The Social Responsibility of Researchers in Combating Fake News and Conspiracy Theories During a Pandemic

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Abstract: One of the problems that arise in crisis situations is that of fake news (presenting as being real events that did not actually take place) and of conspiracy theories (which emerge from subjective interpretations of real facts). The medical and social crisis created by the onset of the COVID-19 pandemic has resized the role of researchers and bioethicists, emphasizing their social responsibility in properly informing not only the academic community, but also the general public. The present article analyzes the new dimensions that the ethical principle of responsibility of researchers acquires as a result of the SARS-CoV-2 pandemic.

Keywords: *fake news; conspiracy theories; ethics of research; bioethics; social responsibility of researchers.*

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Introduction

Even if social distancing and isolation are two major downfalls of a pandemic, the SARS-CoV-2 virus has not de-globalized society. People fight off the lack of classical socialization (Luca et al., 2020) by escaping to social-media, the realm of free speech, free sharing, free commenting, but it is difficult for the general public to choose between what is worth believing and what needs to be discarded (Apostu, 2016), in the absence of clear, reliable and simple criteria for identifying information that should not be allowed to influence them (Chaikovska et al., 2020). Another impediment is the difficulty of understanding the medical information, the scientific details that the average person faces during the wave of the pandemic and which they cannot ignore, because how the necessity and efficiency of security measures is perceived depends on understanding medical details depends and influences the behaviour of each citizen in supporting (or not) the efforts of the specialists to fight the disease. Aspects such as spreading virus rate, biochemistry (types of tests and accuracy of testing), medical sociology techniques (the elements of epidemiological investigations), medical protocols (safe circuits and disinfection techniques - including those applied at home), types of protective equipment and their efficiency, medical diagnosis (including self-monitoring of symptoms for those treated at home and the relevance of the communications made to the attending physician), off-label treatments, individual immunization and herd immunity, asymptomatic disease, elements of cellular and genetic biology (virology and virus mutations), have come out of the realm of academic and research environments and have become the subject of debates of the entire population, in many cases by need, not by choice.

Of course, there is an imperative to inform the large masses of population about these aspects, regardless of their degree of instruction or education and their level of understanding, but this information exceeds, in level of complexity and difficulty, the general information that the average citizen have in the field of health and medical sciences. It is a form of instruction under pressure, in which citizens receive information from multiple, disparate sources, which are in many cases unorganized and that have the disadvantage of leaving behind gaps in the scientific knowledge of the population, that can lead to erroneous perception of phenomena.

Because of this, the population becomes vulnerable to interpretations, correlations, distortions of information, as it is unreasonable to ask the average person to have the ability to discern the reliability of all

this bombardment of information, especially in social-media, as some information provided by social media channels are alluring to the point of distancing clear thought from concrete evidence, in such a way that some news or theories can take over even the most disciplined of minds.

Therefore, a general message has been launched by international bodies (Naughton, 2020) and by authorities from countries all over the Globe, for citizens to pay special attention not to believe fake news and conspiracy theories, as they are said (European Commission, 2019) to have the potential to undermine people's trust in authorities and lead to a harmful course of action.

1. Resizing the ethical principle of researchers' responsibility in times of a pandemic

When speaking about credibility, we speak about two major axes: the credibility of the information itself and the credibility of the source where the information originated. Amongst all the benefits of globalization (instantaneous communication and relaying of information), one major peril arises when people try to find adequate criteria to sort through sources of information: it is very difficult to verify the credibility of a source (be it a person or an organization) when that source is sometimes on a different part of the Globe than the receiver and when the public profile of that source can be manipulated by computer masterminds in such a way that it can create for itself credible avatars, but which remain, none the less, false.

Fake news are acts of deliberate disinformation (Shu et al., 2017), the facts presented are unreal and manufactured by those who launch these pseudo-news, either for discrediting certain entities, or for gaining followers in favour of a certain course of action, or for their own material gain (each accessing of the site that publishes the news brings a revenue to the owner of the site). On the other hand, real news is information transmitted by the media or by private persons (natural or legal) through mass-media or social media, through which the public is informed about an event that really took place and that is supported by evidence that: 1. the event happened: 2. the event happened in the manner presented in the news: 3. the event had certain consequences or implications, that is, it generated new events regarding which the same credibility path can be followed, by presenting evidence.

