

# DATA PERCEPTION AND INFORMATION DISORDER IN THE ITALIAN CONTEXT DURING THE PANDEMIC

Giovanni Ciofalo Sapienza University of Rome giovanni.ciofalo@uniroma1.it

Lorenzo Ugolini Sapienza University of Rome lorenzo.ugolini@uniroma1.it

Fabio Ciammella Sapienza University of Rome fabio.ciammella@uniroma1.it

**Abstract:** This paper aims to investigate how Italian audiences received and perceived data-driven television news during the Covid-19 pandemic. During this time, the logic and practices of creating and consuming television journalism were disrupted by the pandemic emergency. The paper presents the results of research carried out as part of a wider project titled "The Social Effects of Fake News" which was conducted from 2018 to 2022 within the CoRiS department of Sapienza University of Rome. The research project was reshaped in 2020, to understand the effects of what has been called "information disorder" in the areas of health, medicine, and science at a time when, together with the pandemic, an "infodemic" also emerged. We use Wardle and Derakhshan's notion of "information disorder" as presented in their Council of Europe report. 2

The results of the survey research we conducted show a surprising paradox. We found an interesting pattern of receiving and using information content based on data, in which users trust those who produce and validate certain data and at the same time do not believe that same data. This pattern of use indicates a particular approach to dealing with news among the Italian public. We have labelled it "know-it-all." This article aims to deepen the understanding of this paradox of trust in experts but not in the data they deliver and how journalistic practice should deal with this conundrum.

Keywords: Italy, Fake news, Information disorder, Covid-19, pandemic, Data news



## 1 Journalism, Data and Information Disorder

The starting point of our research is the importance data was accorded in the institutional communication related to the pandemic. Journalistic media had to adapt their coverage to deliver a relevant supply of data (from institutions and scientists) that corresponded with the demand for data (from the public), that were felt to be significant.<sup>3</sup> One of the most iconic elements of the pandemic in Italy, as in other countries,<sup>4</sup> was the daily press conference, which was aired live by the main television networks every day at 6 p.m. It started from the first lockdown and continued for several months after it. Suddenly, presenting data, trends, and percentage changes were a fixture of the television schedule for millions of Italians forced to stay at home, with TV regaining social and media centrality.<sup>5</sup>

Contextually, a data-driven scientific approach gave an unexpected celebrity role<sup>6</sup> to scientists called upon by the media to interpret what was going on. Research on data delivered by AgCom (the regulator and competition authority for the communication industries in Italy) shows how, in March-April 2020, the overall video presence of scientists called upon to comment about pandemic news on five of Italy's major television networks exceeded 67 hours in total.<sup>7</sup> A year later, in the same period of the year (albeit with different coverage concerning Covid), it was still around 45 hours.<sup>8</sup> More generally, the pandemic led to a renewed centrality of data in journalistic content, contributing, in a peculiar form, to the first extensive diffusion of data journalism in Italy.<sup>9</sup> As elsewhere, Covid-related data journalism was a centrepiece of the daily journalistic narrative. Tables, graphs, and infographics became a substantial part of the Italian public's daily journalism consumption.

Data journalism thus became present at every level of Italian public debate. It was shared, commented on, and resemantized in a hybrid media context. Television was not the only media platform used: datafication and data visualisation also became increasingly crucial for the widespread development of platforms that needed content suitable for mobile use. <sup>10</sup> All of this had wide-ranging consequences for television journalism, both for its production and its consumption. Three areas are important in the Italian context.

Firstly, with the Pandemic, there was a sudden daily demand for data. This stream of datafied information assumed and needed a progressive literacy of the public concerning statistical issues. Percentage changes in the spread of infections (and subsequently vaccines) needed to become meaningful. New, elaborate codes such as "peak infection" or "flattening of the curve" were used.<sup>11</sup>

The second area refers to the changed relationship between information, data, and science. Not only did journalism mediate between its audience and the topics related to science, medicine and research but it needed to introduce the language through which to carry out this specific kind of mediation. While it is true that "data do not speak for itself", it is also true that its use can be a means to make a science-based news story credible and more plausible. Data is never simply information; it is also a tool that bestows authority. That makes data a difficult tool to wield. The mere use of data does not provide the media user with any guarantee of the quality of journalistic mediation. It requires a specific skill set (informative, scientific, mediatic, etc.) on the part of the journalist, to turn interpretation of data into a story. It also requires a skill set on the part of the audience to understand these stories and what proof they are based on. Only then a relationship of trust can be built. 13

This leads to the third domain, which brings us to the main theme addressed in this paper: the relationship between data and information disorder. We distinguish three types of information disorder as they have been outlined by Wardle and Derakhshan. The pandemic situation and the evolving media ecosystems provided a fertile ground for the spread of misleading content with respect to all three proposed types: *mis-information* (where false or misleading content is disseminated without a specific harmful intention), *dis-information* (where false information is created to harm people, companies, institutions, etc.), *mal-information* (where information, real or at least based on reality, is framed and disseminated with the specific intention to cause harm to people, companies, institutions, etc.). Information disorder fuelled unfounded fears, amplified conspiracy theories, and exacerbated ideological and political conflicts, for particularly in relation to vaccines.



