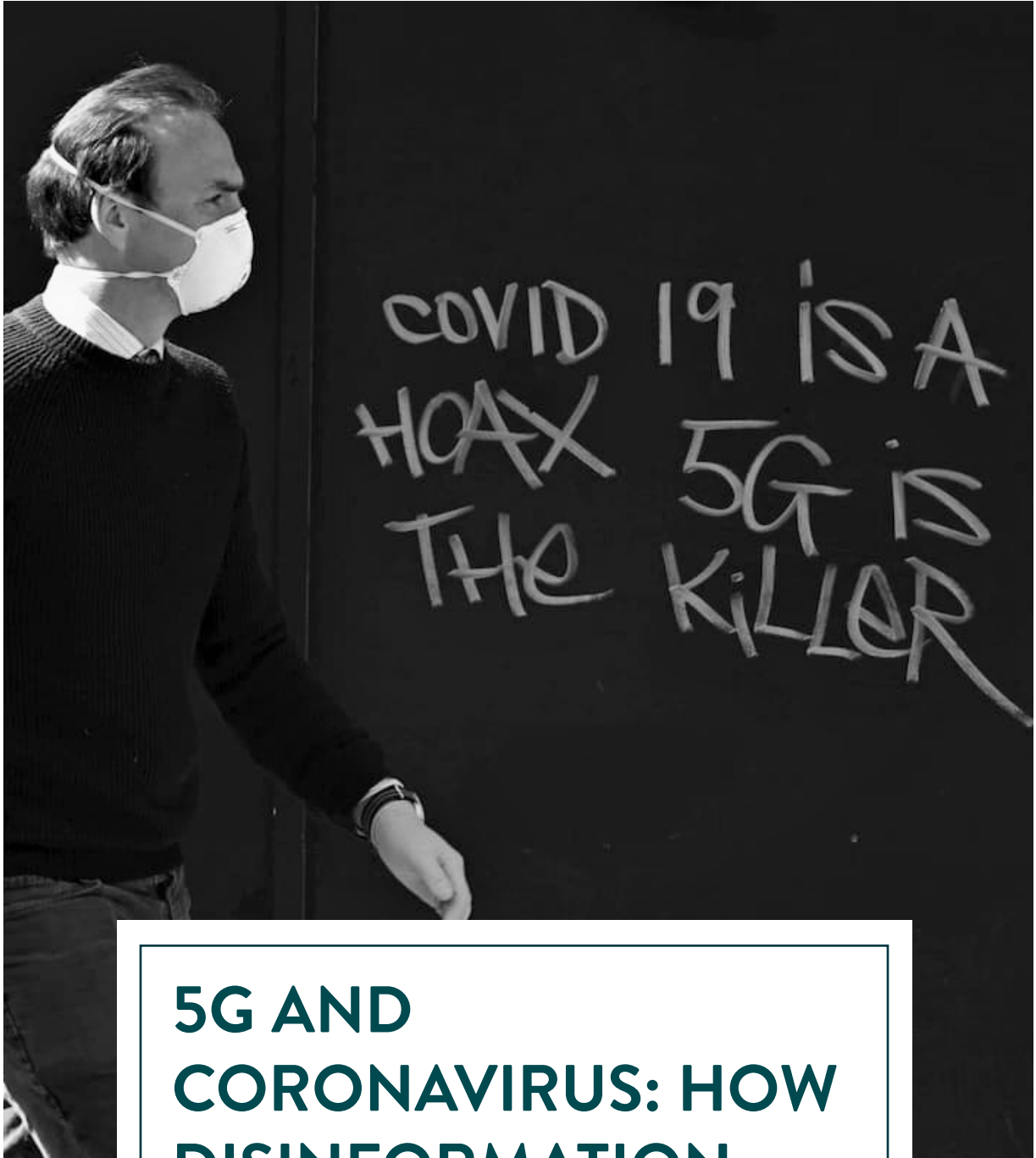




CENTRO STUDI  
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# **5G AND CORONAVIRUS: HOW DISINFORMATION CAN PUT CRITICAL INFRASTRUCTURES AT RISK**

Paolo Crippa  
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While citizens across Europe are struggling with a quarantine regime that has lasted for several weeks, while States are trying to optimize the resources available to allow their national health systems to withstand the impact of the Coronavirus emergency, on numerous social networks a dangerous fake news is spreading. Specifically, the news reveals alleged links between the installation of 5G antennas in different cities and the onset of Covid-19 cases. This theory is generally declined in two variants. A first version claims that the electromagnetic waves propagated by the 5G antennas weaken the human immune system, exposing the population residing in the surrounding areas to greater risks of contagion. The other version claims that the virus can spread more easily and extensively by traveling through the same waves.



Fig. 1 Growth trend of web searches containing '5G and Coronavirus', Italy, last 90 days.  
Source: Google Trends

These theories are often accompanied by references to scientific studies or to opinions of self-styled experts. Among the most recurrent references there is a monograph by dr. Ronald Neil Kostoff on the risks of exposure to electromagnetic waves for human health, or to the words of prof. Luc Montagnier, virologist at the Institute Pasteur in Paris and Nobel Prize winner, who in a recent interview on French TV would have expressed vague doubts about it. However, going to check the validity of these documents or declarations, it turns out that the monograph in question is the result of an individual initiative of dr. Kostoff, devoid of any validation by the scientific community, as well as empirical evidence to support its thesis. In the case instead of prof. Montagnier, from whom the whole scientific community suddenly took the distances, his general perplexities were soon

transformed into official statements by the supporters of the theory, as result of years of study and experience. At the scientific level, to date, no study has been able to demonstrate that 5G technology, within the maximum levels established by law, is harmful to human health. This belief has already been repeatedly denied by major international research consortia. Among these, the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which recently published an update on the guidelines for the management of electromagnetic spectrum, after a seven-year study that has not returned any evidence in this regard.

