S has been the opposite: not to dally with anti-science.

Another topic is shared by FdI and the M5S: "Technical Scientific Committee". However, the contents of the topic are very different in the two cases. As for the M5S, references to the CTS have been positive. For instance, the work of the CTS has been encouraged, and the necessity to continue to follow the CTS's suggestions has been recalled.

CONCLUSION

This paper has dealt with science-related communication by populist parties, with the aim of exploring how much and how it has changed following the Coronavirus. Therefore, this contribution is meant as an intervention into the growing debate on the relation between pandemic and populism, which, for the moment, has not focused enough on the implications of the Coronavirus crisis for the way populists conceive expert knowledge and science. By focusing on the Italian context, which seems particularly apt for investigating the relation between populism and science (both before and after Coronavirus), and via a thematic analysis of science-related tweets by Italian populist parties, we have come to a number of relevant conclusions.

First, different populist parties have resorted to different science-related rhetoric. A “neither left nor right” populist party, the M5S, has employed mainly positive references to science. Instead, the two Italian populist parties on the radical right, the League and FdI, have engaged in “counter-science” and “anti-science” communication, although in different proportions. The League has resorted to “counter-science” more, whereas FdI to “anti-science” more. Therefore, this study contributes to the research on populism, science and expertise, by emphasizing both clear differences between ideologically diverse populisms, and more nuanced differences between populist parties in the same political field (the radical right).

Secondly, whether a populist party has been in government or not during the pandemic seems to have had an impact on its position towards science and experts. The only Italian party that has always been in government during the health emergency, the M5S, has tweeted about science less in the post-Covid period than in the pre-Covid period. This has been interpreted as a strategy that sought not to politicize science during the pandemic (due to the complicated handling of the health crisis).

These results reiterate the need to be more cautious both in analyzing the consequences of the pandemic for populists (in fact, we cannot speak of a single “populism”) and in exploring the relationship between knowledge and populists (Ylä-Anttila 2018). Indeed, the research has confirmed that populists do not only valorize the “common sense” of “the people” over expertise. Some of them also employ “counter-science” rhetoric and, to a lesser extent, share conspiracy narratives.

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