The Italian case appears to be especially significant, whether it has to do with pandemic management, communication, or perception. Importantly, there was a high level of distrust toward institutions, political and administrative institutions but also towards journalists, and public communicators. In addition, there is a widespread problem related to the education of the population, whose competence in hard sciences appears limited and, therefore, in potential difficulty in reading and interpreting data and applications of scientific methods. This may have made the Italian public more open to all three forms of information disorder.

More specifically, there have been numerous criticisms of the information system. As elsewhere, it has been criticised for over-dramatization at the expense of adhering to the needs dictated by the situation. It has also been criticised for its inability (presumably in good faith) to read, interpret, and contextualise data correctly.<sup>18</sup> Then, the intersection between the actual difficulty of reading and interpreting Covid-19 data and the potential malice of those who were deputed to perform this task should also be considered.<sup>19</sup> This made us think that the domain of *mal-information* could be considered the one that was boosted most by the sudden increased use of data. There have been several cases in which the framing of data was profoundly conditioned, and perhaps corrupted, to support a particular thesis (the interpretation or explanation of a given phenomenon) or a particular position or context (social, cultural, political, economic, etc.) regarding the pandemic.<sup>20</sup> As for example: the often malicious confusion that occurred between profoundly different measures such as the mortality ratio and the lethality ratio; the long-discussed hypothetical difference between people who died *with* Covid and people who died *from* Covid; the presentation and/or discussion of reports whose source does not appear to be reliable; the consideration of alleged adverse reactions linked, more or less forcibly, to the administration of the anti-Covid vaccine.

## 2 Research: Aims and Methodology

In light of this emerging set of issues, between the end of 2020 and 2021, a specific part of the research project "The Social Effects of Fake News" was devoted to delving into how Italian citizens approached information disorder. In addition, we focused specifically on a series of critical issues emerging during those pandemic months in relation to key scientific domains (mathematics, science, medicine and technology, to borrow the categories proposed by the OECD). We administered a survey to 399 participants between March and June 2021. The survey used purposive sampling method to ensure representativeness in terms of gender and age characteristics relative to the general population. The sampling design aimed for a minimum of 384 interviews to maintain a margin of error of 0.05. Based on the sampling methodology, we conducted the 399 interviews across the entire Italian territory, stratified by gender and age as follows:

Table 1: Sample distribution by gender and age
--

Age	Male	Female	Total
18-30	37	40	77
31-45	51	27	78
46-60	52	64	116
>60	57	71	128
Total	197	202	399

The survey was administered through face-to-face interviews<sup>21</sup> (complying, of course, with the Covid guidelines). The survey was constructed based on four main thematic areas: socio-demographic data, information, media use and personal opinions. Thus, we could outline the spatial distribution of respondents. We gathered data on the geographic area they lived in, the type of location (urban, suburban, etc.) but also on level of education; household composition; and the relationships the respondent has with the people he or she hangs out with (family members, friends, colleagues, etc.). The "media use" questions were constructed to assess how media contents enter the respondent's daily discourse. The goal is to describe the impact of media use on daily life, and for this purpose questions were structured to gain a sense of our subjects' media repertoires.<sup>22</sup>



The area of personal opinions represents the central part of the survey and is divided into two sub-areas. In the first, we developed a list of 20 statements related to news stories (6 true and 14 fake), pertaining to different journalistic fields and genres (current affairs, politics, sports, etc.). Methodologically, a deliberate choice was made to predict a larger number of false statements in comparison to true news stories. The twenty news items are those shown below. For clarity, we have explicitly labelled them here as false (FN=Fake News) and true (TN= True News). They were presented neutrally to the interviewees.

The respondent was asked to assess the authenticity of the news in the form of "likelihood to be true". The question was worded as follows: "Concerning the circulation of news, we now list some controversial news stories, because some people believe them to be true, while others believe them to be false. In your opinion, are they more likely to be true or false?". Respondents could answer with a binary choice of "probably true" or "probably false".

The list of 20 news items was compiled by selecting agenda topics from the Italian hybrid information system that had gained relevance in Italian public opinion. They were inspired by major issues and controversies discussed in Italian public debate in recent years. Some of them refer to worldwide well-known conspiracy theories that gave birth to false storyworlds, <sup>23</sup> such as the Holocaust denial, the supposed harmfulness of vaccines, the supposed fabrication or distortion of the scientific roots of climate change, the Moon hoax and the role of a hypothetical gay lobby.

Other news stories were inspired more specifically by the Italian context. They include major political issues and Italian customs and traditions. These news stories also referred to established narratives in Italian society. Examples are the

