



Republic of San Marino

SAN MARINO BIOETHICS COMMITTEE

**BIOETHICS IN THE TRANSFORMATION OF
COMMUNICATION:
KNOWLEDGE AS DEFENCE AGAINST FAKE NEWS**

APPROVED ON 26 APRIL 2023

TABLE OF CONTENTS

TABLE OF CONTENTS	2
PRESENTATION	4
INTRODUCTION	6
DEFINITIONS AND REFERENCES	8
CONTEMPORARY SOCIETY: RISK SOCIETY OR RATHER UNCERTAINTY SOCIETY	11
Risk society	11
Liquid society	12
Narcissistic society	14
SOCIETY AND DISINFORMATION	16
COMMUNICATORS	18
Disinformation and journalism	20
INTERNET AND ARTIFICIAL INTELLIGENCE	23
INTRINSIC CHARACTERISTICS OF THE NEW MEDIA	26
Accessibility	26
Durability over time	26
Abandonment of context	27
Difficulties in fully defining the boundaries between public and private	27
Listening/Verisimilitude (despite everything)	28
Filter bubble	28
PSYCHOLOGICAL MECHANISMS EXPLOITED BY FAKE NEWS: COGNITIVE TRAPS	30
Cognitive biases	30
COMMUNICATION IN TIMES OF CRISIS	34
The concept of crisis	35
Crisis Communication	37
FAKE NEWS IN THE SPECIFIC CASE OF HEALTH	40
The case of COVID-19 vaccines	41
Fake news, nutrition and diets	42
Fake news and healthcare litigation	44
LEGAL ASPECTS OF DISINFORMATION	45
WAYS OF COUNTERING DISINFORMATION	46
Debunking or reactive response	47
Facilitation of socially valid behaviour	49

Proactive promotion	50
Watch and wait	50
THE BIOETHICAL IMPACT OF DISINFORMATION	52
CONCLUSIONS	55
RECOMMENDATIONS	57
BIBLIOGRAPHY AND SITOGRAPHY	58

PRESENTATION

San Marino Bioethics Committee began its new mandate in December 2020, at the peak of the SARS-CoV-2 pandemic.

Inevitably, the CSB activities have been directed towards the analysis of the numerous related bioethical issues, some of which have emerged so forcefully as to require the bioethics community to reflect anew on principles and values that are now considered intangible human assets.

Some problems, although they have existed for a long time, have exploded with such virulence that they require an attention, which can no longer be postponed.

Amongst these, the problem of communication across all media, in traditional and new “social” channels, by every individual, whether a professional or simple user of the new media, has emerged overwhelmingly.

This has generated a mass of information for which, due to its quantity and quality, special neologisms have been introduced: infodemic, misinformation, disinformation, malinformation, all of which can be traced back to the most common term: fake-news.

It was immediately evident that communication has undergone a radical transformation precisely at the time of the greatest crisis the world has experienced in recent times: first the pandemic, then the Russian Federation's aggression against Ukraine, together with the problems of climate change and food insecurity.

In this context, the CSB considered it necessary to dedicate a specific document to issues related to new forms of information and the dangers of disinformation on individuals and society.

Aware of the complexity of this phenomenon and of the impossibility of circumscribing it within a defined perimeter, the CSB has chosen a different approach from the currently most widely used one of condemnation and blame.

Indeed, this document aims at involving the entire community and all citizens in order to raise awareness of the problem and call for a collective responsibility not only in the act of generating fake news but also in feeding and spreading it.

To this end, the CSB decided to devote the first part of this document to outlining this issue, with a special focus on times of crisis, because of its decisive impact on people's lives.

Given the pervasiveness of this phenomenon in all areas, this document sets out a number of examples of the dangers of disinformation, including the repercussions on the right to health, in the legal sphere and in health litigation, and proposes a number of ways of combating it and promoting appropriate social behaviour.

The bioethical impact is all-encompassing.

Therefore, through this document, the CSB does not intend to play the role of either spectator or mere descriptor of a phenomenon that is impossible to define in all its complexity. On the contrary, it intends to provoke debate as a public strategy starting from moral concerns, recalling the seriousness of consequences in terms of damage not only to individuals but to the very form of democratic coexistence, in which “to know in order to decide” is a *sine qua non* condition for its very survival.

The work was preceded, as is customary for the CSB, by the involvement of a number of experts who provided an overview of the relevant issues: Prof. Francesco Sabatini, Honorary President of Accademia della Crusca; Gabriella Jacomella, journalist; Francesco Bongarrà, President of the Supervisory Authority for Information of the Republic of San Marino; Umberto Rapetto, President of the Data Protection Authority of the Republic of San Marino.

For the drafting of this document, the CSB established for the first time a synergistic collaboration with the Council for Information of the Republic of San Marino, which the Committee wishes to thank through its President Roberto Chiesa, and Franco Cavalli, who supported the Committee throughout its work.

The complex psychological aspects were addressed by Roberto Ercolani, CSB's external expert and a constant presence in the drafting of the documents.

Finally, the entire CSB extends a special thanks to Ferruccio Di Paolo, NATO Civilian Expert in Crisis Communication, an external expert, who provided his assistance, with great competence and dedication, for the description of the phenomenon in its many facets.

This document was approved at the meeting of 26 May 2023 by all members: Borgia, Cantelli Forti, Carinci, Garofalo, Griffo, Guttmann, Hrelia, Iwanejko, Raschi, Santori, Selva, Strollo, Tagliabracci.

Luisa M. Borgia
CSB President

INTRODUCTION

In 2016, the Oxford Dictionary announced to have declared “post-truth” as the word of the year, referring to a piece of news that is completely false but spread as true with the intention of influencing a part of public opinion on the basis of a strong appeal to emotion.

Therefore, the era of post-truth is characterised by the extensive use of euphemisms, which embellish facts and words that communicate a meaning contrary to what they mean.

The following year 2017, the Collins Dictionary¹ declared as word of the year a new term with the same meaning: “*fake news*”.

This demonstrates not only that such term is widely used, but also, and above all, that the topic to which it refers arouses so much interest among web users that it has now come to dominate the world of information and beyond.

The problem of disinformation, both in digital and traditional media, affects crucial aspects of our society. As we will see, our society is in many respects fragile because it is permeated by a constant sense of insecurity that can strongly condition the ability of citizens to achieve stable collective knowledge.

The right to quality information is put at risk by the manipulation of messages, with consequent repercussions in various fields, from health to the economy, affecting consumer choices and even, at times, the very future of democracies.

However, one word cannot be sufficient to circumscribe and define such a vast and pervasive phenomenon.

In the same year that the Collins Dictionary named it term of the year, the Washington Post's Media Editor Margaret Sullivan considered that this term was already outdated, as it was misleading and limiting.

According to the American journalist, there was a risk of univocally defining completely different contexts, even though they belonged to the same category, thus reducing the space for analysis and understanding of a complex phenomenon.

For example, an artfully created hoax and a journalistic error are two very different things and must therefore be dealt with in different ways.

Similarly, a conspiracy theory based on nothing and a considerably partisan opinion expressed in support of extreme political positions are very different and cannot therefore be treated in the same way².

¹ <https://www.collinsdictionary.com>

² Di Salvo P, “*Come farla finita con le fake news?*”, Wired.it, 13 January 2017 <https://www.wired.it/>

Nevertheless, while being aware of its differentiations, for the sake of simplicity, the CSB has decided to continue using the term “fake news” in this document.

DEFINITIONS AND REFERENCES

A clear distinction is increasingly becoming established, not only among insiders, between *misinformation*, a mostly involuntary act, and *disinformation*, in which willingness is manifest.

Disinformation is when completely fabricated news is circulated with the intention of harming someone, while misinformation is when false information is fed into the communication circle in good faith, sometimes even thinking of acting for the good of others.

Both aspects of a phenomenon that collectively we could call *information disorder* have different characteristics and effects from those of a third component called *malinformation*, i.e. the conscious public sharing, in the form of leaks or so-called *hate speeches*, of content that is true or truthful but of a private and often sensitive nature and whose dissemination damages someone's reputation.

Although disseminated without the explicit intention to deceive, misinformation is misleading, inaccurate or outright false and, if perceived by recipients as serious and factual, can cause harm.

Those who know they are telling falsehoods and have the malicious intent to stir up divisions and fear are instead the source of disinformation. Indeed, disinformation is defined as “intentional falsification of information and news in order to manipulate the perceptions and influence the decisions of individuals receiving the message to induce them to act in the manner desired by the disinformers”³.

In the 19th century, when mass psychology was introduced (the study of the influence of collective phenomena on individual behaviour), it could hardly have been assumed that the crowds involved would be so large as to almost equal the entire world population.

Indeed, the development of new information technologies has led to a considerable enhancement of the tools to influence public opinion through disinformation.

The network allows the massive, uncontrolled and almost instantaneous dissemination of deliberately falsified or manipulated news, increasing the vulnerability of social groups and individuals to actions designed or deliberately intended to exploit certain cognitive weaknesses that are extremely widespread in contemporary society.

Misinformation and disinformation are sometimes associated with false analyses, deceiving people and leading them to take decisions contrary to their real wishes or interests.

³ Germani LS, *Disinformazione e manipolazione delle percezioni*, Eurilink University Press, Rome, 2017.

However, while the former falls under the umbrella of freedom of expression and is based on a misinterpretation of a message or on deep personal convictions, the latter often clearly takes the form of slander or the expression of hatred against individuals or groups of people by those who seek to sow distrust in institutions.

As such, the rise of disinformation also poses a growing threat to democracy and social cohesion worldwide, if it is true that “democracies rest on the principle of trust, that is, the reasonable presumption that appearances correspond to reality”⁴.

In order to graphically represent the phenomenon of *information disorder*, we can draw a double-entry table with intentionality or not to harm on the x-axis and truthfulness of information on the y-axis:

		Intentionality	
		Benevolent	Malevolent
Information	True	Information	Malinformation
	False	Misinformation	Disinformation

Therefore, disinformation involves malevolent intent and is generally linked to personal (e.g. a desire for self-aggrandisement), political, economic and/or geopolitical motivations⁵.

For example, 80% of investigations involving websites that created disinformation on COVID-19 revealed economic reasons behind the dissemination of incorrect information⁶.

Therefore, as we will see, active interventions to counter disinformation are not only the responsibility of the world of communication but also require active involvement of specific State administrations and the judicial authority.

Historically, approaches against fake news have focused on the need to reveal falsehoods and debunk myths, on the assumption that the latter depend on a lack of correct information.

In general, communication must in any case be primarily committed to combating misinformation because, in the absence of a real alternative to misleading news, a

⁴ Violante L, *Politica e menzogna*, Einaudi, Turin, 2013.

⁵ When hostile actions are carried out through targeted propaganda and disinformation, these become useful tools to act both on civil society, undermining its trust in the national system or creating public unrest, and on the armed forces in general, weakening their structure. It cannot be ruled out that, during the pandemic, some States undertook disinformation activities to test the permeability and resilience of certain countries.

⁶ Sciubba Caniglia C, Special Editor of Harvard Kennedy School Misinformation Review, *Gruppi di disinformazione in Italia e loro strategie* IDMO – Italian Digital Media Observatory. <https://www.idmo.it/2021/10/29/sciubba/>

substantial number of people who are sceptical, disenchanted or simply curious - but at the same time unprepared for the use of the new media - may be fascinated by an “alternative” message.

Correct communication should be directed towards them, enabling them to understand, interpret and correct erroneous information, while a smaller number of “diehards”, firm in their convictions even after timely verification and refutation, are likely to resist any recovery attempt.

Therefore, it is essential that whoever is on the front line, be they institutional actors or communication experts, acquire a profound understanding of this phenomenon, of the processes that lead many to rely on disinformation (a term that from now on, for simplicity's sake, we will mainly use to refer to the whole of *information disorder*, including misinformation), and of the reasons and modes of dissemination that make fake news so difficult to eradicate.

CONTEMPORARY SOCIETY: RISK SOCIETY OR RATHER UNCERTAINTY SOCIETY

The phenomenon under examination cannot be tackled unless we place it within the society in which we live.

As Lorenzo Del Boca writes, “fake news”, “rumours”, “hearsay”, “have existed since the dawn of time, History is full of them, but we used to call them lies. [...] An example: Titus Livius describes Mucius Scaevola who puts his hand on a burning brazier without batting an eyelid. [...] Of course it is nonsense, it is just the way to glorify the power of Rome. However, other times, the fake news serves an immediate purpose”⁷.

Risk society

Contemporary society is characterised by some specificities that make it particularly delicate and exposed to manipulation, primarily because of its fragility.

Already in 1986⁸, German sociologist Ulrich Beck published a book that was destined to achieve great resonance: *Risk Society*⁹.

He argued that in the second half of the 20th century, the nature of technological risks underwent a radical transformation, profoundly affecting people's perception of their sense of security.