Conspiracy theories are those scenarios of events based on real facts, which are combined with interpretations and explanations that lead to the conclusion that occult interests (political or otherwise) are hidden behind the

events generally presented to the public, ignoring - with deliberate intent or, sometimes, by providing a series of arguments - official explanations (Byford, 2011). Fake news are relatively easy to combat, because, as it is based on actual facts, it is sufficient to prove that those events did not take place. Conspiracy theories, on the other hand, because they are started by using actual elements of reality, are more difficult to dismantle. Both phenomena are likely to affect social perception of reality and to modify, when believed, the course of human actions.

This is when the essential role of researchers in general, regardless of the scientific field where these fake news and conspiracy theories appear, and, in times of health crisis, of bioethicists in particular becomes essential.

The European Charter for Researchers and Code of Conduct for the Recruitment of Researchers (European Commission, 2005) defines professional responsibility as that ethical principle that requires the researcher's constant concern to produce scientifically relevant research, as well as the awareness of the researcher that he is ethically responsible to society for their activity and its effects, taking responsibility for the entire research, from the initial idea until the publication of the results, as well as any other future effects that the research could have. ALLEA's European Code of Conduct for Research Integrity (ALLEA, 2017) adds to the definition above the responsibility of researchers for publishing and disseminating the results of the research, meaning that the researchers must ensure that the results of the research will be available to other researchers, in order to combat possible errors, as well as to acknowledge the existence of conflicts of interests that they might find themselves in, to issue corrections or to retract any errors in research reports and publications and to publish all data, including the data that contradict the research hypotheses, not only those which confirm these hypotheses.

As can be seen, these definitions of the ethical principle of researcher responsibility take priority to underlining the ethical elements of the research itself and, when discussing the dissemination of information, they mainly focus on publication in academia. The responsibility of researchers at a social level, as a credible source of information for the general public, as well as a source of public education in combating false, distorted or insufficiently documented information is less emphasized. As a result of the crisis caused by the SARS-CoV-2 virus, it is precisely this dimension that is the fundamental change that takes place in the research community: researchers exit academia and interact not with other specialists, but with the general public.

2. Transferring the principles of research ethics and bioethics to the large society

Health education, in times of pandemic, seems to involve educating the public in choosing sources of information and providing axes, criteria to divide between real and fake news, as well as between theories that have a scientific background and those that cannot be proven by concrete facts (generically called conspiracy theories). As a starting point, adapting the basic principles of research ethics and bioethics to promote such criteria appears to us as a step with long-term beneficial effects, as it does not solve only a momentary, punctual problem of society, but prepares citizens in general to extrapolate these criteria and principles in any future similar situation. Also, this educational role seems to be returning, as a form of social responsibility, to scientists, noting a recent trend in mass-media to provide ample broadcasting space precisely for interviews with such researchers.

Regarding fake news, there is a rule of good practice in journalism (Brandtzaeg, 2016) (valid for the written and audio-visual press), according to which, for a news to be credible, it is necessary that before the news was broadcast it would have been confirmed from several different sources. In social media, however, where anyone, not just journalists, can post information, this rule of journalistic professionalism no longer applies. So, what criterion can be used to verify whether information disseminated through sharing (therefore by a third person and not by the one who originally broadcasted the information) is taken or not from a secure source?

One of the most important principles of research ethics, which can be transferred into society and transformed into a criterion for the selection of sources, is honest citing, more precisely the correct indication of the sources of information cited in the published paper, an indication to be made by the author of the paper in such a way that the source can be identified and consulted directly by an interested reader (Sandu, 2018). Posts shared in social media indicate sources for the information they disseminate, and to check the validity of the information, a careful reader can check the initial source. If that source is identifiable, another step is the source's citation grade. This principle (the relevance of the source) is also derived from the ethics of research. Research ethics theorists (Sandu, 2018) show that a paper relevant for its contribution to science will be indexed by international scientific databases and will be cited in multiple other scientific papers. In our case, if the original source, mentioned in the post, is cited by other news disseminators (credible scientific journals, newspapers or

periodicals, television or radio channel that have previously applied the principle of source verification, according to journalistic good practices), then the degree of probability that the respective source is credible increases.