Table 2: Content, truth/falsity, and sequence number of selected news stories

News Stories Content	Fake News (FN)/ True News (TN)
Scientists exaggerate the severity of this pandemic	FN1
Astrazeneca vaccine caused more deaths than we were told	FN2
Anti-Covid measures keep "Kebabs" and "Bengalis" open, but close Italian restaurants	FN3
They hide from us the negative effects of Covid vaccines	FN4
A referee has been downgraded to second division after penalizing Juventus in a match against Crotone	FN5
Today, politics and culture are influenced by a powerful gay lobby	FN6
Murders in Italy continue to rise	FN7
Without making it public, the Conte government last Christmas gave 250 euros as a "bonus" for those who stayed home responsibly	FN8
The Italian government gives each immigrant at least 35 euros a day	FN9
The Italian President Mattarella was used as a secret agent against Trump	FN10
The Italian TV-host Amadeus didn't want to present the Sanremo festival until the crucifix from the Ariston theatre was removed	FN11
Francis is an anti-Pope; the real Pope is still Ratzinger	FN12
It's not true that the Americans landed on the moon; it's a hoax for propaganda	FN13
Official reports of the number of Jews who died in concentration camps are exaggerated	FN14
Our planet's rising temperature is also due to pollution	TN1
There are contrasts and clashes within the Catholic Church about the current Pope	TN2
Some scientists are planning the first cities on Mars	TN3
Money from the world's 10 richest billionaires could be used to pay for anti-Covid vaccines for all mankind	TN4
Some social media, such as Twitter, have banned Trump	TN5
Some nations suspended Astrazeneca vaccinations for a while because they feared thrombosis	TN6



alleged subservience of Italian institutions and politicians to other countries and to the Catholic Church to the detriment of Italians, but also the historical predisposition of the Sanremo Music Festival (a major Italian media event) to generate news and controversy on non-musical topics, or the alleged favouritism enjoyed by the Juventus football team from referees.

The news items on the list are intentionally constructed as simple stories. This is done for the purpose of being concise, easy to understand, and to convey the way in which news is spread in the current media landscape. At times, this led to a somewhat rough and "homespun" form. This, we hoped, would align with the presentation of content related to information disorder, particularly with conspiracy theories. The use of the vague term "they" to describe those supposedly conspiring to conceal the dangers of vaccines, is an example of this.

The decision to ask participants to rate the likelihood of a news item as either true or false was intentional. It was meant to emphasise not only the credibility of the specific news item among the Italian public but also the participants' tendency to rely on a particular narrative. These narratives could be information-based or information disorder-oriented. In fact, the false contents proposed could be related to all three types of information disorder, some even simultaneously (such as the ones related to immigration), depending on how they are framed by news media.

The second sub-area of personal opinions was aimed at investigating the reference values of the respondents through the construction of Likert scales. These refer to levels of trust towards media and news media; to social, political and cultural institutions, to associations related to the protection of civil and human rights; to controversial figures both nationally and internationally (such as, for example, the Pope and Donald Trump); and finally to doctors and scientists. The survey closed with socio-anagraphic data, namely: age, marital and family status, occupation, education, place of residence and housing. The data matrix obtained from the survey was analysed using statistical software (SPSS).

#### 3 Findings

## 3.1 An Hybrid Media System of Mainstream Information

The first interesting aspect that emerges from the analysis of the survey concerns our respondents' media repertoires, that is the entirety of media he or she regularly uses. We are interested in how access to the information system is gained. We found that television still represents the main tool through which people inform themselves, with 70,2% listing it among the three sources of information they could indicate. Interestingly, the smartphone has a similar percentage (69,2%).<sup>24</sup> We see the emergence here of a structurally hybrid access to mainstream news fruition in terms of the experience and practice of daily interaction with news media. This allows us to hypothesize that audiences do a structural double-check on news stories. It may be the case that not only are they interested in news as content, but they are also willing to access different sources of information to check that content.

### 3.2 The Attitude Towards "DataNews"

As we were interested in the attitude of the Italian public towards scientific issues, health issues and pandemic-related issues in the news, we built a "DataNews" index. It is based on cross-referencing answers to four false news items. It allows us to see which part of our sample believed these news items to be "probably true".



More specifically, we chose to cross the results related to the following false statements: "Scientists exaggerate the severity of this pandemic"; "Astrazeneca vaccine caused more deaths than we were told"; "They hide from us the negative effects of Covid vaccines"; "Murders in Italy continue to rise".

The selection of these news items was inspired by two main criteria. The first one was explicit or implicit reference to data, especially in the scientific and medical contexts. The statement about the role of scientists in spreading and analysing news related to the pandemic and vaccines, was of course based on daily data analysis in the pandemic period. Secondly, these news items were characterised by a significant percentage of respondents that believed them as probably true: rising from a quarter to a third (24,6% [FN2], 28,6% [FN1], 36,4% [FN4]) and even a majority of two thirds for the rising numbers of people murdered in Italy (62,3% [FN7]).

We looked for which respondents answered "probably true" for none of the four news items (R=0:24,1%), only one of them (R=1:32,3%), two of them (R=2:19,7%), three of them (R=3:15,9%), finally all four news items (R=4:7,9%). We then analysed the characteristics of the part of the sample which answered "probably true" to at least three news items (R=3+R=4:23,8%). These we consider to be people who are strongly oriented to believe false news related to data. We conclude that a significant portion (close to a quarter) of the sample is likely to believe false news items, as their positive answer to 3 or 4 out of the 4 questions indicates.

We correlated the characteristics of these respondents according to four criteria: age, education, media repertoire, and finally, level of trust in respect of those categories that are crucial to the purpose of our project, namely TV news, social media, government, and doctors and scientists. Below, we will discuss what we found for "age and education" and for "media repertoires."