Since the 1970s, the very nature of the concept of risk has changed from a local to a global dimension, with immeasurable aggravation of the consequences.

Contemporary technological risks do not only depend on accidental errors but are considered by Beck to be intrinsic to production processes and therefore ineliminable, especially due to the complexity and consequent fragility of technology: the more complex it is, the more easily a device can fail.

The concept of a risk society, in which risk transcends the usual frontiers, emphasises that risk is difficult to recognise, because it stems from modern production techniques, and is almost an unwanted effect of them.

Only in the last 20 years or so, five systemic crises have occurred¹⁰ with a frequency unknown in the previous century.

⁷ Del Boca L, *Il maledetto libro di storia che la tua scuola non ti farebbe mai leggere*, Piemme, 2017.

⁸ The year sadly remembered for the Chernobyl disaster.

⁹ Beck U, *Risikogesellschaft – Auf dem Weg in eine andere Moderne*, Suhrkamp, Frankfurt a. M. 1986 – English version: *Risk Society: Towards a New Modernity*. London: Sage, 1992 – Italian version: *La società del rischio. Verso una seconda modernità*, Carocci, 2000.

¹⁰ A systemic crisis is the collapse of the system as a result of a chain reaction of negative consequences affecting a large number of sectors or economies and the lack of instruments to resolve the disaster. The initiating event of a systemic crisis can be of different nature, financial, health, environmental, scarcity of natural resources, etc., and causes a contagion effect that affects both the financial markets and the real economy. The effects of a systemic crisis lead to massive business bankruptcies, job destruction, high levels of indebtedness as a result of limited credit granted by banks and a collapse in private consumption.

The level of technological development entails an ever-increasing dependence on technical tools due to the strong interlinking of production processes with the structural elements of our social organisation: the failure of one can be followed by the failure of another, and the spread of large mass media leads to an increased perception of risk in the population.

Through technology, production processes, communication and transport, a society as strongly interconnected as today's rapidly extends crises from local to systemic: what happens in Japan immediately affects Germany, and events in Latin America or Africa can generate short-term problems throughout other continents.

With the attack on the Twin Towers of the World Trade Center, which generated the first systemic crisis of this century, our society has been thrown into an era of instability, with the sub prime crisis and the migration crisis, up to the most recent pandemic, which has built on the climate crisis that began in the last century and whose consequences we are now feeling more keenly, along with those of the sixth crisis generated by Russia's invasion of Ukraine.

As we have all understood, this is not a limited event but a complex situation with multiple repercussions in extremely diverse sectors, from *supply chain*¹¹ to the problem of food supplies.

Moreover, we are facing a condition without precedents in modern times, represented by the concatenation of two systemic crises, namely the war in Ukraine overlapping the Covid-19 and its consequences. Today, for the first time in modern times, such a serious and unexpected event takes place.

Liquid society

Alongside structural and technological fragility, we must also address cultural fragility.

Similar to Beck, for Zygmunt Bauman, today's society is "liquid", i.e. characterised by a constant state of uncertainty.

The liquid modernity proposed by Bauman suggests a rapidly changing order that undermines all notions of duration and implies a sense of uprooting from all forms of social construction¹².

¹¹ Literally, "supply chain" or "distribution chain", meaning the complex process of bringing a product or service to market by organising the transfer from a supplier to a customer. The first to talk about Supply Chain Management were Keith Oliver and Michael D. Webber who, in 1982, defined it as a "technique for reducing inventory in the company".

¹² Bauman Z, *Modernità liquida*, Rome-Bari, Laterza, 2002.

Following Umberto Eco's explanation of the liquid society, we can say that with the crisis of the concept of community¹³ an unbridled individualism emerges, in which no one is a companion any more but, on the contrary, everyone is seen as a possible antagonist.

Such exaggerated subjectivism has undermined the foundations of modernity, made fragile by the lack of reference points. Such reference points dissolved in a kind of fluidity that offers as its only possible solutions, on the one hand, appearance at all costs, and on the other, a consumerism that, due to the rapid obsolescence of things and even of desires, does not aim at possessing objects, at best identifiable *a priori* as sources of only temporary gratification, but at the continuous shifting of attention from one product (a service, a need) to another in a sort of bulimic vortex¹⁴.

By changing his habits in response to the needs imposed by the market, modern man has learnt to bind himself to ideas rather than ideals.

According to the Polish sociologist, liquid modernity is “the conviction that change is the only permanent thing and that uncertainty is the only certainty”.

Today's man desperately searches for fixed points but finds none and, not seeing the end of the process in which he is entangled, cannot imagine a future either for himself or for humanity. For this reason, he feels trapped in a dead end represented by a fluid reality where everything is possible but nothing is certain.

Therefore, from the impossibility of predicting what will happen in the face of continuous, difficult daily choices, a state of anxiety arises, linked to the feeling of living in a condition of constant risk.

In his latest book, when referring to contemporary society as opposed to previous ones, Beck prefers to avoid the term *change* and introduces the concept of *metamorphosis*.

Indeed, change entails the possibility of focusing attention on the future of a single aspect in the presence of others that are completely unchanged, while in metamorphosis all the certainties of modern society are uprooted¹⁵.

The metamorphosis suddenly puts into play the entire way of being in the world, therefore what was hitherto inconceivable is now happening: the global risk to which we are exposed implies the prediction of catastrophe and the emergence of a civilised culture of

¹³ The concept of community represents a series of human interactions and behaviours that have meanings and expectations among its members. Not just action, but actions based on the choice of expectations, values, beliefs and meanings shared among individuals.

¹⁴ Eco U, “*La società liquida*”, *L'Espresso*, no. 22, 4 June 2015.

¹⁵ Rambaldini F, Review of Ulrich Beck: *La metamorfosi del mondo*, Pandora Rivista, 20 June 2018, <https://www.pandorarivista.it/articoli/metamorfosi-mondo-ulrich-beck/>

responsibility, i.e. a cosmopolitan space of action where the “traumatic vulnerability of all increases the responsibility of all for the survival of all”¹⁶.

Narcissistic society

There are also other characteristics that make our society particularly permeable to fake news, and damageable by it.

Luigi De Gregorio¹⁷ reports on some of them, starting from the assumption that ours is the most narcissistic, ego-centred and individualised society in history. Indeed, it lacks stable beliefs and cognitive authorities, is focused on the instant, on an existence lived in such a fragmentary way as to make the present uncertain, the past difficult to reconstruct and the future even more difficult to imagine.

Therefore, today's society is constantly in search of immediate gratification, compelled by consumerism and mass communication to seek immediate satisfaction for its needs.

In this context, the lack of the spirit of sacrifice is also counterbalanced by the inability to savour the taste of waiting.

However, what has just been described is very dissonant with certain aspects of everyday life that cannot adapt, except by distorting themselves, to the constant search for immediate satisfaction.

For example, the ability to understand politics and implement projects in line with its dictates is not a commodity that can be bought on the digital market or immediately enjoyed on the Internet at the push of a button, let alone by sharing a “like”.

Politics needs time, resources, complex negotiations and procedures, that “extra time” needed to process thought compared to the average instinctive and instantaneous reactions of everyday life.

Unfortunately, however, time is no longer guaranteed or granted for the maturation of phenomena that find their *raison d'être* in it and that acquire meaning precisely in the intrinsic nature of becoming, i.e. varying until they gradually take on a sufficiently stable form because it is considered and shared.

Impatient actuality is articulated around an increasingly imperative “all and now”.

Therefore, politics becomes “fast” by necessity: it takes refuge in hyper-communication, gratifies by announcing, promising and telling.

Although every choice should always represent the point of balance between emotions and cognition, all too often proposals seek confirmation and support from emotions to the detriment of planning. Therefore, those who should represent the safe and reasoned guide

¹⁶ Beck U, *La metamorfosi del mondo*, Laterza, Bari-Rome 2017.

¹⁷ De Gregorio L, *Comunicazione di crisi. 5 lezioni dall'era Covid-19*, in Campi A, (edited by), *DOPO Come la pandemia può cambiare la politica, l'economia, la comunicazione e le relazioni internazionali*, Rubbettino Editore, 2020.

to the path of the social group as a whole can turn, on the contrary, into an element reinforcing the emotional response detached from critical attention from which no reasoning can be separated.

It is necessary to pay attention to the dynamic just described because it represents one of the factors that can make citizens permeable to fake news: if the leadership invents and improvises statements without any concrete follow-up, despite being responsible for the management and, with it, the resilience of public affairs, citizens feel justified in believing anyone who proposes different strategies to solve a problem.

Similar considerations apply to scientific communication: citizens need certainty and expect an unambiguous response which, due to its intrinsic characteristics, science cannot provide *a priori*.

Indeed, by its very nature, it proceeds by trial and error and is based on a method that requires very well-defined timeframes and protocols, the non-observance of which completely disrupts the reliability of any results.

However, precisely because of the need to obtain short-term certainties in a kind of cognitive closure whereby mental laziness relies on the thought “certified” by others, many expect science to provide “the answer” and not dozens or hundreds of different and contradictory possible answers, each with a different degree of probability.

In the light of the above, news and information relevant to people's lives and health are reported in the context of experience and the personal sphere and thus downgraded to the role of “*soft news*¹⁸”. Therefore a public quarrel among experts, which is unfortunately becoming increasingly frequent, almost automatically fuels the credibility of the many individual expressions found on-line (“my cousin told me that...”; “I was sick afterwards.....”), which are inevitably supported by those who have gone through similar experiences¹⁹.

¹⁸ In traditional journalism, soft news is understood to mean all those news items concerning current affairs, costume, gossip, etc. that are not characterised by the urgency and social relevance that so-called hard news has.

¹⁹ De Gregorio L, *Comunicazione di crisi*, ... op cit, page 161.

SOCIETY AND DISINFORMATION

Disinformation acquires new connotations in terms of also redefining the actors who disseminate news and those who receive it.

During wars, for example, one of the tools of propaganda and misdirection of the enemy and of conditioning the relevant public opinion has always been based on disinformation, and the various ways used to encrypt or hide secret messages from the enemy have built up an exemplary model of information-related double-truths.

This model, in various forms, is also often used in peacetime by States and governments both for the public good and to protect partisan interests.

In this context, it is clear that, if an essential element of democracy is the possibility to enjoy a public debate free of constraints on freedom of opinion²⁰, *fake news* is of strategic importance for free adoption of appropriate private and public decisions.

The numerous new opportunities and perceptions of the use of technology (neuronal extensions²¹ suited to the rapid dissemination of arguments that in the past were referred to as “barroom discussions”), with the very wide capacity for the dissemination of any news on the web, have now substantially overturned the arena of public and private communication, giving voice to the increasingly widespread rejection of the mediations of technical experts (lowered to the same rank as the opinions of anyone who expresses his ideas without producing any evidence). Therefore, it is possible for everyone to “post” information without evaluation-related filters, for opinion groups to launch news and self-referential stances, and for many to satisfy the need for social cohesion by joining blogs or opinion groups that offer unverified “truths” (e.g. flat earth supporters).

Today, the tools of blogs, influencers, social networks and the resulting followers allow uncritical loyalty, in clear and paradoxical contradiction to the rejection of expert mediation.

It is useful, in this regard, to recall that in a recent speech at a conference on communication²², Ilvo Diamanti took inspiration from Bernard Manin and the models of democracy²³ to affirm that, with the advent of mass communication and the replacement of ideology by marketing, digital and new media have generated a reality quite opposite to the direct democracy initially envisaged in line with Rousseau's dream.

The new reality is identified with the so-called “immediate society”, which is fast, direct, free of the interpositions of time, place or people and therefore deprived of the mediations necessary to foster debate and understanding.

²⁰ Habermas J, *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy* Edited by Ceppa, Bari, Laterza, 2013.

²¹ Computers and smart phones can be described as extensions of the brain's neurons in the areas of memories and knowledge, perceived as an external part of the human body. De Kerckhove D, *Dall'alfabeto a internet*. Milan, Mimesis, 2007 and De Kerckhove D, Rossignaud M.P. *Oltre Orwel. Il gemello digitale*. Rome, Castelvecchi, 2020.

²² Dialogue between Ilvo Diamanti and Dario Di Vico *Un confronto sul Paese e le dinamiche sociali*, 28 January 2023, Ferpi, Congress Centre of the Cariplo Foundation.

²³ Manin B, *principi del governo rappresentativo*, Il Mulino, 2017.

The result is fragmentation, the lowering of the level of complexity and the inelegance of public confrontation, too often now reduced to a clash between irreconcilable positions due to the overlapping of the voices of interlocutors, who are totally incapable of dialogue through successive stages of listening and logical argumentation.

At the same time, the unauthorised use of some personal data (for example, the sale of contacts through cookies for commercial purposes and therefore the invasiveness of unsolicited advertising) demonstrates that it is difficult on the web to effectively protect a person's privacy.