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1	coronavirus 5g	Impennata
2	5g e coronavirus	Impennata
3	antenne 5g italia	Impennata
4	samsung s20	Impennata
5	s20 ultra	Impennata

Fig. 2 Main queries associated with '5G', Italy, last 90 days  
Source: Google Trends

Despite the obvious inconsistency of this theory, as well as the continuous denials by traditional media, governments and the international scientific community, the fake news in question has had a very wide spread in a short time and continues to be shared with good frequency on several social networks, also in Italy. But what makes this fallacious worthy of analysis, in addition to its content, is certainly a series of episodes that occurred in mid-April in the UK. Indeed, vandalism has been recorded against 5G antennas and installations in various British cities, including Birmingham, Liverpool and London. The link between these violent actions and the theories mentioned above was made clear by several online claims, as well as by the appearance of Facebook groups in which some people shared photos of damaged antennas, inciting further actions. Although certainly not the first, this is a striking case that sheds light on the destructive potential of fake news, capable of distorting reality to the point of



convincing certain individuals to take violent actions, no longer only within the cyberspace, but also in reality. It is therefore a risk profile to be carefully examined in its dynamics and manifestations, since, in an era where the border between verified information and only apparently truthful information is increasingly blurred, it might occur more frequently. The element linking 5G to the spread of Coronavirus is information that presents all the peculiar characteristics of fake news or, more generally, of conspiracy theories. First of all, these are two topics, the Covid-19 virus and 5G technology, already targeted by disinformation campaigns, as well as at the center of a confused and magmatic public debate. Also thanks to a succession of inconsistent declarations by various international political leaders, conflicting hypotheses are circulating about the origin and cause of the current pandemic. Technology, on the other hand, especially if it concerns 'invisible' elements, such as electromagnetic waves (exemplary is the case of HAARP, at the center of numerous and imaginative theories), has always played a leading role within the universe of disinformation and conspiracy theories. In this case, the general lack of clarity on both topics has led to an absolutely random correlation. Triggering this mechanism is the lack of adequate technical skills and scientific knowledge, which allow the mainstream public to handle the topic with full awareness. The feeling of dealing with a 'dark matter' heightens doubts, perplexities and fears, especially in an era in which it seems increasingly difficult to rely on expert opinion. These motions of collective thinking are further exacerbated by the historical moment in which we find ourselves. The explosion of a 'black swan event' (as defined by Nassim Taleb), such as the current pandemic, therefore the pervasive sensation of imminent catastrophe, triggers an urgent search for meaning, culprit or at least a scapegoat. Since, as in the case of the Coronavirus, nature does not respond to the accusations, it is easy to channel feelings of anger towards easier targets. A new technology, whose functioning is difficult to understand for most, moreover at the center of a dense international debate, easily lends itself to this purpose.

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What is surprising, in the case in question, is the speed with which, from the simple diffusion of an online news, a coordinated series of vandalism has come to the detriment of a telematic infrastructure of national relevance. This speed must trigger, also in Italy, a reflection on the need to constantly monitor the proliferation of fake news particularly harmful for the community, in order to limit and neutralize them before they can reach wide diffusion and generate risks for the public safety. To cope with this type of threat, it is necessary to act on two levels. On the one hand, it is necessary to set up targeted counter-information campaigns, on the other to monitor the dissemination of this information on all media, with particular reference to social networks. With regard to the first aspect, numerous announcements were made by the institutional bodies of various countries, not least Italy, capable of denying the coronavirus-5G link and persuading citizens to use only authoritative sources of information. However, it must be assumed that, especially for people inclined to accept them as true, the rhetorical mechanisms of fake news are often stronger than those of official communications, especially ex-post. It would therefore be useful, once a phenomenon at risk of fake news such as the 5G infrastructure has been detected, to prepare preventive educational campaigns, promoted by the institutions in close partnership with the main operators in the TLC sector, which educate the citizen about the opportunities and advantages of the 5G network for a whole series of application areas. Getting in touch early with a new and forthcoming technology creates cognitive antibodies that reduce the persuasive power of fake news. In doing this, moreover, it is necessary to keep in mind how often the latter spread through closed, but no less pervasive channels (such as the Telegram or Whatsapp groups), which are difficult to reach by institutional counter-narratives. Also, in order to facilitate the dissemination of these information campaigns, it is important to develop, at the level of the main public security agencies, the ability to monitor fake news and to map their dissemination on social networks. To this end, the work of social media intelligence (SOCMINT) and software based on Artificial Intelligence is essential for the aggregation and analysis in real time of huge quantities of multimedia content present on social media. Equally fundamental, especially if the phenomenon concerns a sector of national importance

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such as 5G network, it is the fruitful and transparent interaction between the public sphere, the main TLC groups and the companies owning the main social media and communication platforms. In the specific case of UK, although Twitter, YouTube and Facebook have done their utmost, at the request of the British government, to censor content deemed harmful to the community, this effort has not been sufficient to stop the spread of fake news or to prevent some individuals from set some antennas on fire. Although in this case these were minor episodes, it cannot be excluded that these phenomena may reoccur in the future, triggering escalations that might compromise the entire connectivity of a country.