### 3.3 Age and Education

In respect of age, it is interesting to underline that the number of respondents who believed the false statements to be probably true (the R=3 and R=4 groups), increases with age. Only 10,52% of the younger people (18-30) is inclined to believe these false news items, compared with 23,15% of the 31-45-year-olds, and 28,44% of the 46-60-year-olds. Those over the age of 60 come in at the highest level of 37,89% believing in the fake news items. As we expected, the majority of the considered respondents have a low education level (R=3: 60,80%; R=4: 61,30%).

Table 3: DataNews index distribution by age

Age	R=3	R=4	R=3+R=4	
18-30	11,3%	9,7%	10,52%	
31-45	22,6%	25,8%	23,15%	
46-60	25,8%	35,5%	28,44%	
>60	40,3%	29,0%	37,89%	

Table 4: DataNews index distribution by level of education

Table 4. Data vews index distribution by level of education				
Level of Education	R=3	R=4		
Low	60,80%	61,30%		
Medium	19,60%	25,80%		
High	19,60%	12,90%		
TOTAL	100%	100%		



# 3.4 Media Consumption

In addition to the demographic data in relation to the false news statements, we looked at the media repertoire of our respondents. We cross-tabulated the orientation to believe in false news items with their media consumption. This involved analysing the top three news sources for different groups based on their tendency to believe false claims (% of respondents R=3 + R=4). Although the data confirmed the overall trends, we found interesting that, despite a decrease in the use of smartphones, computers, and tablets, we observed an increase in the use of radio and word of mouth.

#### 3.5 Level of Trust

The last aspect we analysed is trust in Italian TV newscasts, social media, government, and doctors and scientists. We asked the respondents to rate their level of trust in a Likert scale going from 0 to 10, which corresponds to the Italian school marking system from lower secondary school (the mark 6 being the pass-mark and 10 the highest), which is widely known and used by Italians of any age.

We divided newscasts into three sub-categories: those aired on Italian public service broadcasting (RAI), those aired on major Italian commercial tv stations (Mediaset) and associated with Berlusconi family ownership, and those aired on other networks. This division is necessary because of the strong relationship between news media and politics that

Table 5: DataNews index distribution and media device use.

Medium/device	% of respondents (total)	% of respondents (R=3 + R=4)	
TV	70,2%	68,82%	
Smartphone	69,2%	62,37%	
Computer, tablet	38,8%	31,18%	
Radio	27,1%	33,33%	
Word-of-mouth	17,3%	20,43%	
Newspapers	13,5%	9,68%	
Magazine	9,8%	7,53%	
Books (paper or digital)	7,0%	6,45%	
Free press	4,8%	7,53%	

Table 6: Level of trust expressed by R=3+R=4

	RAI TV NEWSCASTS	MEDIASET TV NEWSCASTS	OTHER TV NEWSCASTS	SOCIAL MEDIA	DOCTORS AND SCIENTISTS	GOVERNMENT
Mistrust (% 0 to 5 mark)	47,3%	58,1%	48,4%	62,4%	15,1%	62,4%
Trust (% 6 to 10 mark)	52,7%	41,9%	51,6%	37,6%	84,9%	37,6%
Average mark (/10)	5,06	4,29	5,05	4,06	7,51	4,24



historically has shaped the Italian media system.<sup>25</sup> Public-service RAI newscasts, especially the one aired on RaiUno, the most watched, are traditionally considered close to governmental positions (all the more so if we consider that the Draghi government in charge was considered as highly "institutional" and had very little opposition in Parliament). Mediaset newscasts are considered close to the positions, parties, and coalitions that are linked to their funder Silvio Berlusconi. In addition, they disseminated populist content that was critical towards vaccines, the EU Digital Covid Certificate and so on. Trust in social media was interpreted as confidence in sources that keep their distance from state and other institutions.

What level of trust then was expressed by people who believed in 3 or 4 of our false statements concerning data, science, and health? We expected to observe a general attitude of mistrust towards everything that could be considered institutional and more trust towards any source that "marches to a different drummer" (which is one of the most widespread motivations to seek out populist media content which spreads "alternative facts" which, to us, cause information disorder). Furthermore, we expected to specifically observe mistrust towards doctors and scientists since three of the statements out of four contained concepts profoundly opposed to the positions of the international scientific community.

The figures in table 6 confirm a general mistrust in media and institutions. Regarding TV newscasts, interestingly, a moderate majority of respondents say they trust institutional news (RAI) and more "independent" news (other networks), even though the average answer is below the pass mark. A slightly larger majority distrust Mediaset news and social media, which can be considered the "less institutional" sources we analysed. The most interesting data, however, seem to be those related to trust in the government and in scientists. Mistrust in the government is clear (62,4% of mistrust and a poor average mark). Scientists, on the contrary, are considered as highly trustworthy (84,9% of trust and an excellent average mark). So, even though the government scrupulously followed medical guidelines to regulate public life, based on expert advice, and was strongly criticized for this at the time.

# 4 The "Know-it-all" Approach

Combining these findings, we see a paradoxical picture emerge. First of all we found that the minority of the audience that is inclined to believe in false news items, while having a media repertoire mostly similar to the totality of the audience, shows a slight propensity to make use of multiple sources. Therefore, the persistent hybrid media consumption of mainstream information is strongly confirmed. We hypothesize that this corresponds to the wish of the public to check news coming from TV and search for additional information through Internet, social media, but also radio and word of mouth.