Moreover, the very transmission of information within a group characterised by shared opinions is subject to misrepresentation and changes during communication²⁴.

²⁴ Bloch M, *Soldati in marcia, Apologie pour l'histoire ou Métier d'historien*, Paris, Armand Colin, 1949. *Apologia della storia o Mestiere di storico*, translation by Giuseppe Gouthier, Turin, Einaudi, 1950. - New edition on the critical edition of his son Étienne Bloch, Einaudi, 1998-2009.

COMMUNICATORS

In approaching *information disorder*, it is also necessary to consider who is active in today's world of communication and how the various "operators" interact with the recipients of messages.

The range of "communicators" is indeed very broad and, given first and foremost the rapid evolution of today's multimedia society, attempting to circumscribe it would risk leaving out certain categories and quickly making this document obsolete.

However, it is appropriate to distinguish at least those communicators who habitually operate in order to receive remuneration of various kinds, including mere notoriety, from those who do so extemporaneously and not in order to obtain any remuneration.

Journalists

Within the first group, which is also very broad and varied, are, in particular, journalists.

Whether they are professionals or publicists (as regulated in both Italian²⁵ and San Marino legislation by Law no. 211/2014 and Law no. 40 of 8 March 2023²⁶), journalists are required to comply with the code of ethics²⁷ which, among other rules, provides for the verification of sources, truthfulness of the news, continence, relevance and the obligation to correct any errors that emerge either from an external report or from a subsequent personal check.

These fundamental rules alone should represent an almost insurmountable barrier to the spread of fake news in newspapers and official media, but, as can be seen from past and recent reports, reality unfortunately contradicts the theoretical assumption.

Professional journalism has, however, all the tools and rules, represented by compulsory continuous professional training and the bodies to protect and safeguard the profession and the citizens-readers, which, although subject to further reforms and improvements, represent an additional guarantee in favour of the ability to correct errors and intervene when false news is disseminated.

Non-journalists

Those who do not belong to the category of journalists often totally lack preparation, training and deontological rules and are, *de facto*, only obliged to comply with the civil and criminal laws of their State of residence.

Among non-journalists, bloggers and influencers deserve a separate mention.

They can produce highly professional and emotional "content" such as videos, texts and images, and through them solicit a high level of engagement, i.e. a level of interaction of the

²⁵ <https://www.fnsi.it/upload/9b/9bf31c7ff062936a96d3c8bd1f8f2ff3/8130b7d880458e51696bec74c4f2cc9c.pdf>

²⁶ <https://www.consigliograndeegenerale.sm/on-line/home/in-evidenza-in-home-page/documento17070804.html>

²⁷ <https://www.giornalistitalia.it/wp-content/uploads/2017/06/II-decreto-delegato-sul-Codice-deontologico.pdf>

“content” with readers/followers, consisting of “likes” and shares, such that the product becomes “viral”.

The CSB would like to point out that the noun “influencer” and the adjective “viral” are used as such and in a manner completely independent of the possible negative connotation by which they are characterised among some people.

However, as we will see hereunder, disinformation has important bioethical aspects to be considered, first and foremost, the possible manipulation of public opinion on political, social and cultural issues resulting from the seemingly unlimited dissemination of non-consolidated news and concepts.

Such activity can damage democracy and undermine trust in politics and institutions, and its use also has a strong impact on public health.

For example, fake news about medical treatments or vaccines may push people to make choices that may put their own health and/or that of others at risk and affect minorities by spreading stereotypes and prejudices. More generally, they may have a negative impact on freedom of expression, a fundamental human right, and, in some cases, severely limit the ability to participate in democratic life by making informed choices.

Therefore, tackling disinformation requires balancing the protection of fundamental rights with the promotion of freedom of expression and diversity of opinion, and thus requires engaging in a difficult struggle against the apparent comfort offered by the simplifications characteristic of fake news in favour of a generally more complicated and nuanced truth²⁸.

In the long run, both governments and the media should promote programmes to facilitate access to reliable information, supporting professional journalism and fact-checking to reduce the risk of being manipulated.

These initiatives should be undertaken by defining a specific modality of inter-institutional coordination that enhances existing experiences and brings together the communication experts already present in the institutions in order to better guide citizens' search for information and make existing content more accessible and integrated.

Moreover, the distinction between disinformation and misinformation is extremely blurred; for example, artificial intelligence bots²⁹ are capable of immediately identifying a source of disinformation but can hardly distinguish misinformation from correct communication.

Therefore, it is important to set up or strengthen interdisciplinary teams capable of detecting erroneous communications, responding to them appropriately, and facilitating access to sites with trustworthy content in order to make citizens aware of truthful messages.

A further contribution could come from analysing the different news dissemination patterns of digital media versus social media.

²⁸ The mnemonic process of saying “I’ve heard it somewhere before” constitutes a common heuristic for truth construction.

²⁹ A “bot”, short for “robot”, is a computer programme designed to imitate or replace the actions of a human being by performing automated and repetitive tasks with much greater speed and accuracy than a human being.

The former constitutes the digital part of traditional media, in which communication is not conveyed by users but by journalists.

Therefore, digital media represent channels that, although present on the web, perform an intermediary function between news and citizens.

In such contexts, a very important role is performed by journalists, who recognise as the foundation of their profession the search for truth through a balanced, impartial and complete account of events and problems in a delicate balance between independence and responsibility.

The so-called “ethical journalism” refers to the balance between freedom of speech and the protection of the privacy and integrity of people involved. It concerns the way reporters and publishers’ comment on the events that determine people's lives; it is deeply rooted in moral values and has evolved along with the protection of human rights in Europe for more than 150 years³⁰.

In order to restore trust in institutions, it is necessary to create an environment in which blatantly incorrect information is less likely to reach media users and thus limit - or represent in a manner commensurate with its actual social weight - actors and realities that systematically publish evidently false and repeatedly disproved content.

Professional ethics and the scientific training of journalists are important levers on which it seems essential to work.

Disinformation and journalism

The problem is therefore linked to the evolution of the media world, especially the traditional media, which, with their daily activity of representation and thus construction of reality, can favour or counteract the spread of fake news.

All information follows its own media logic: each media “chases” the market and, in order to capture clicks, visits, audience and readers, feeds pathos and sensationalism.

What has just been described represents a normal condition for which neither publishers nor individual journalists can be blamed, and which depends on the gradual transformation of the media's way of communicating to satisfy an internal dynamic within the establishment of the industry of production and distribution of mass cultural goods and services as a source of homogenised content, regardless of specificity.

Over the years, this has led to a move away from information that is attentive to explaining a phenomenon in its complexity, running the risk of reducing articles to mere news sources in which the scandalous and exceptional aspects of individual stories are privileged,

³⁰ San Marino Bioethics Committee, [Disaster Bioethics](#), 2017.

accentuated by the growing tendency to present the news in somewhat spectacular and captivating forms.

While responding to the new needs of an undifferentiated public, composed of sections of the population previously excluded from cultural processes, mass journalism conveys uniform content in which the imaginary world mimics the real one and the real world takes on the colours of the imaginary one.

In 2019, Edgar Morin warned: "The present is constantly invaded by the present, it is invaded by television information that changes every day and makes us forget the one from the day before. The gaze of thought serves to avoid living in a perpetual present in which each instant removes that which precedes it. The re-establishment of the relationship between present, past and future is the work of reflection and is an eminently philosophical work"³¹.

This characteristic of today's journalism makes it difficult to fully process and objectively evaluate a message in which reality is confused with imaginary dimensions. There is also an attitude of widespread deresponsibilisation, linked to the inability to distinguish the playful dimension from the real one in a society in which mass culture advocates unattainable and therefore only imaginary goals, while, precisely through the category of the imaginary, it tends to make people believe that it is possible to realise all unfulfilled desires.

What emerges from all this is a picture of a narcissistic and individualistic world. According to Beck, it is vulnerable precisely because it is focused on a continuous present and incapable of paying attention to "everyone's responsibility for everyone's survival".

Citizens need access to complete and accurate information in order to make free and informed decisions but, in information landscapes crowded with improper messages, they find it increasingly difficult to discern truth from falsehoods and to make important decisions based on accurate news.

After all, faced with phenomena such as the modification of forms and instruments of communication and the dissemination of news in a world dominated by uncertainty for the future and the subjectivity of opinions with frequent crises of personal identities, it becomes reassuring to belong to an opinion group to which one can become loyal in order to feel reassured by an unambiguous reading of the plethora of news coming from many sources and all understood as equivalent and potentially falsifiable.

Moreover, by taking up the theories of the French philosopher René Girard, many have assumed that the fake news phenomenon may also depend on the mimetic attitude evidenced over the centuries, whereby all human actions are determined by the desire to

³¹ Morin E, *Interview of Multimedia Encyclopaedia of the Philosophical Sciences*, January 2019.

emulate and imitate (“mimetic desire”) those who appear happy, in the hope of achieving the same degree of happiness³².

However, by mimicking the other, man often turns his model into a rival and begins to feel envy and hatred for him, so that personal and social relationships turn into a web of mostly unresolvable micro-conflicts that, in turn, result in a generalised conflict (of all against all).

³² Girard R, *Mensonge romantique et vérité romanesque* (1961), Italian translation *Struttura e personaggi nel romanzo moderno*, subsequently *Menzogna romantica e verità romanzesca*, Italian translation by Leonardo Verdi-Vighetti, preface by Marco Dotti, with an essay by Luca Doninelli, Bompiani, Milan 2021 [ISBN 8830103055](#). See also Girard R. *Anoressia e desiderio mimetico*. Turin, Lindau, 2009.

INTERNET AND ARTIFICIAL INTELLIGENCE

The web, which at first seemed to be a factor in the growth of democracy, has appeared in the last decade as an arena in which, alongside ordinary citizens and businesses, criminal organisations (terrorism and mafia), bearers of economic³³ and commercial interests of various kinds, operate (the producers of fake news develop forms of commercial exploitation linked to the group they belong to) and are capable of soliciting conflicting perceptions of insecurity³⁴ and even of clamorous social manipulations, bearing witness to the progressive moral, cultural and political decay of the ruling classes³⁵.

To what has been presented so far, we must add considerations regarding the possibility offered by the most advanced technology to use Artificial Intelligence (AI) which, in turn, can generate fake profiles and content that can be easily interpreted by users as real.

Such phenomena can have a wide appeal within social media, which contribute to reinforcing prejudices and distorted notions due to the “rebound” effect of information within a closed system.

News created on the basis of the profiling characteristics of the user tends to circulate and be assumed as true because, through the use of artificial technology, it is constructed in such a way as to confirm the ideas and beliefs of a specific category of readers and/or “surfers”, with serious damage to the plural and “quality” formation of public opinion in a democratic system³⁶.

Indirect evidence of this is the fact that on 3 April 2023, the Italian Data Protection Authority requested clarifications with a block on data processing from ChatGPT, a US model of open Artificial Intelligence, due to objections related to non-compliance with the European General Data Protection Regulation (GDPR) by showing on 20 March 2023 the conversations and payment details of dozens of users of the platform.

This prompted ChatGPT to self-suspension in Italy and to wait to regularise its position in order to avoid incurring a heavy financial penalty, rather than responding within the prescribed 20 days³⁷.

Moreover, this model, beyond the mere aspect mentioned above, due to its ability to converse with people on the basis of information stored and gradually reproduced by algorithms not fully clarified, is capable of generating false but credible news and thus, even unintentionally, destabilising the social system in the long run.

AI can offer numerous advantages and benefits that can improve our daily lives.

³³ Economic interests manipulate even what appear to be positive factors. See Cabanas E, and Illouz E, *Happycracy. Come la scienza della felicità controlla le nostre vite*. Turin, Codice edizioni, 2019.

³⁴ Deneault A, *Economia dell'odio*. Vicenza, Neri Pozza, 2019.

³⁵ Deneault A, *La mediocrazia*. Vicenza, Neri Pozza, 2017.

³⁶ Bucca R, *Intelligenza artificiale e “fake news”: gli algoritmi sono i “buoni” o i “cattivi”?* 25.1.2022 <https://www.previti.it/intelligenza-artificiale-e-fake-news-gli-algoritmi-sono-i-buoni-o-i-cattivi>

³⁷ https://www.laleggepertutti.it/635542_blocco-di-chat-gpt-cosa-ce-di-vero

With its learning and data analysis capabilities, AI can help improve process efficiency, reduce human error, prevent failures and increase security, and can be used to develop intelligent solutions in many different sectors, from medicine to agriculture, from industrial automation to logistics.

In medicine, AI can be used to analyse large amounts of clinical data and identify patterns or correlations between risk factors, symptoms and diagnoses, helping physicians make more informed and accurate decisions, improving the quality of healthcare.

In industry, it can be used to control and optimise production processes, reducing costs and improving product quality.

Furthermore, AI can be used to improve security, e.g. in the surveillance of large areas or the prevention of traffic accidents.