Even in the case of fake news, one can apply the ethical principle of the researcher responsibility (Resnik & Elliott, 2016), in its dimension of responsibility for disseminating information, both for the information presented in the published paper and for the way in which this information was obtained. Therefore, posts that indicate general sources, without expressly providing their name or elements that can lead to their exact identification (such as "a group of researchers", "authorities", "government officials"), and doing this even if the type of news does not call for protecting the anonymity of the source, are therefore advisable not to be trusted. The lack of credibility of the news is due to the fact that nobody assumes responsibility for the truthfulness of the information presented by the news. By correlating this possible criterion with the researchers' obligation to declare conflicts of interest in the elaboration of the research, the public will be able to be educated, if not in identifying the motivation of a fake news provider (which is sometimes difficult for the average person to do due to the impossibility to obtain information about that disseminator), at least to start from the presumption that any unofficial sources are potential fake sources and to look at the information with maximum reluctance.

It is precisely the credibility of official sources, however, that the conspiracy theorists strike, and discrediting official sources indirectly supports those who launch fake news, because by divesting official sources of reliability, they shift the public's investment of trust to other sources, extraneous to the official ones and, by this, more susceptible to conflicts of interest. When analyzing conspiracy theories, we speak about connection, deduction and conjecture, which are the essential ways in which these theories are argued. On the other hand, when we talk about science, we talk about concrete, measurable facts, and evidence.

A connection is a relationship that is stated to exist between two events, which are thus associated ("Connection", n.d.). In conspiracy theories, the most commonly used connections are those of cause and effect type. One such example is the theory that the large number of asymptomatic patients is due to the fact that SARS-CoV-2 is a delayed-effect biological weapon, that will be triggered by 5G technology (Lee, 2020). In scientific research, cause and effect connections are formed as conclusions of a series of data gathering techniques, following a strict methodology and as a result of identifying qualitative or quantitative indicators that lead to such

conclusions. It would probably be excessive for the general public to be trained in research methodology, but in the first stage, it is necessary for the public to raise awareness and to internalize the fact that the real, credible scientific research implies a strict methodology, which is mandatory to be presented to the reader whenever connections between events are affirmed. The lack of such a methodology places any statement on the realm of conjectures.

Deduction is “the process of reaching an (...) answer by thinking about the known facts” (Cambridge Dictionary, n.d.). A deduction from supporters of conspiracy theories, for example, is that according to which COVID-19 was created by genetic engineering techniques from combining coronaviruses with the HIV virus, since there is no possibility that elements of genetic sequences from HIV could naturally occur in the genetic structure of SARS-CoV-2 (Forster, 2020). In science, deductions are not regarded as absolute truths, but are the basis for formulating research hypotheses to be verified. After their verification, these deductions become proven facts. But again, we turn to research methodology, a highly technical aspect of which the general public is unlikely to be very interested.

After connecting facts without any solid proof that those facts are actually connected, and deducing facts that are never intended to be tested or confirmed, what results cannot be a valid conclusion, but a conjecture. A conjecture is a conclusion which only has the appearance of truth, because it is supported on preliminary actual facts, but that can neither pose as a certain truth, nor can it be absolutely dismissed, due to lack of evidence (Schwartz, 1997).

The complexity of scientific methodology, the low degree of accessibility of scientific terminology and the difficulty for the public to understand them presuppose an educational approach to raise public awareness on debunking conspiracy theories, starting from a more accessible main base. In this sense, bioethicists have the role of conducting ethics education based on two basic principles of bioethics: beneficence and non-maleficence. While beneficence imposes the imperative to do no harm, non-maleficence means that any act, including the dissemination of information, should be free of any negligence and any careless or unreasonable transmission of information.

The question that these two principles must raise in the public's perception of conspiracy theories is: who benefits from presenting a certain situation in a certain way and what beneficial purpose (if any) is served by that theory (beyond, of course, the publicly stated purpose of disclosing a conspiracy). Beneficence and non-maleficence suppose the scrutiny of the

good faith of the one who transmits the information and the lack of any hidden interest (be it only self-advertising). The lack of scientific rigor (medical, political, historical, etc.) increases the risk of carelessness, and protecting oneself from falling under the influence of hidden interests to distort reality, even more, to act in accordance with the effects of this influence is a skill that can be trained, learned and, why not, taught.

Conclusions

Resizing the role of researchers, through their active involvement in the public sphere, as well as the responsibility society invests in them to explain to the masses scientific facts is a process that has been greatly emphasized during the SARS-CoV-2 pandemic. Whether or not this process will continue after the pandemic ends is a fact that only time can prove. Encouraging this process, however, will enhance the benefits that society will draw from its relationship with the academic and research environment and can be an important step towards a true knowledge-based society, rather than a society where hidden individual interests can prevail by information manipulation.

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