This leads to the even more paradoxical finding, that results specifically from the analysis of the levels of trust in TV newscasts, social media, institutions, and in doctors and scientists. Reconstructing our steps, we first selected respondents who believed in fake news, that is in news items that are widely disproved scientifically and institutionally. They, we hypothesized, would exhibit a low level of trust towards institutional sources. We could only confirm this with respect to trust in the government. RAI newscasts, however, were considered as (moderately) trustworthy by a significant part of the sample. Even more surprising, doctors/scientists were considered as definitely trustworthy. Symmetrically, news sources that could be considered as more biased from an "institutional" viewpoint, such as Mediaset newscasts and social media, were considered as less newsworthy.

Therefore, our findings suggest that people who are oriented to believe false news items are, at the same time, oriented to trust media and, especially, public figures who spoke out against the falsehood of these same news items. So, this part of our sample is likely to believe what scientists state, while at the same time believed that "scientists exaggerate the severity of this pandemic". This paradox is reinforced by the similar and simultaneous distrust towards



government on the one side, and towards media and platforms where the governmental positions concerning the pandemic were mostly put into discussion on the other.

In order to explain this paradox, we propose an analysis aimed at identifying a specific model of reception and use of news items, particularly the data-driven news items. We call this model the "know-it-all" approach<sup>26</sup>. It refers to the effect whereby individuals believe that others receiving the message may not perceive the true intentions behind it. From a theoretical perspective, it can be traced to the theory of the Third-Person Effect.<sup>27</sup> This model identifies the tendency to overestimate the influence of media effects on the attitudes and behaviours of others, but not on oneself. In this case, the impact of media effects should be considered in terms of information disorder. Another concept that is useful in this regard, is the well-known Dunning-Kruger effect.<sup>28</sup> It is often referenced in public discourse, particularly in relation to information disorder. It describes the phenomenon where people with limited skills tend to overestimate their abilities in specific areas or even across the board. A third concept that might be relevant, given that it is linked to the current hybrid media system and aims to explain the dynamics associated with information disorder, is the "nobody-fools-me perception".<sup>29</sup> More specifically, «this is a cognitive bias involving overconfidence in one's own ability to detect the fake nature of content and, therefore, a perception of being relatively immune to the threat of disinformation. This overconfidence in one's ability also includes one's tendency to be less influenced by hoaxes than others».<sup>30</sup>

With the help of these concepts, the "know-it-all" approach aims to describe the main characteristic of a segment of the public that adopts this attitude. It is built on a belief that they are more competent than others when analysing and interpreting events and data, and policy decisions. Distinctive for this approach, interestingly, is trust in the ability of others to analyse an overall situation (such as the pandemic or the efficacy of vaccines), to gather data, and communicate them. General scientific competence is not put into question. What is being questioned are the subsequent decisions made based on these events and related data.

When compared to the three concepts discussed above, we see interesting differences. First, there is a strong connection to the specific characteristics of the Italian context. This is of course also due to the design of the research but also possibly to a set of distinctly Italian customs, such as mistrust towards institutions and difficulties in STEM (science, technology, engineering and mathematics) disciplines. Moreover, when considering the potential for overestimated self-competence and the third-person effect, the "know-it-all" approach can be seen to focus more on mastering "how things work" than on guarding against the threat of false information. Therefore, it appears to be linked to the contrast between experience and *naiveté*, rather than to a difference between competence versus fear of being misled.

Through this viewpoint, all the four selected false statements ("Scientists exaggerate the severity of this pandemic", "Astrazeneca vaccine caused more deaths than we were told", "They hide from us the negative effects of Covid vaccines", "Murders in Italy continue to rise") can be considered as true if not analysed in a strict sense, but in a broad sense – a broad sense that the respondents consider themselves to master better than others. While scientists are felt to exaggerate, this does not put into question that there is a pandemic, nor its severity. The overall approach of scientists and the translation of their positions into political acts, however, they are critical of. Similarly, the hypothetical negative effects of vaccines were considered to be hidden for political reasons, not for their lack of quality in scientific sense. Even the data related to murders (which is disbelieved by a majority of respondents) appears to be consistent with a personal perception and a political analysis rather than with the effective number of murders: our useless government, the reasoning might be, does nothing to reinstate law and order.

The emergence of a model based on the claim of greater competence in understanding "how things work" by the "average citizen" appears to be generally consistent with all the characteristics highlighted by our research. It also includes the respect felt towards doctors and scientists' competence in scientific matters, which is uncoupled from their perceived competence in their everyday work lives. This approach appears to be also consistent with the age and the level of education of the analysed sample of respondents. Older people can be more inclined to consider themselves as "know-it-all", in a society that values experience, gained over the years, in understanding "how things work".



Furthermore, this attitude opposes formal education (based on academic study) to an education based on experience. From such a perspective personal experience, beliefs, traditions and stereotypes are understood to hold true for others as much as for the believer themselves. University-level education in older generations in Italy, it needs to be noted, is low. Finally, it is relevant to underline that this attitude and approach to news and authority, is consistent with a stereotype that is widely diffused and particularly strong in the Italian context, which sees "how things work" as significantly different from "how things are presented" by governments and institutions.