In the ecological field, AI can be used to analyse data on air quality or deforestation, helping to prevent environmental damage.

However, it is important to be aware of the risks and challenges that AI may pose, such as unemployment or ethics in the use of data, and to work to mitigate these risks.

AI can also be used to create fake content, such as deepfakes, which are increasingly sophisticated and difficult to detect by backing up the databases of major search engines and, in the absence of careful analysis algorithms capable of interfering and blocking improper dissemination, could present the most popular opinions as true to the detriment of the more correct ones.

For instance, AI algorithms could be trained to amplify data and information reflecting prejudice and discrimination, enhancing their dissemination and effectiveness.

Nevertheless, some techniques, including machine learning and natural language recognition, can enable AI to detect content containing false or misleading information, making it possible to use the same tool to identify, monitor and reduce the spread of fake news.

The development and use of operating equipment built on standards considered valid for all can also create problems for user groups such as persons with particular types of disabilities³⁸.

For this reason, tools related to AI mechanisms cannot be considered in absolute positive or negative terms: much depends on how they are used.

Human intervention plays an essential role in identifying clear and linear rules of transparency, which should be the main objective to be pursued in order to ensure the proper functioning of the entire system.

³⁸ At the European Board meeting on 31 March and 1 April 2023 in Stockholm, the European Disability Forum approved a document highlighting the problems that persons with disabilities might face when using AI applications: **Resolution “EU Artificial intelligence Act for the inclusion of persons with disabilities”**. See <https://www.edf-fehp.org/ensuring-artificial-intelligence-systems-respect-disability-rights/>

However, it is clear that the particular characteristics of the Internet create fertile ground for the spread of fake news due to a number of mechanisms that we will try to explain below.

INTRINSIC CHARACTERISTICS OF THE NEW MEDIA

The model of society just outlined cannot disregard the technology associated with the development of the Internet and the web, which has profoundly altered the very organisation of everyday life, transforming the way people live, work and socialise, and the very development of domestic and foreign relations of individual countries.

In two decades, the Internet has been transformed from a network between researchers to something used by billions of people on a daily basis.

According to the McKinsey Global Institute Report, the digital revolution, now complete and fully established in our everyday lives, can be compared to the development and distribution of electricity more than to Gutenberg's invention of printing, in that it has changed the landscape of our cities and has had and continues to have an ever-increasing influence in shaping economies³⁹.

It should be pointed out that the emergence of social media, with the advent of Web 2.0, represents a further revolution in the world of the Internet.

Simplifying and taking this concept to the extreme, we have gone from the possibility of making information available from all over the world and allowing contact between people, sometimes isolated in remote locations even at enormous distances, to the advent of social media, which have made it possible to create “groups”, “companies” and “communities” without being subject to the physical limits of interpersonal contact and based on affinities and commonalities suggested by digital algorithms.

In this context, the CSB considers it necessary to illustrate the characteristic aspects of information technology that can make the problem of fake news an issue of global relevance:

Accessibility

The Internet as such - as well as the social media that exploit its potential - is a tool accessible to all.

The strong acceleration of computerisation has enabled its use by very large sectors of the population that did not have access to this form of communication and sharing before the SARS-CoV-2 pandemic.

Durability over time

A typical characteristic of the Internet is the total indifference to the concept of time.

It is permanent and lives in an absolute present that has no knowledge of a past or a future.

³⁹ McKinsey Global Institute, *Internet matters: The Net's sweeping impact on growth, jobs, and prosperity*, Report May 2011. https://www.mckinsey.com/~media/mckinsey/industries/technology%20media%20and%20telecommunications/high%20tech/our%20insights/Internet%20matters/mgi_Internet_matters_full_report.pdf

If, for example, we want to gather information through a search engine, the answers we get are independent of the time at which they were published⁴⁰, so that on the same page we can find information and news from many years earlier next to information and news from the previous day without any temporal distinction.

This clearly makes the phenomenon of the eternal present that characterises contemporary society particularly acute.

Indeed, removal and rectification are possible, but these actually face several obstacles, can only be applied in certain circumstances, and do not guarantee the total removal of the information and content subject to the request for removal or rectification.

Abandonment of context

Another characteristic of the Internet - and, even more so, of social media - is that communication - sometimes proposed exclusively through videos and animated infographics - is based on information or short excerpts of text, which are completely decontextualised at the time of dissemination and sharing (quotations, fractions of images or shows that do not exceed sixty seconds), inevitably leading to the loss of the overall view of the problem or topic being dealt with.

Indeed, this progressive decontextualisation of content is present not only on the Internet, but also in other forms of communication; for instance, the titles of articles and photographs published, even in newspapers and magazines of wide national circulation, aim more at capturing the attention or emotions of the public rather than respecting the content of the articles.

Difficulties in fully defining the boundaries between public and private

Through the Internet, the boundaries between public and private become blurred and confused, subverting the normal activities of protecting one's privacy.

If in everyday life, what we might call offline life, it is necessary to act in order to communicate something strictly personal, on the Internet the process is exactly the opposite, in that it is necessary to activate blocks, filters and barriers in order to guarantee privacy and respect for personal intimacy.

⁴⁰ This happens if there is no metadata within the page that binds the page to a specific date. This happens very rarely. Meta tags are part of the HTML tags that describe the content of the page to search engines and website visitors. This is basically the information, called metadata, that is not displayed in the front end of the site, but is located in its structure and allows search engines to classify its content. In other words, meta tags are basic elements that appear in the HTML code of a website and tell the search engine what that website is about (<https://www.italiaonline.it/risorse/meta-tag-cosa-sono-e-come-scrivere-l-alfabeto-della-seo-1105>).

Listening/Verisimilitude (despite everything)

Although in recent years there has been a growing sense of detachment, if not mistrust, in the population with regard to the content of the web, widely regarded as unreliable, there has not been a parallel and consistent reduction in the use of platforms.

The penetration rate of information conveyed through the Internet remains very high and the fact that it is frequently repeated beyond any rational approach tends over time to make it credible and reliable.

"Google is particularly difficult to abandon, as it is commonly referred to as a "search giant", but also Facebook and Twitter show unquestionably low abandonment rates"⁴¹.

After the even excessive use of social media and digital content during the lockdown (a phenomenon that had caused a surge in web usage in all rankings), there has been a slight reduction in time spent online in recent months; in any case, the web is now the preferred way to communicate and access information, and more than 95 percent of Internet usage is related to social networks, even though the majority of images and videos in this area are puppies⁴².

Despite the established distrust towards platforms, such a high degree of loyalty demonstrates that they create a substantial dependence and thus maintain a form of power and influence over users. Through constant reiteration, this causes a gradual acceptance of certain messages, regardless of their intrinsic veracity.

This credibility factor is further reinforced by the presence of algorithms within some platforms, which create the so-called "filter bubble", as illustrated below.

Filter bubble

In December 2009, Google started customising search results for all users, thus starting a new era of user orientation.

The filter bubble arises from the customisation of search results on sites that record the history of user behaviour, known as profiling⁴³.

Such sites are able to use information (e.g. location, clicks and previous searches, likes, etc.) to select, out of all the contents, the preferred ones.

⁴¹ William J, Tedeschi P, Marcati A, *Credibilità e Social Media: gli effetti della conoscenza pregressa sul rapporto tra la fonte e il contenuto di un messaggio*, LUISS Department of Business and Management, 2019.

⁴² Digital 2022 Global Overview Report (<https://www.hootsuite.com/it/risorse/digital-trends-q3-update>).

⁴³ For more on the concept of online user profiling, see *Profilazione on line: regole chiare e più tutele per la privacy degli utenti, a cura del Garante per la protezione dei dati personali*. <https://www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/3921331>

As a result, people are excluded from information that contradicts their point of view and thus isolated in their cultural or ideological bubble.

Some examples of this process are Google's personalised search and Facebook's personalised news⁴⁴, or – to an even greater extent - of other social media such as Instagram and TikTok.

For instance, no one knows precisely the principle governing Facebook's algorithm, but everyone knows that the people with whom one communicates most often and who, in 99% of cases, have sufficient affinity with the account holder, take precedence.

The European Union is working to curb the dangers of profiling and the dissemination of harmful information by regulating the digital market as was already the case with the GDPR.

With the *Digital Market Act (DMA)* and the *Digital Service Act (DSA)*, 19 platforms⁴⁵ will have to comply with EU regulations, with fines of up to 6% of annual turnover and a ban on operating in Europe in the event of a repeat offence.

The EU aims at protecting the digital rights of users, especially minors, prevent systemic risks and moderate content.

Platforms will have to introduce reporting systems for illegal content and remove them quickly; it will no longer be permitted to show advertisements based on sensitive data, such as ethnic origin, political opinions and sexual orientation, *de facto* banning profiling.

The EU's philosophy is to place greater responsibility on large companies in terms of preventing and mitigating systemic risks, moderating content and protecting users' rights⁴⁶.

⁴⁴ Maddalena E, *Social media, perché la filter bubble è un problema di algoritmo e di cultura*, Huffingtonpost, 28 April 2016.

⁴⁵ That is, those that reach at least 45 million active online users each month: Alibaba AliExpress, Amazon Store, Apple AppStore, Bing, Booking.com, Facebook, Google Play, Google Maps, Google Search, Google Shopping, Instagram, LinkedIn, Pinterest, Snapchat, TikTok, Twitter, Wikipedia, YouTube and Zalando.

⁴⁶ The EU Regulation 2022/206 on digital services (*Digital Services Act*), together with the *Digital Markets Act*, was approved by the European Parliament on 5 July 2022 and was published on the [Official Journal of the EU of 27 October 2022](#).

PSYCHOLOGICAL MECHANISMS EXPLOITED BY FAKE NEWS: COGNITIVE TRAPS

It is customary to say that “crazy people don't know they're crazy”.

Following the Socratic principle “I know that I do not know”, non-consciousness defines the inability to have knowledge of a state and, at the same time, the knowledge of having certain cognitive gaps offers man the opportunity to fill them.

Indeed, people who know their limits will more easily try to face and overcome them precisely because of this awareness; on the contrary, people who deny their limits will hardly have the chance to question them and improve. The choice depends on the mental strategies used.

Age affects mental plasticity; indeed, considering Pasteur's statement “chance favours the prepared mind”, the majority of the most relevant scientific discoveries and most complex theories have been made and confirmed as valid by young people.

By way of example, Albert Einstein revolutionised physics at the age of 26, James Watson was just a year younger when he contributed to the discovery of the DNA double helix and Steve Jobs founded Apple Computer at the age of 21.

At the end of the development of the nervous system, i.e. from about the age of 20, the mind responds to experiences and opportunities in a more or less creative and productive manner depending on the person's skills and predispositions.

From the age of 30 onwards, learned mental strategies tend to be selected and used with greater structuring and this phenomenon can cause a strong rigidity in behaviour, in an attempt to seek confirmation through cognitive traps.

Cognitive biases

Through unconscious mechanisms, human beings interpret situations subjectively with the ultimate aim of confirming or approving their own behaviour.

When the aforementioned mechanisms are activated, certain automatic thought processes generated by experiences with negative emotional connotations (fear, anxiety, sadness, anger, shame) create agitation and can only be brought back to inner calm if acceptability is restored through the use of cognitive bias.

Cognitive biases related to gambling have been studied more thoroughly so far, but in recent years, with the SARS-CoV-2 pandemic, those related to disinformation and misinformation have been analysed:

- a) “confirmation biases” (only information that confirms one's own thinking is sought);
- b) “Dunning-Kruger effect” (mistake made by incompetent people who tend to overestimate their knowledge on a specific subject);

- c) “positive illusions” (errors related to the fact that people overestimate their abilities and qualities by pretending that they can influence events completely independent of their will and, by boosting their self-confidence in this way, defend themselves against anxiety and depression);
- d) “survival biases” or “drive towards causal knowledge” (a logical error that falls under the more general statistical fallacy of the so-called *selection bias*⁴⁷ whereby, in assessing a situation, people only take into account elements, persons or things that, mostly because they are physically available or visible, have passed a certain selection process and thus come to fallacious conclusions because they have no reliable statistical basis);
- e) “underestimation of probability” (tendency to make decisions based on emotion while completely ignoring statistical probability);
- f) “inaction bias” (fallacious perception that the risk associated with action is higher than that corresponding to non-action);
- g) “illusory correlation” (perception of the existence of a correlation between phenomena despite the absence of evidence for it);
- h) “proportionality bias” (an error, often made by conspiracy theorists, according to which the less verifiable a theory is, the more truthful it is, and only the intervention of large organisations or powerful groups can explain effects of vast proportions).

Following Maslow's pyramid of needs⁴⁸, after satisfying basic physiological and safety needs, we all have to face those related to sense of belonging, esteem and self-fulfilment, which do not always harmonise with correct information.

Being part of a group, socialising, feeling esteemed by those with the same socio-cultural or political background, and becoming a promoter of a thought (whatever that may be) becomes more attractive and intriguing than analysing in depth the *mare magnum* of information, disinformation and misinformation data.

⁴⁷ In 1942, at the request of the US government, a group of scientists from Columbia University in New York launched a series of analyses and studies to support the army's activities. The United States had entered the war a few months earlier, following the surprise attack on the naval base at Pearl Harbor. The work of that group of scientists - the Statistical Research Group (SRG), made up mostly of mathematicians - would serve to improve the statistical quality control of the military industry and to refine strategies and equipment. Among the members of the research group was Abraham Wald, a 40-year-old Hungarian mathematician of Jewish origin, who had fled Austria three years earlier during the Nazi occupation. It was said that Wald, when questioned by the US Navy, was able to identify a logical error - defined survival bias - in a reasoning of the engineers who were studying a way to make allied aircraft less vulnerable. Analysing the bullet holes in the fuselages of the returned aircraft after missions, the military first thought they needed to add protection at the most damaged points. For Wald, the undamaged points were precisely those that had to be protected because they had evidently conditioned the shooting down by the opposing forces of aircraft which, for that reason, had never returned to base. Because of the anecdote just mentioned, Wald - known for his studies on statistics - is now often mentioned in connection with the survival bias, an error that occurs when, in assessing a situation, one focuses only on the people or things that have passed a certain selection process and neglects all other elements due to their very invisibility. This error is at the root of fallacious reasoning frequently found in analyses and discourses relating to the most diverse human disciplines and activities, from finance to the arts, and can lead to extremely misleading conclusions. The flaw that Wald identified in the US Navy's reasoning - according to the most accredited and agreed reconstructions and net of some undoubtedly legendary elements - still represents one of the clearest formulations of the aforementioned bias. (Taken from: <https://www.ilpost.it/2021/04/02/pregiudizio-sopravvivenza/>).

⁴⁸ Maslow, AH, *A theory of human motivation*. Psychological Review, 1943. 50(4), 370–396. <https://doi.org/10.1037/h0054346>

The less strenuous strategy exploits the distorting mechanism of “confirmation biases”, through which one seeks those who follow the same current of thought and, finding immediate confirmation, do not even feel the need to investigate the reasons that have led to certain conclusions; therefore, they fail to realise that these conclusions may simply derive from the unconscious indulging of a creeping feeling of fear (of dying or losing a loved one, in the case of the pandemic, the so-called death taboo) capable of paralysing their rational component.

It is important, in this regard, to emphasise that conspiracy theories are not necessarily false and irrational but respond to fundamental epistemic and psychological needs, including the desire not to depend on others to explain facts that closely affect and change lives.

Thanks to this latter psychological mechanism, one is able to elaborate a credible personal theory capable of making sense of an ever-changing reality⁴⁹ (“Psychological studies tell us that many of our choices, if not all, are influenced by factors extrinsic and inessential to choices, of which we are not aware”⁵⁰).

What confuses the users of information is the ever-increasing presence of people and organisations that, by exploiting the sacred freedom of speech and opinion, attract to themselves, also for commercial purposes, those who, even if they lack the appropriate skills to elaborate on a certain idea or theory, are convinced that they are smarter than others or are more open-minded than those who are against it.

Therefore, the so-called “epistemic bubbles” are established: social contexts characterised by a very limited and selective circulation of information, impervious to the infiltration of divergent points of view⁵¹, strengthened in their convictions by the filter bubbles described above.

The generalised distrust of institutions, combined with a lack of basic culture, makes some people resistant to the “official version” of the facts and predisposed to accept any alternative theory, including conspiracy theories.

In this case, any explanation or clarification proposed by the institutions is not only rejected but even reinforces the idea of conspiracy (“backfire effect”, whereby new information makes erroneous convictions even more rigid, instead of helping to correct them).

Therefore, conspiracy theories respond to the need to manage fear through anger, i.e. to find a culprit and/or an explanation that can negate the fear of the unknown.

⁴⁹ Stammers S, *Confabulation, Explanation, and the Pursuit of Resonant Meaning*, in *Topoi* 39 (2018), pages 177-18733.

⁵⁰ Ichino A, Bortolotti L, *Conspiracy theories, denialisms, and other cognitive distortions: a challenge at the intersection of psychology and philosophy* - 3 Dec 2021 - *Syzetesis Journal*: "At the supermarket we have a tendency to choose items to our right (if we are not left-handed); when we reflect on the quality of our personal relationships, thinking about the practical benefits the relationship has for us, rather than its intrinsic value, negatively influences our assessments of its prospects of durability; when we are in a hurry we are much less willing to help a stranger in need".

⁵¹ Nguyen T, *Echo Chambers and Epistemic Bubbles*, in *Episteme*, 17 (2020), pages 141-161.

The sense and will to control are indispensable elements of mental health⁵² and, as such, do not always cause cognitive biases.

However, they amplify the risk of pushing people into situations of plagiarism and/or channelling them into affiliation with sects that use cognitive biases to ensnare as many people as possible in their web.

However, the CSB has chosen not to deal with the topic of plagiarism and sects here, believing it necessary to devote to it a wider and more thorough examination, which would take the entire document off topic.

⁵² Ichino A, Bortolotti L, *Conspiracy theories...* op.cit.

COMMUNICATION IN TIMES OF CRISIS

Starting from the analysis of the psychological mechanisms underlying vulnerability to fake news that has just been carried out, we must now identify an appropriate “rehabilitation” process for our society, starting from the extensive literature on typical communication strategies in crisis situations; the positive results obtained in this field can help to manage and, in many cases, prevent complex conditions of information disorder.

Disinformation and crisis are on parallel tracks that often feed off each other because fake news proliferates during times of crisis, characterised by the fragility of systems, the urgency of finding adequate answers to emerging problems and feelings of uncertainty or fear.

Indeed, the latter foster a desire to find security, to identify convincing solutions to complexity as quickly as possible and to feel part of an elite ready to fight in a crumbling world.

The people most exposed to the crisis have now changed their attitude in their search for information, shifting from the identification of the most reliable sources, which are particularly difficult to find, to resorting to immediately available information that can reassure them, offering confirmation to egosyntonic considerations⁵³ that, by their very nature, directly acquire the value of “reliability”.

An example of this is the approximately 60 percent increase in fake news circulating on the Internet during the fourth wave of the SARS-CoV-2 pandemic - a phenomenon also present in more or less massive forms during all times of crisis; indeed, a direct proportionality between the increase in contagions and the increase in disinformation has been demonstrated.

⁵³ In psychology, egosyntonic is any behaviour, feeling or idea that is in harmony with the needs and desires of the ego, or consistent with the person's self-image. More precisely, EGOSYNTONIC: “[...] refers to the compatibility of ideas or drives with the ideals of the ego and the person's concept of himself. Hence a welcoming attitude [...], taken from Galimberti U, *Enciclopedia di Psicologia*. Ed. Garzanti (1999).

The concept of crisis

It seems appropriate to briefly deal with the concept of crisis, a term too often used improperly and arbitrarily, sometimes as a synonym for difficulty or emergency.

In the media and in everyday language, the words “emergency” and “crisis” are sometimes used indifferently.

This also happens in journalistic reportage without the author or user realising that the use of the word “crisis” actually presupposes a very different and much more complex and dangerous condition than the one being discussed at that particular moment.

Indeed, the terms “emergency” (sudden difficulty) and “crisis” (event of which there is no system of representation and experience), in addition to not being synonymous, do not refer to situations that are consequential or preparatory to each other or that can be dealt with in the same way when preparing, let alone implementing, corrective action.

By way of extreme simplification, we can say that a crisis situation is characterised by the impossibility of obtaining useful results through the application of the natural if-then problem solving process (according to which, if I behave in a certain way, then I obtain certain results).

The crisis arises as an extraordinary event that bursts into the life of a community with clear external visibility and alters the processes taking place inside and outside the social system, disrupting the latter's regulatory balances and functional mechanisms to such an extent that no existing rule is any longer able to offer an operationally valid solution.

The definition of crisis that seems most appropriate to us is: "the perception of a possible event, unpredictable in time and manner, which generates high levels of uncertainty and threat, the occurrence and visibility of which produce an effect capable of compromising the operational capacity and survival of an organisation"⁵⁴.

⁵⁴ Di Paolo F, *La Comunicazione di Crisi*, in *Manuale di Relazioni istituzionali*, Stefano Scarcella Prandstraller (edited by), McGraw Hill, Milan, 2022.

The term that emerges as dominant from this definition is “perception”, a cognitive process that guides people's behaviour when faced with decisions involving potential risks.

Perception involves the consequences of a certain situation both on a rational and objective level and on an emotional and subjective level; indeed, by virtue of it, people sometimes fear activities that are not dangerous in themselves and feel, instead, reassured by choices that could have dramatic consequences.

Thus, by Thomas Theorem, “if men define situations as real they are real in their consequences”⁵⁵, a group or individuals can make real the social situations they perceive as true by engaging in behaviour appropriate to the latter.

For example, those who perceive the outside temperature as cold, wear heavy clothes regardless of the objective fact.

In this context, based on the awareness of how much the perceived situation conditions and shapes the real one, it is useful to distinguish between crisis management, which is based on reality, and crisis communication management, which takes the perceived situation into account.

Indeed, although immersed in a society totally conditioned by mass perceptions and a series of crises that sometimes exist only in the sphere of the perceived situation, institutions still fail to come to terms with the extent of the new media reality that is produced at the level of “public emotion” and to develop a communication capable of handling a crisis - after having identified its key elements - through a clear, accomplished, comprehensible and convincing message aimed at a shared objective.

This presupposes the ability to immediately recognise the complexity of a situation in order to reduce general uncertainty and the risk of erroneous decisions, to intercept a threat at an early stage and to prevent a manageable emergency from escalating into a systemic crisis.

Indeed, if institutions were not able to immediately grasp the signs of an emerging crisis, they would have little chance of responding adequately from both an organisational and

⁵⁵ Thomas WI, *The Child in America: Behavior Problems and Programs*, Forgotten Books, 2018.

communicational point of view, by consciously and constantly managing a series of information tools, channels and processes to prevent disinformation or misinformation from generating a further cause of crisis within the pre-existing one or triggering a further crisis in itself.

Crisis Communication

Reiterating the statement by Trancu Patrick, one of the leading Italian experts in this field, according to whom “in a crisis situation, communication is not the action of communicating, but it is the communication of the action”⁵⁶, two phenomena must be recalled: on the one hand, crisis communication accompanies the actions undertaken in an attempt to overcome the impasse, and on the other, it must constitute a lever for the involvement of other “stakeholders”, who, in this specific case, are identified with citizens, encouraging a modulation or transformation of their behaviour to achieve a common interest.

To this end, it is essential to implement specific communication strategies and modes of operation useful for reducing the paralysing or destructive effects of a distorted perception in the population.

In crisis communication, it is necessary to diversify interventions, take nothing for granted, show courage and use fundamental terms and principles, such as *listening, trust, fairness, competence, concreteness, authority, timeliness, transparency, cadence, regularity, awareness of the intangibility of danger and attention to detail.*

Each of the aspects just listed is essential to ensure the relationship of trust between those who communicate and those who receive the messages, the recognition of competence on the part of those who are managing this passage, and the ability of institutions to listen, which is the only real quality capable of suddenly transforming the relationship between base and leadership into a (“two-way”) symmetrical one and intercepting and understanding needs, fears and perceptions of danger in order to make the messages more effective and comprehensible.

⁵⁶ Trancu P, Speech at the round table “*Reputazioni sull’Orlo di una Crisi Sociale*”, organised in Rome by FERPI, 9 October 2018, <https://www.youtube.com/watch?v=yXBErIbh>.

The closely related and inseparable terms that are most useful for achieving correct communication in the fight against fake news seem to be *timeliness* and *correctness*.

Indeed, correct but untimely communication does not produce the expected results, as it activates responses only when the damage is already severe, while timely but incorrect communication risks even worsening the situation, providing misleading indications and thus aggravating the risk of triggering a crisis within a crisis.

Moreover, timeliness and correctness require preparation and *competence*, two qualities that can only be acquired over time by making full use of the previously experienced phases of dormancy.

Another important term in the resolution of crises with massive disinformation is *courage*, a quality that is also present in admitting one's mistakes, proclaiming uncertainty, accepting and publicly acknowledging the feeling of fear, with the clear intention of saving lives and reducing physical or moral damage to the affected population.

Courage is also required in declaring that one has failed to timely recognise the signs of a crisis that was in fact unforeseeable and to emphasise from the outset that initial statements and indications can change completely and sometimes be disproved or refuted on the basis of changed contexts and new information acquired day by day on the characteristics and dynamics of the ongoing crisis.