#### 5 Conclusion

Analysis of our data allows us to highlight several interesting finds. The goal we set at the beginning of the paper, was to understand how the Italian public approached television news that is based on the use of data. We focused on the pandemic period characterized by a large volume of medical and scientific news, as well as by the emergence of phenomena related to information disorder. We addressed this by considering how difficult was it for journalists to cope with a complicated situation and complicated data-driven news items to convey (mis-information); the emergence and becoming stronger of conspiracy theories (dis-information); and finally, the propensity to use true data but to decontextualize and reformulate it so that it supports specific political positions or the conspiracy theories themselves (mal-information).

We hoped to use our analysis to activate the public's ability to discern between true and false in areas that explicitly refer to data, especially in a medical-scientific context. This would then form a kind of defence against fake news conveyed particularly on television. Therefore, we decided to focus on a specific part of the public, namely the one that appears most likely to be misled by scientific data for different forms of misinformation. However, the results of our analysis are very different from what we had expected. They show, above all, a paradoxical approach by respondents in the dynamics of attributing of trust.

While affirming strong trust in the scientific community and moderate trust in institutional media, respondents expressed overall distrust of the way in which data was interpreted by media, scientists, and institutions, compared to which they consider themselves more competent. Thus, it is likely that their media use is geared less toward informing themselves and more toward seeking confirmation of their (already established) opinion regarding what is said by media, institutions, and even scientists. The pre-existing opinions, in turn, are built on experiential learning rather than on formal education.

In conclusion, we must ask ourselves what news producers can do to bring this part of the audience back into an information dynamic in which factual adherence and actual expertise are well-anchored. The most relevant aspect, to this purpose, is hybridity of mainstream media use between TV and smartphones. In a hybrid media context strongly characterized by deep mediatization and platformization,<sup>31</sup> the simultaneous use of the TV and smartphones to access the news appears to be, above all, an opportunity for newsrooms to convey data and interpretations that cannot find room within the TV logic via online channels. Based on the findings of our research, in fact, il it possible to hypothesize that the type of users who employ a know-it-all approach do not use the double-check between television and smartphones to obtain confirmation of their own preconceived notion (as could be for other approaches), but rather to expand and corroborate, through new data, their own personal experience to be contrasted with the naivete of others. In this context, there seems to be room for newsrooms to convey content to this type of audience that is enjoyable, spreadable, and ethically oriented, which might gain entrance to a mindset that is not aprioristically closed.

By applying a transmedia logic,<sup>32</sup> newsrooms could emphasise and enrich their presence on platforms to expand and elucidate their broadcast media content. It offers an opportunity to activate users and to encourage them to deepen – and to "drill", paraphrasing Jenkins<sup>33</sup> – news and events in a context where an ethically oriented approach to



journalism is guaranteed. In an approach inspired by media ecology,<sup>34</sup> transmedia appears to be the most effective way to make platformization more accessible to every part of the audience<sup>35</sup> – which is the democratic fundament of journalism.

# Acknowledgement

The essay represents one of the outcomes of the research project 'THE SOCIAL EFFECTS OF FAKE NEWS. AN ECOLOGICAL APPROACH TO FAKE NEWS CREATION, DISTRIBUTION, AND RECEPTION,' which was funded by Sapienza University of Rome (Sapienza University of Rome - prot. RG11816436BAE21B - MUR). The funding was awarded through a competitive call for proposals under the 'University Large Research Project' category, based on a peer review process.