To this end, one can and must rely on the fact that the initial absence of valid data to be used in the decision-making process is one of the essential characteristics of any crisis.

The courage to proclaim the provisional nature of the data and the resulting uncertainty is in itself capable of mitigating anger and reducing the aggressiveness of accusations triggered by denials of previous statements, all the more so if *transparency* is used in the publication of new evidence supporting the need to change certain choices.

Another fundamental element is the *courage* to accept fear: the objective of correct communication is not to flaunt security *a priori* and without any logical basis in the hope of instilling tranquillity, but to demonstrate that fear can be endured and even become a useful tool to achieve a true state of security for all.

Stigmatising or denigrating the feeling of fear makes people more fragile, abandoning them to a feeling of inadequacy; it is therefore essential to always emphasise that fear is a natural response to the need to take shelter from various imminent dangers.

Therefore, paradoxically to reduce its effects and prevent fear from assuming the paralysing character of panic, it is necessary to recognise that uncertainty exists and thus accept that what is happening generates fear.

On the contrary, incorrect crisis communication by experts reduces the ability to provide correct information and control disinformation. The science of communication applied to crisis situations teaches us that scientific and political languages are ineffective and often harmful. This is due to the lack of courage of political decision-makers, combined with the so-called “communication of announcements”, and to the fact that scientific information, by its nature linked to emerging evidence, runs the risk of contradicting itself and what was previously suggested to the institutions, thus unintentionally discrediting the latter to the point of putting them on the same level as any self-referential source and the producers of fake news themselves.

FAKE NEWS IN THE SPECIFIC CASE OF HEALTH

Health issues involve the most emotional part of each of us and, therefore, have always been among those most affected by fake news.

The target audience often consists of people in a particularly emotionally fragile condition because they are affected, directly or indirectly, by a sometimes serious disease with no therapeutic solutions, and are therefore willing to compromise more with the reliability of the information received.⁵⁷

In times or contexts where consistency, credibility and reliability of information on preventive measures, diseases, drugs and therapies are essential for individual decision-making, the dissemination of false or misleading news poses a threat to the health of millions of people worldwide.

The most extreme effect is the abandonment of treatment and, of course, the death of the patient.

From the Bonifacio case, the veterinary surgeon who in the 1960s devised an anti-cancer serum based on goat excrement, to the Di Bella method or the Stamina method, a section of public opinion never ceases to be fascinated by explanations that are not supported by scientifically unequivocal data.

However, when it comes to public health, as in the case of a pandemic or vaccination campaigns where the behaviour of individuals can directly impact the community, the consequences of personal choices can affect the health of all.

The issue is not only scientific but, as will be explained in a specific paragraph below, it intersects with ethics, as fake news in medicine lean on the illusion of finding a solution to every desire and the inability to accept the finitude of life.

Polluted sources prevent the average citizen from forming a valid opinion on complex topics.

Therefore, fake news has a direct impact on the right to health: for a more direct, immediate and potentially damaging effect of the resulting social alarm, information disorder affects and conditions the lives of individuals to varying degrees, with negative repercussions especially when it concerns health issues, and therefore requires the utmost effort to identify and neutralise distorted and mendacious news.

⁵⁷ According to the 15th Censis Report on Communication, *Trust in the media in the age of fake news*, 2018, at the end of 2017 (the year in which fake news was recognised as a worldwide problem), in Italy the use of the web to find information on health stood at 28.4 percent of people interviewed, with an even higher percentage of 36.9 among the very young and with almost nine million Italians having been affected by fake news on this subject during the previous year.

The case of COVID-19 vaccines

Since the beginning of the SARS-CoV-2 pandemic emergency, the World Health Organisation has coined the term “infodemic”, i.e. an abundance of information that makes it difficult to identify reliable sources.

“Hoaxes” and disinformation are very dangerous when they concern health and it is often not easy to distinguish them among millions of news items.

A recent WHO review on infodemic and health disinformation has shown that the rate of health disinformation on social media is 51% of posts associated with vaccines, 28.8% of those associated with Covid-19, and 60% of those related to pandemics⁵⁸; indeed, to classify and refute the most recurrent fake news, the Italian Ministry of Health and the National Institute of Health (ISS) have set up specific sites⁵⁹ where all information is verified by experts on the basis of scientific and regulatory evidence and of national and international documents available at the date of publication.

The term *hesitancy*, or “vaccination hesitation”, refers to a series of attitudes varying from outright refusal to acceptance despite persistent fear and scepticism towards vaccination.

Three factors have been identified as underlying this phenomenon:

- *Confidence*: level of trust in vaccines, those who produce and supply them, and the health authority;
- *Complacency*: underestimation of the importance and efficacy of vaccines or the severity of related diseases and the risk-benefit ratio in relation to the likelihood of falling ill;
- *Convenience*: ease of access to vaccines, which in turn is linked to the price (if paid by the individual), the distribution and opening hours of vaccination centres, and the active offer by call home, letter, message.

News can also quickly lead to rapid changes in the situation: a case in point was the possible link between the anti-COVID vaccine (*Vaxzevria*) produced by AstraZeneca and the University of Oxford and extremely rare cases of cerebral and abdominal thrombosis.

The suspension of the vaccine's administration by several EU countries for a few days divided experts and public opinion, and caused some citizens to lose their already wavering trust in the AstraZeneca vaccine and in the vaccination campaign in general.

In addition to its implications for the relationship among science, policy decisions, risk communication and the media, the AstraZeneca case is particularly important for the fundamental role of pharmacovigilance, the process of assessing vaccine safety whose rigour justifies the trust to be placed in global vaccination campaigns.

⁵⁸ Borges do Nascimento IJ, Pizarro AB, Almeida JM, Azzopardi-Muscat N, Gonçalves MA, Björklund M, Novillo-Ortiz D. *Infodemics and health misinformation: a systematic review of reviews*. Bull World Health Organ. 2022 Sep 1; 100(9):544-561. doi: 10.2471/BLT.21.287654. Epub 2022 Jun 30. PMID: 36062247; PMCID: PMC9421549.

⁵⁹ <https://salute.gov.it/portale/nuovocoronavirus/archivioFakeNewsNuovoCoronavirus.jps>

Indeed, this case testified amply against the uncertainty of vaccine studies and in favour of the intensive and constant process of verification and control of vaccine safety.

Indeed, thanks to the analysis of real time data emerging from reports of adverse reactions (vaccinovigilance), the regulatory authorities, including AIFA and EMA, can verify the safety of vaccines by confirming what has been observed in the registration studies or report variations in the frequency of certain undesirable events, and possibly identify new adverse reactions, even rare (1 in 10,000) or very rare (less than 1 in 10,000), to the point of suggesting restrictions on the use or withdrawing the marketing of certain products⁶⁰.

Fake news, nutrition and diets

Continuous scaremongering in the mass media and on social networks conveys the impression every day that there is no longer a single healthy food on the planet; on the other hand, the web is full of news about miracle foods and diets.

On the contrary, scientific evidence indicates that the existence of miraculous foods, i.e. those with magnificent nutritional properties, is a false myth and that, at the same time, there are no foods to be condemned *per se* as poisonous to humans.

In general, the danger of any product depends on the dose: no food or ingredient can be defined as “toxic” and its possible negative effects on health are commensurate with the extent of consumption and cannot be separated from the analysis of the overall dietary regime and, more generally, the lifestyle⁶¹.

Facilitated by the democratisation of the Internet and social media, the information system has created the nutrition fake news: a real bombardment of fake news about food.

Websites constantly publish news on the food/health pair and social media increase their visibility and sharing, amplifying the effect with data-driven effectiveness.

Nutrition fake news have a greater impact on eating behaviour than news based on scientific evidence; they manage to influence the food choices of large sections of the population and, in some cases, precisely because they are repeatedly reported in the media, they are also reported on reputable websites, thus becoming strongly rooted in society.

⁶⁰ In this regard, it should be pointed out that the supposed carcinogenic effect of the mRNA-based COVID vaccines linked to the use of excipients to form the vesicles designed to carry the antigen in the Pfizer-BioNTech *Comirnaty* vaccine arose from an extrapolation in the absence of context, as the incriminated synthetic lipids ALC-0315 and ALC-0159 could only develop carcinogenic effects when used for research purposes in chloroform and ethanol solutions, two substances that are not part of the final composition of the vaccine. As amply demonstrated through the administration of billions of doses worldwide, this vaccine is extremely safe and effective. Indeed, the final product, as clearly stated in the document containing its composition, although containing ALC-0315 and ALC-0159, successfully passed three clinical trial phases and underwent further checks by EMA before and after distribution, and was found to be free of any trace of carcinogenic substance. The qualification of the above-mentioned supposed carcinogenic effect as fake news was later confirmed by the company producing the excipients (<https://www.echelon-inc.com/>; <https://www.echelon-inc.com/statement-on-alc-lipids/>).

⁶¹ As emphasised by the Italian National Institute of Health, the body responsible for research, control and analysis of many aspects of public health in its previously reported assessments of false myths: <https://www.issalute.it/index.php/falsi-miti>

A classic example is self-administered, restrictive exclusion diets, which, considering the fact that eliminating a food item can only be justified by a precise medical diagnosis and prescription, could cause harm to the point of actual malnutrition.

Similarly, dietary patterns useful to allergic or intolerant individuals are nowadays advertised as miraculous or slimming.

An example of this phenomenon is the recommendation of the gluten-free diet for all, which *de facto* makes no sense as such; indeed, unlike the Mediterranean model, it exposes people to the risk of an inadequate intake of complex carbohydrates.

The events of the last few years involving palm oil⁶² and red meat⁶³ are a good example of how the assessment of the healthiness of a food is complex and must be based on all the various factors involved and not on a single aspect; indeed, it is now clear that, at an individual level, the most reasonable strategy is to vary nutritional sources, avoiding the abuse of certain foods, without denigrating or demonising some of them in the absence of valid scientific reasons and a competent overview.

⁶² <https://www.airc.it/cancro/informazioni-tumori/corretta-informazione>; <https://www.eufic.org/it/>
Risks for human health related to the presence of 3- and 2-monochloropropanediol (MCPD), and their fatty acid esters, and glycidyl fatty acid esters in food. EFSA Journal 2016; 14(5):4426. In 2016, EFSA, the European Food Safety Agency, reported that at temperatures above 200°C, vegetable oils, and in particular palm oil, develop substances (2- and 3- and 2-monochloropropanediol and related fatty acids) that, at high concentrations, are genotoxic, i.e. capable of altering the DNA of cells. EFSA has never called for a ban on palm oil because dangerous concentrations are unlikely to be reached through normal eating. The risk is therefore linked to the frequency and quantity of consumption and affects young age groups in particular, because children prefer foods with a high concentration of palm oil, such as biscuits and various types of baked goods. The problem is therefore not related to the consumption of palm oil *per se*, but to the excess of saturated fat in the overall diet. In conclusion, it is advisable not to abuse foods containing palm oil, but there is no reasonable cause to completely eliminate these substances. However, the market has largely banned the use of palm oil, associating and well highlighting the absence of palm oil in products with higher quality and healthiness; in fact, only a few of these products have actually improved nutritional values in relation to fat content.

⁶³ *Red Meat and Processed Meat*, IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 114, IARC 2018. Struijk EA, Banegas JR, Rodríguez-Artalejo F, Lopez-García E., *Consumption of meat in relation to physical functioning in the Seniors-ENRICA cohort.* BMC Med. 2018 Apr 5; 16(1):50. EU Joint Research Centre. *Health Promotion & Disease Prevention – Food-based Dietary Guidelines in Europe.* Accessed on 7 Feb. 2022. In 2015, IARC, the International Agency for Research on Cancer in Lyon, an agency of the World Health Organisation that evaluates and classifies evidence on the carcinogenicity of substances, defined red meat as probably carcinogenic (class 2A of the IARC classification) and processed red meat (sausages and salami) as definitely carcinogenic (class 1 of the IARC classification). Meat, including red and processed meat, is an important source of protein, associated with optimal physical functioning, greater muscle strength and less age-related frailty; however, it also contains saturated fats and iron in the heme group, which, in excessive doses, can cause an increase in circulating concentrations of cholesterol and insulin and facilitate the development of certain cancers, particularly colorectal cancer, understood in terms of relative risk, which must necessarily be related to the individual's actual risk. No disease is caused solely by the consumption of red meat. The danger of red and processed meat and the risk of cancer depend on the amount and the way it is processed and cooked (grilling or barbecuing). Modest consumption of red meat does not substantially increase the frequency of occurrence of cancerous disease in individuals who are at low risk. People at high individual risk (due to family history or the presence of other diseases) should discuss their diet plan with their doctor, to assess whether and by how much to reduce their intake of red or processed meat, since, as with any specific food or nutrient, its effects on health cannot be isolated from general diet and lifestyle.