#### Notes

- 1. John Zarocostas, "How to Fight an Infodemic", The Lancet 395 (2020): 676.
- 2. Claire Wardle and Hossein Derakhshan, *Information Disorder: Toward an interdisciplinary framework for research and policy making* (Council of Europe Report, 2017).
- 3. Alessandro Lovari and Nicola Righetti, "La comunicazione pubblica della salute tra infodemia e fake news: il ruolo della pagina Facebook del Ministero della Salute nella sfida social al Covid-19", *Mediascapes* 15 (2020): 156-173.
- 4. Cfr. Ève Dubé, Fabienne Labbé, Benjamin Malo, and Catherine Pelletier, "Public health communication during the COVID-19 pandemic: perspectives of communication specialists, healthcare professionals, and community members in Quebec, Canada", Canadian Journal of Public Health 113 (Suppl. 1) (2022): 24-33; Endah Saptorini, Xin Zhao, and Daniel Jackson, "Place, power and the pandemic: The disrupted material settings of television news making during Covid-19 in an Indonesian broadcaster", Journalism Studies 23, no. 5-6 (2022): 611-628; Marina Morani, Stephen Cushion, Maria Kyriakidou, and Nikki Soo, "Expert voices in the news reporting of the coronavirus pandemic: A study of UK television news bulletins and their audiences", Journalism 23, no. 12 (2022): 2513-2532.
- 5. Stephen Cushion, Marina Morani, Maria Kyriakidou, and Nikki Soo, "Why media systems matter: a fact-checking study of UK television news during the coronavirus pandemic", *Digital Journalism* 10, no. 5 (2022): 698-716.
- 6. Declan Fahy, The New Celebrity Scientists. Out of the Lab and into the Limelight (Lanham (MD): Rowman & Littlefield, 2015); Giuseppe Tipaldo, La società della pseudoscienza. Orientarsi tra buone e cattive spiegazioni (Bologna: il Mulino, 2019).
- 7. Donatella Campus and Barbara Saracino, "Gli esperti durante la pandemia: nuove celebrities?", Comunicazione Politica 3 (2022): 355-380.
- 8. In the context of health and TV news, a 2019 research study, developed by the Pavia Observatory, analysing reports from Italy's top 7 TV news programs found that only 2 percent of all news programs were devoted to health. This result indirectly confirms the significant impact of the pandemic in 2020 on media coverage of health-related topics. See <a href="https://www.osservatorio.it/salute-e-sanita-nei-tg-prima-del-coronavirus/">https://www.osservatorio.it/salute-e-sanita-nei-tg-prima-del-coronavirus/</a>
- 9. Sergio Splendore, "E se il data journalism esistesse davvero?", in *Data Journalism. Guida essenziale alle notizie fatte con i numeri*, eds. Marzia Antenore and Sergio Splendore (Milano: Mondadori, 2017), 7-15.
- 10. Martin Engebretsen, Helen Kennedy, and Wibke Weber, "Data visualisation in Scandinavian newsrooms: Emerging trends in journalistic visualisation practices", *Nordicom Review* 39, no. 2 (December 2018): 3-18; José van Dijck, Thomas Poell, and Martijn de Waal, *The Platform Society. Public Values in a Connective World* (Oxford: Oxford University Press, 2018).
- 11. Cfr. Noni E. MacDonald, "COVID-19, public health and constructive journalism in Canada", Canadian Journal of Public Health 112, no. 2 (2021): 179-182; Christian Pentzold, Denise J. Fechner, and Conrad Zuber, "Flatten the Curve': Data-Driven Projections and the Journalistic Brokering of Knowledge during the COVID-19 Crisis", Digital Journalism 9, no. 9 (2021): 1367-1390; Liis Auväärt, "Fighting COVID-19 with Data: An Analysis of Data Journalism Projects Submitted to Sigma Awards 2021", Central European Journal of Communication 32 (2023): 379-395; Andrea Miconi and Elisabetta Risi, "Framing pandemic news. Una ricerca sulla rappresentazione del Covid-19 nei news media italiani", Problemi dell'Informazione 1 (2022): 32-61.
- 12. Carlos Lopezosa, Lluís Codina, Ariadna Fernández-Planells, Pere Freixa, "Journalistic innovation: How new formats of digital journalism are perceived in the academic literature", *Journalism* 24, no. 4 (2021): 821-838.