Fake news and healthcare litigation

According to Italian data from the Tribunal for Patients' Rights and the Parliamentary Commission of Inquiry into Health Care Errors, there are 300,000 active lawsuits (of which 35,000 new ones every year) against doctors and health care facilities, both private and public.

However, most of these ended in a deadlock, with 66% of civil claims and 95% of criminal claims being rejected.

The high number of litigations, with a trend that has remained constant over the past decades, is not matched by the undoubted improvement in the quality of care that has been achieved in the meantime, thanks to the acquisition of new techniques and technologies in the biomedical field and the widespread recognition of an overall improvement in professional performance.

Without prejudice to the uncontrollable share of negligent and imprudent professional conduct, of organisational and logistical defects that are justly prosecuted, of unjustified requests for compensation of unforeseeable and unavoidable damaging events, it is believed that one of the main factors that contribute to keeping the level of litigation high is the altered relationship between the expectations of the patient/family member and the concrete possibility of health service provision by medicine in the specific case.

In other words, as already mentioned, it is claimed that medical science can treat all diseases and guarantee their cure.

Thanks to the Internet and the proliferation of video/radio broadcasts dealing with medical issues, the user/patient is always better informed and this can only be considered positive.

However, if inappropriate use is made of web resources in relation to the possibilities offered by medical progress, without a proper analysis of the real applicability of the progress achieved to the individual case, disinformation creates unattainable expectations that lead to the claim of safeguarding an imaginary "right to a cure" rather than the right to health⁶⁴.

⁶⁴ In the Republic of San Marino, the right to health is protected as part of the broader right to social security, as provided for in Article 9 of the Declaration of the Citizens' Rights and Fundamental Principles of San Marino Legal System no. 59 of 1974 and subsequent amendments.

LEGAL ASPECTS OF DISINFORMATION

In legal terms, what has just been mentioned justifies a higher level of attention to this matter within international codes of criminal procedure; however, in bioethical terms, false and unverified news impacts on the rights of the individual and prevents the implementation of fundamental principles, by *de facto* referring to the “basic” level at which the scientific issue intersects with the ethical level, which will be discussed in greater detail below.

Indeed, considering that free choices are the subject of the individual's moral action, it is clear that these can only rest on the basis constituted by knowledge, which, if subject to any distortion, pollution or conditioning, would prevent an unconditional exercise of the freedom to choose.

From what has emerged so far, it is clear that, in a crowded and often confusing information landscape, it is imperative that democratic governments, media organisations and civil society groups work together in countering the growing threat of disinformation aimed at spreading mistrust and dividing and damaging societies, by carrying out a more thorough analysis of this phenomenon and taking appropriate measures to prevent the pollution of the entire information ecosystem.

In the light of the above, it seems useful to address the fallout of fake news in the economy, referring to the crime of agiotage or/and “market manipulation”.

Indeed, the latter relate to the “crime” (“misfatto” in San Marino legal system) committed by anyone who disseminates false information or carries out simulated transactions or other artifices concretely capable of causing a significant alteration in instruments that are not listed or being listed (for the crime of agiotage), or “listed or being listed” (for the crime of market manipulation).

What has just been described is completely independent of any willingness to act for economic advantage.

If the dissemination of market-distorting fake news is an economic crime in that it generates damage, it should likewise be understood that fake news can generate damage with sometimes catastrophic consequences also in the health sector.

Obviously, even if the difficulty of assigning responsibilities is more evident in this area, it appears necessary to adhere to the same guiding principle in order to identify appropriate implementing legal formulations.

WAYS OF COUNTERING DISINFORMATION

In a society characterised by increasing backward illiteracy and inability to understand a text, it becomes even more important to work against disinformation.

To better combat this phenomenon, communicators and other government professionals need a thorough understanding of how beliefs⁶⁵, whether false or true, are adopted, supported and abandoned.

In addition to what has been described regarding the “cognitive traps” that most easily expose us to “contagion” from fake news, it seems useful at this point to suggest other more typically social insights on the subject of beliefs.

Beliefs are intensely personal and, in addition to the innate need to discover the truth, may satisfy other needs:

- *community and belonging*: having the same beliefs as one's own community or social group guarantees and preserves a common sense of belonging and shared understanding;
- *relationships with others*: sharing the beliefs of trusted friends or family members allows one to avoid conflict or maintain and cultivate such relationships;
- *explanations for complexity*: believing deeply in something that provides a simple explanation for complex events avoids feelings of helplessness or anxiety;
- *self-esteem*: having certain beliefs (e.g. believing in conspiracies that blame negative events on a particular individual, group or institution) preserves one's own self-esteem or that of a group to which one belongs;
- *justification of behaviour*: having certain beliefs (sceptical about climate change, for example) justifies more complex or economically burdensome behaviour to adopt or avoid;
- *loyalty to the past*: confirming what was said publicly in the past or a commitment made previously avoids embarrassment or the perception of social unworthiness associated with changing one's mind;
- *loyalty to sacred values*: clinging to certain beliefs that are an integral part of one's identity and worldview is essential for self-esteem and a stabilised and stabilising interpretation and understanding of the world⁶⁶.

⁶⁵ “Belief” is defined by the Treccani Encyclopaedia as the attitude of a person to recognise a proposition as true: it is distinguished both from doubt, which suspends judgement, and from certainty, which refers to the objective validity of a notion. In ancient philosophy, the notion of belief is linked to sensitive knowledge and thus falls within the sphere of opinion, which is contrasted with science, i.e. knowledge of eternal truths.

⁶⁶ See British Government Communications Centre - GCS Behavioural Science Team, *The Wall of Beliefs*, September 2022.

Moreover, the power of conviction becomes explosive when it self-multiplies on the web with the contagion of ever-widening human realities.

Debunking or reactive response

To date, one of the most popular measures to counter the spread of fake news is fact-checking, i.e. a process of verification and fact-finding; for this purpose, over the last decade, many sites have appeared with the purpose of so-called *debunking*⁶⁷ and some famous newspapers have built platforms dedicated to verifying statements.

Sometimes it is enough to ask a few questions, do some research, contextualise statements, find their exact spatio-temporal location, such as: Who is the author? Is it a reliable source? What do other sources say on this matter? Is there any real evidence? When was the news published? Where was the information published? Is this platform reliable?

The countermeasure to fake news just described is called “reactive response”: it consists of quickly and directly addressing false stories or disinformation and directly explaining why they are not true.

In order to prevent people from feeling attacked because of what they believe and assaulted by a direct form of communication, thus developing immediate defence mechanisms and closing themselves off from information that might reach them, it is important to use non-judgemental language and tone, i.e. to avoid messages conveying the idea that those who believe in false information might be foolish, naive or gullible.

Therefore, it is necessary to argue counter-disinformation by paying particular attention to exposing the concepts in a clear and easy-to-understand and easy-to-remember manner, including them into broader stories that are consistent with the topic without ever “exaggerating”.

Paradoxically, including a large number of data and supporting reasons or elaborating the thinking too complexly can make the messages less credible.

However, reactive response approaches are only recommended in the presence of a real and immediate risk of harmful behaviour, as they entail the risk of backfiring on those who implement them. This is due to the existence of cognitive biases (heuristics that allow for a lower waste of cognitive energy) that can pollute any search for information or reading of a text⁶⁸, thus helping to amplify and spread false information to an ever wider audience and triggering a rejection reaction from those who, in the debate, feel certainties waver. In some cases, people may actively avoid information that contradicts their beliefs or may silence their doubts or concerns in order not to find themselves in a situation that is referred to as

⁶⁷ To demystify and refute false or anti-scientific news or statements, often the result of beliefs, assumptions, convictions, theories received and passed on uncritically. (https://www.treccani.it/vocabolario/debunking_%28Neologismi%29/).

⁶⁸ See the chapter on cognitive biases or traps.

cognitive dissonance. In such circumstances, the mere presentation of true information is unlikely to successfully overturn false beliefs. Challenging it publicly - especially on large channels of mass communication - can unwittingly amplify false information, spreading it to a wider audience and, in this way, making it familiar to most by increasing its supposed credibility; moreover, directly addressing the myths can also lead many to imagine that both positions are characterised by the same level of analysis and complexity and are therefore legitimate, fostering the false perception of a real controversy. In addition, the discomfort resulting from the cognitive dissonance associated with questioning one's own worldview can lead to an unstoppable rebellion against debunkers interpreted solely as enemies to fight against⁶⁹.

A new ethical consideration thus arises: even supposing that it is possible to create a perfect classification system capable of labelling news as “true” or “false”, the problem remains unresolved as to which authority - the government, a private company managing the social network service, or the user - can be delegated to control this filtering of information⁷⁰.

The best solution to curb the possible negative consequences of a reactive response strategy could be to allow citizens to autonomously activate fact-checking processes.

This would require working intensively on computer literacy, providing a large part of the population with direct access to useful tools to better understand and safely navigate the online environment, independently assess the goodness and reliability of information, and use their critical thinking by activating a series of useful tricks in processing and contextualising news⁷¹.

In fact, a very broad computer literacy would ensure widespread awareness of the existence of a few simple steps that would enable everyone to detect incorrect information, to the benefit of the segment of the population that, to date, is least trained to surf the net safely, composed mainly of adults who are less computer literate⁷².

⁶⁹ Those involved in a head-on conflict through debunking may also be the subject of the network activity called “shitstorming” (whereby a rather large number of people express their disagreement with another person or group, organisation or company). The specific feature of this phenomenon is the ferocity with which criticism is expressed and the vulgarity of users' comments), resulting in the alteration of the entire perception of the topic.

⁷⁰ Ruffo G, Tambuscio M, *Capire la diffusione della disinformazione e come contrastarla*, in *federalismi.it*, no. 11/2020. <https://iris.unito.it/retrieve/handle/2318/1737723/608063/23042020224425.pdf>

⁷¹ There are simple image search tools that can reveal manipulations, tricks, decontextualisations of some photographs that are often taken to support certain positions. One can take as an example the photograph that appeared during the winter of 2019 depicting a snow-covered tent city claiming that it was an image of a camp near Amatrice still in that condition three years after the earthquake. This is a dramatic situation in which the shot is used via social media to denounce the blindness of those who would like to welcome migrants when instead the earthquake victims of Amatrice are under two metres of snow. This is an effective, dramatic and strong photo. This picture is worth a thousand words. However, a web search reveals that this photo is not from Amatrice. This picture is taken in Lebanon to denounce the situation in which Syrian refugees live (those fleeing their country at war and sometimes landing on Italian shores). It is the refugee camp of Aرسال, north of the country, plagued by a snowstorm. (https://www.repubblica.it/cronaca/2019/01/12/news/quella_foto_fake_di_amatrice_sotto_la_neve_che_in_realta_e_il_libano-216359315/) Therefore, knowledge of some simple image search tools may be sufficient to reveal a distorted story.

⁷² Guess A, Nagler J, Tucker J, *Less than you think: Prevalence and predictors of fake news dissemination on Facebook*, *Science Advances*, 9 Jan 2019, Vol 5, Issue 1. According to this study conducted at Princeton University and New York University (USA), people over the age of 65 tend to share up to 7 times more fake news than younger people, contributing to the spread of incorrect information often published for political and propaganda purposes. Researchers merely presented the data, while they did not

Facilitation of socially valid behaviour

Countering highly ingrained beliefs that cause harmful behaviour also implies the choice to directly challenge them with effective communication, aimed at encouraging change, to mitigate the effects of the most deleterious actions without addressing underlying beliefs, the countering of which would require a complex and overly lengthy communication strategy.

In the course of time, such a choice could also contribute to changing personal perceptions and beliefs; indeed, according to the theory of self-perception⁷³, actions influence our image, and the latter can in turn modify our behaviour to the extent that it can influence previous beliefs.

Such behaviour management can be implemented by aiming at:

- *making the desired behaviour as easy as possible and thus making harmful behaviour more difficult*: making the desired behaviour attractive or rewarding can increase the likelihood that people will adapt to it anyway;
- *avoiding linking desired behaviour to beliefs, values or specific worldviews*: this reduces the likelihood of people experiencing psychological reactance or cognitive dissonance;
- *introducing obstacles to the implementation of harmful behaviour*: introducing and publicising bans, fines, regulations or practical obstacles⁷⁴ can be a strong disincentive for people who are gradually less resistant to change.

provide any particular assessments or conclusions as to why older people tend to believe and spread false news. However, they assume that one cause may be that older people are less familiar with things on the Web, and are therefore more exposed to sites that spread disinformation and publish hoaxes. Younger people, although not always very knowledgeable about where it is best to get information, tend to ask a few more questions when they see a link to an unknown and potentially less reliable site than others.

⁷³ The concept of the self is the subject of numerous studies in the social sciences. The self is what an individual thinks of himself, the image he has of himself in the various social contexts in which he is immersed, an expression of specific viewpoints and perspectives, linked to the cognitive development of the person and the different experiences he faces throughout his life and in relation to others.