- 13. Fabio Giglietto, "Dai dati all'informazione", in *Data Journalism*, eds. Antenore and Splendore, 28-35; Amanda Ramsälv, Mats Ekström, and Oscar Westlund, "The epistemologies of data journalism", *New Media & Society* (2023).
- 14. Wardle and Derakhshan, *Information disorder*.
- 15. David Robert Grimes, "Medical disinformation and the unviable nature of COVID-19 conspiracy theories", *PLoS One* 16, no. 3 (2021); Rachel Armitage, Cristian Vaccari, "Misinformation and disinformation", in *The Routledge Companion to Media, Disinformation and Populism*, eds. Howard Tumber and Silvio Waisbord (London: Routledge, 2021), 51-62.
- 16. Marco Pedroni, "Narrazioni virali. Decostruire (e ricostruire) il racconto dell'emergenza pandemica", *Mediascapes* 15 (2020): 24-43; Lorenzo Ugolini, Fabio Ciammella, "Dalle fake news all'infodemia. I disordini dell'informazione sul Covid e il ruolo del giornalismo", in *Pandemie Mediali. Narrazioni, socializzazioni e contaminazioni del mediavirus*, eds. Marica Spalletta, Vania De Luca (Roma: Aracne Editrice, 2020), 215-232.
- 17. The fact that in Italy there are high levels of distrust towards institutions and the news media, and that there are significant problems of functional illiteracy in young people and adults, in all subjects and particularly in those that the OECD traces back to mathematics, science, technology and engineering, is widely shared and frequently analysed and discussed, including in the public debate. By way of example, we quote the ISTAT 2022 report on trust in institutions (https://www.istat.it/it/files/2022/05/Fiducia-cittadini-istituzioni2021.pdf), the 2023 Reuters Institute Digital News Report (https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2023-06/Digital\_News\_Report\_2023.pdf) and the 2023 OECD-PIAAC report on adult skills (cfr. https://www.slideshare.net/OECDEDU/skills-matter-additional-results-from-the-survey-of-adult-skills).
- 18. Darrin Baines and Robert J. R. Elliott, "Defining misinformation, disinformation and malinformation: An urgent need for clarity during the COVID-19 infodemic", *Discussion papers Department of Economics, University of Birmingham* 20, no. 6 (April 21, 2020); Oscar Westlund and Alfred Hermida, "Data Journalism and Misinformation", in *The Routledge Companion*, eds. Tumber and Waisbord, 87-96.
- 19. Darina Sarelska and Joy Jenkins, "Truth on Demand: Influences on How Journalists in Italy, Spain, and Bulgaria Responded to Covid-19 Misinformation and Disinformation", *Journalism Practice* 17, no. 10 (2022): 2178-2196.
- 20. By way of example, we refer to three Italian sources that have long stood out for their debunking activities: the site MedicalFacts.it, which can be traced back to Professor Roberto Burioni, one of the scientists who have been most outspoken against fake news (since before Covid); the site of Butac.it (acronym of "Bufale un tanto al chilo", which can be translated in "Hoaxes by the pound") and the blog of David Puente, two of Italy's most renowned debunkers. Cfr https://www.medicalfacts.it/2020/07/23/coronavirus-non-si-scherza-con-i-numeri/; https://www.butac.it/anomalia-decessi-covid; https://www.butac.it/bassetti-dati-morti/; https://www.open.online/2021/08/14/autopsia-camilla-canepa-agosto-vaccino/; https://www.open.online/2021/12/16/israele-video-messinscena-reparto-covid-complotto/.
- 21. The research project and the actual empirical survey predate the establishment and the activation of the Ethics Committee for Transdisciplinary Research (CERT) of Sapienza University of Rome. However, by Wisdom's procedures, the research was subject to a final report approved by a positive resolution of the Department of Communication and Social Research on May 18, 2023.
- 22. Uwe Hasebrink and Hanna Domeyer, "Media repertoires as patterns of behaviour and as meaningful practices: A multimethod approach to media use in converging media environments", *Participations. Journal of Audience & Reception Studies* 9, no. 2 (2012): 757-779; Melissa Zimdars and Kembrew McLeod, eds., *Fake News: Understanding Media and Misinformation in the Digital Age* (Cambridge: MIT University Press, 2020).
- 23. Giovanni Ciofalo, Silvia Leonzi, and Lorenzo Ugolini, "From Newsmaking to Newsfaking: a Transmedia Opportunity for Disinformation", in *Contemporary Approaches in Social Science Researches*, eds. Christian Ruggiero, Hasan Arslan, and Giovanna Gianturco (Bialystok: E-BWN, 2019), 329-335.
- 24. The media repertoire that emerges from the survey sample, after TV and Smartphone, consists of: computers and tablets (38,8%), radio (27,1%), word-of-mouth (17,3%), newspapers (13,5%), magazines (9,8%), books (paper or digital) (7,0%).
- 25. Daniel C. Hallin and Paolo Mancini., *Comparing Media Systems. Three Models of Media and Politics* (Cambridge: Cambridge University Press, 2004).
- 26. We have chosen this particular definition in order to blend the supposed assertion of high competence with a critical significance aimed at highlighting an evident self-referentiality, which, in Italian, could also convey a sarcastic, but non-offensive, undertone.
- 27. W. Phillips Davison, "The Third-Person Effect in Communication", Public Opinion Quarterly 47, no. 1 (Spring 1983): 1-15.
- 28. Justin Kruger and David Dunning, "Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments", *Journal of Personality and Social Psychology* 77, no. 6 (1999): 1121-1134.
- 29. Maria-Pilar Martínez-Costa, Fernando López-Pan, Nataly Buslón, and Ramón Salaverría, "Nobody-fools-me perception: Influence of Age and Education on Overconfidence About Spotting Disinformation", *Journalism Practice* 17, no. 10 (2023): 2084-2102.
- 30. Ibid., 2085.
- 31. Andrew Chadwick, *The hybrid media system: Politics and power. 2nd Edition* (Oxford: Oxford University Press, 2017); Andreas Hepp, *Deep Mediatization* (London: Routledge, 2020); van Dijck *et al.*, *The Platform Society.*



- 32. Silvia Leonzi, ed., *Transmedia Studies. Logiche e pratiche degli ecosistemi della comunicazione* (Roma: Armando Editore, 2022).
- 33. Henry Jenkins, "The Revenge of the Origami Unicorn: Seven Principles of Transmedia Storytelling", *Confessions of an Aca-Fan: The Official Weblog of Henry Jenkins*, December 12, 2009, http://henryjenkins.org/blog/2009/12/the\_revenge\_of\_the\_origami\_uni.html; Henry Jenkins, "Revenge of the Origami Unicorn: the Four Remaining Principles", in Ibid., http://henryjenkins.org/blog/2009/12/revenge\_of\_the\_origami\_unicorn.html.
- 34. Fausto Colombo, *Ecologia dei media. Manifesto per una comunicazione gentile* (Milano: Vita e Pensiero, 2020); Giovanni Ciofalo and Marco Pedroni, "Rileggere la *media ecology*: ambiente, campo, figurazione, mediatizzazione", *Sociologia della comunicazione* 64 (2022): 5-27.
- 35. Silvia Leonzi and Alberto Marinelli, "Per un approccio ecologico ai media tra processi di piattaformizzazione e dinamiche transmediali", *Sociologia della comunicazione* 64 (2022): 59-79.

#### **Biographical Note**

Giovanni Ciofalo is Associate Professor in Sociology of Cultural and Communicative Processes at the Department of Communication and Social Research (CoRiS) of Sapienza University of Rome. His main research fields are media ecology, cultural and media studies, mediatization, and digital communication.

Lorenzo Ugolini is Assistant Professor in Sociology of Cultural and Communicative Processes at the Department of Communication and Social Research (CoRiS) of Sapienza University of Rome. His work focuses on digital communication, cultural and media studies, transmedia studies, and journalism.

Fabio Ciammella is a Postdoctoral Research Assistant at Sapienza University of Rome. His research focuses on digital communication, particularly on knowledge disorders, transmedia, creative practices, and participatory cultures.