⁷⁴ Since 1 September 2012, for example, incandescent bulbs with a wattage between 25 and 40 watts have been banned from sale throughout Europe, giving way to energy-efficient ones, which means that when people need to replace their incandescent bulbs, they can only buy new energy-efficient versions, regardless of their beliefs on climate change.

Proactive promotion

Subsequently, it will be possible to introduce a long-term “proactive promotion” strategy to address deeply rooted beliefs.

Proactive promotion approaches aim at helping people build a new worldview through specifically oriented information, which is sustained over time.

Indeed, proactive promotion responds to a long-term strategy focused on communicating the truth in a convincing manner, using a variety of channels and paying particular attention to presenting information in a way that is easy to understand and memorise, in the total absence of any direct engagement against false myths.

Consistently communicating the “other side of the story” in an accurate and coherent manner contributes to resilience to false information; however, this requires patient and time-consuming work by a staff composed not only of communication experts and that shares a strategy based on developing a story, which contextualises “arid” facts and figures in order to work out together the *reasons, modes of expression and actions* to be implemented.

A proactive promotion strategy requires:

- collecting true information and including it into a compelling and coherent story that cuts across fake news;
- using this story to design an easily memorable and accessible communication campaign through multiple channels and platforms (e.g. articles, blogs, speeches and social media posts), which present and reinforce the true information from different perspectives;
- sharing this material consistently over time to favour public understanding and long-term knowledge.

Watch and wait

When one is faced with new beliefs that, although interesting or “newsworthy”, are not yet particularly rooted among the target audience nor a harbinger of harmful behaviour, the most effective strategy seems to be to watch and wait, i.e. not to take any immediate communication action to dispel a false belief.

Although communicators are instinctively inclined towards action, i.e. the earliest possible correction, they would in such cases risk amplifying disinformation rather than correcting it.

Of course, there are risks associated with such an attitude: the Internet's impermeability to time, for instance, allows even very old news abstracted from its original context to reappear as new in completely different contexts and situations.

Moreover, virality effects are hardly predictable, bringing to the fore, in a very short time, messages that seemed abandoned and out-of-trend.

Therefore, the watch and wait attitude does not correspond to inactivity but, on the contrary, involves actively listening to and monitoring the ways in which fake news propagates and possibly risks triggering harmful behaviour to quickly change strategy.

It is also necessary to identify how to induce the large social network platforms to comply with privacy laws: to reach their audience, fake news often rely on microtargeting, a method that allows them to reach people most susceptible to manipulation by exploiting the deep-seated weaknesses and anxieties, desires, and fears of human beings.

Many topics related to human weaknesses, including, for example, children, health, sex, money, the concept of “different”, are exploited in disinformation campaigns and preferentially conveyed to groups of individuals recognised as fragile through a mechanism that allows social media platforms, in violation of privacy regulations, to collect information without the consent of the person concerned.

THE BIOETHICAL IMPACT OF DISINFORMATION

So far, the CSB has deliberately focused on the technical, psycho-social, health and legal aspects of disinformation with the intention of offering the reader the broadest and most detailed picture possible of the complex phenomenon under consideration, leaving everyone free to delve into the individual aspects in the broader context referred to above.

Moreover, the bioethical issues that affect today's society in all areas of daily life, and which the CSB had primarily addressed, emerge clearly and overwhelmingly from what has been said.

When fake news concerns health, for example, the first to be violated is the **principle of beneficence** and, if the news were to induce erroneous and harmful choices, the **principle of non-maleficence** would be violated, i.e. *primum non nocere* that Hippocrates considered the original source of medical ethics.

However, those who personally consider the latter principles to be obsolete as being linked to the “paternalistic” period in the history of medicine, can assess the harmful consequences of fake news on the basis of the “Enlightenment” principle par excellence that inspires modern culture: the **principle of autonomy**.

Autonomy, as an expression of freedom, is only such if it is based on complete, correct and truthful information, enabling people to make an informed choice, not directed by anyone, but based on personal discernment.

Finally, at the very moment that beneficence/non-maleficence and autonomy are violated, compliance with the **principle of justice** is prevented, giving rise to forms of discrimination and lack of equity in access to resources and care.

Therefore, in the above-mentioned issues concerning vaccines and food choices, as well as everything directly or indirectly related to health, the personal position towards freedom of choice appears fundamentally flawed: **if it is based on distorted information, the choice not to be vaccinated cannot be considered free.**

This consideration pertains to meta-ethical reasoning: indeed, if the content of moral choices presupposes the equivalence of the options to be chosen, logically speaking, when it rests on the lack of truth in the complete absence of any will of freedom or justification, no decision could certainly be called a “choice”.

In the light of the above, taking into account the overriding need to guarantee everyone the possibility of making a choice on the most solid basis of individual freedom, the responsibility of those who can and must intervene by stigmatising, combating and, where possible, eliminating every possible source of misinformation/disinformation appears particularly relevant.

Considering disinformation in its possible extra-medical spheres, the bioethical implications of the improper or, at least, not well-controlled use of the web are manifold.

In the field of autonomy, it becomes extremely complex to untangle the jungle of the Internet without adequate and appropriate cultural and technical tools to be able to assess the reliability of news; however, we should not underestimate even the risks linked to the theft of the digital identities of people who surf unaware of the dangers, which can cause serious damage in human and economic relations.

With regard to **beneficence**, tools and strategies must be improved and strengthened to ensure public scrutiny of the reliability and credibility of disseminated news.

In terms of beneficence and **non-maleficence**, national and international rules and measures should be adopted to protect above all the people least able to defend themselves, but also civil society as a whole, against the exponential development of the pervasiveness and ability of those who operate on the web to pursue illicit interests of any kind.

Preventive control over news and information disseminated by social networks and the Internet should extend well beyond the self-regulation of networks; however, the increasing interventions of the postal police on new criminal actions (for example, solicitation of children or cyber bullying) have highlighted other risks related to the manipulation of communications.

Finally, with regard to the issue of **justice**, fake news is to be condemned as ethically unacceptable, as it creates inequalities among citizens by influencing large sections of the population and undermining their ability to make appropriate personal, social and political decisions.

In its reflection on this extremely complex issue, the CSB considers the application of the multidisciplinary and multicultural method of bioethics to be important, not only for cases requiring knowledge of the world of biology (biomedical research, medicine, veterinary medicine, agronomy, agriculture, psychology, care in its various forms, etc.) but also for those in which the knowledge acquired by mankind through the application of the scientific method must become the common heritage of citizens using the contributions of human and social sciences.

In this context, it should be emphasised that science, in its contemporary sense, does not claim to convey absolute truths, but is aware that its inherent, rapid evolution requires constantly reshaping sharing and consensus.

Bioethical reflections, as a result of the interdisciplinary method that is an integral part thereof, must ensure an adequate analysis of the relevant problem for all possible stakeholders on the basis of the best form of knowledge currently available, which we could therefore call “non-absolute scientific truths”.

In the light of all current knowledge and multi-disciplinary assessments, this will enable policy-makers to more consciously face the burden and responsibility of deciding to implement appropriate strategies.

Democracy requires policy-makers to communicate any choice that is not bound by secrecy in a transparent and comprehensible manner, so that it can be accepted or subjected to judgement, always remaining available to make corrective action where necessary.

On the contrary, the forms of conspiracy related to the dissemination of fake news do not belong to the democratic method, since they are based on apodictic assertions that are not proven by scientific method, let alone the argumentative method of bioethics.

Indeed, with fake news, the paradox implemented by self-styled “agents of good” occurs, namely pronouncing absolute truths that aim at undermining accepted scientific statements subject to the rigorous scientific method of proof and confirmation.

The expression of unsubstantiated opinions often monopolises the discussion, taking away space from possible well-founded and valuable criticism of the official system, which is ill-suited to the tight schedule of television disputes aimed at attracting the audience: in this context, the juxtaposition of official nature and conspiracy often risks trespassing into a kind of “pathology of democratic freedom”.

CONCLUSIONS

The world of disinformation is complex and difficult to identify and combat, because it rests deeply on the psychology of the user to exploit flaws in the latter's defence system.

Today, we find ourselves on the thin line between an inadmissible and therefore unacceptable limitation of freedom of expression by an “authority” delegated to decide what news and beliefs are acceptable, and the need to help our society overcome a moment of endemic fragility, by guaranteeing people a communicative environment that fosters choices based on truthful information.

Everyone has the right to be free from false information, from interference by hostile people and contexts, and from messages that, while often presenting themselves as harmless advice, in reality can do harm to the individual and the community.

The CSB does not intend to limit itself to stigmatising intentional misconducts and blaming unintentional ones, but considers it its duty to direct everyone's attention also to the unintended consequences of the most diverse actions, which can be defined as “guilty innocence”⁷⁵: those to whom bad knowledge is provided are victims and, at the same time, may cause damage to third parties, helping to amplify the effects through “epistemic injustice”⁷⁶.

Such mass phenomena, because of the pervasiveness of their consequences, require shared responses, not only on a moral level, to make citizens aware of the possibility that anyone can suffer or generate harm, but also on a regulatory level, to identify precise attributions of responsibility.

Therefore, the fight against disinformation is and must be a collective effort that involves institutions, communication operators and individual citizens in a virtuous action, capable of promoting authoritative sources, declassifying false or misleading content, and removing content that is illegal or could cause damage to social coexistence.

This applies not only nationally, but also internationally: from now on, especially in consideration of the current very serious crisis that, through Eastern Europe, is at risk of going global, it would be most appropriate for governments to make a concerted effort to avoid the increasingly widespread disinformation targeted at public goods and services, such as health and education, or at UN agencies and other very useful international non-governmental organisations such as the International Red Cross⁷⁷.

⁷⁵ The effective expression “guilty innocence” was used by the Italian Veterinary Bioethics Committee in its 2014 document. This document is available at:

http://www.comitatobioeticoperlaveterinaria.it/index.php?a=pubblicazioni_e_documenti&s=documenti&lang=it

⁷⁶ The expression “epistemic injustice” was introduced by Miranda Fricker as early as 1998, but it became famous only in 2007 thanks to her book *Epistemic Injustice: Power and the Ethics of Knowing* (Oxford, 2007). Miranda Fricker defines cases of epistemic justice as those in which a person has a credibility deficit due to prejudices related to his social identity. Therefore, epistemic injustice undermines an individual's ability to position himself as a producer of knowledge in the discourse.

⁷⁷ A precedent for such behaviour can be found in the 2014 US commitment not to use vaccination programmes as a means of information gathering.

In this context, the capacity for individual discernment and the social cohesion necessary for the development of a widespread awareness of reality appear to be particularly at risk, especially due to the egocentrism that permeates the whole of today's society as a direct consequence of an ever-increasing disinterest in the deepening of thought aimed at the search for absolute truth, as a fundamental element of philosophy.

Indeed, the latter is an expression of a person's ability to train the mind to elaborate associations without haste, paying attention to detail and with respect for time, with the necessary slowness, i.e. to project each one into infinity and, with the latter, into an understanding of the needs and vital motivations of others, from which ethics and, in our specific case, bioethics can originate.

Therefore, the CSB believes that only the strenuous defence of the person's right to know and interpret the world in history and in its conditioning factors can guarantee that he will regain full awareness of the limits of the relativism and egocentrism that have prevailed until now, and best express vital strength, moral vigour and awareness of his own specificity, as the founding elements of a less "liquid" and more socially responsible future.

RECOMMENDATIONS

In the light of the reflections made, and of the complexity and pervasiveness of this topic, the CSB believes it must provide information stakeholders and decision-makers with some elements to take action to curb disinformation and monitor the transformation of communication, suggesting to all those involved:

- to respect deontological principles and pay attention to the potential social impact of information activities, with an encouragement to constantly update the codes on the basis of the evolution of communication phenomena;
- to implement the knowledge of the scientific method in its constant dynamism and of the argumentative mechanism typical of bioethics starting from school education, in order to strengthen the principle of “knowing in order to decide” as a democratic value;
- to adopt non-apodictic approaches in the dissemination of modern scientific research, as a direct consequence of the previous point;
- to support official dissemination through comprehensible ways that exclude media contexts aimed at exclusively attracting the audience rather than at promoting knowledge;
- to recover contextualisation of content, favouring a more holistic and integrated approach in the presentation of information;
- to promote “digital literacy” to enable individuals to understand and effectively navigate the digital world, developing critical skills and awareness in the use of online technologies and content;
- when disseminating technological innovations, to communicate the message in the present tense and in the light of current certain knowledge, avoiding prophecies;
- to correctly use language, avoiding terms mistakenly used as synonyms but which have different meanings (see the indistinct use, during the pandemic and afterwards, of the terms “vaccine”, “serum”, “antidote”) and favouring, when necessary, the repetition of words in the absence of synonyms, rather than the use of terms that may cause confusion;
- to disseminate developments in neuroscience as anthropological knowledge, informing on the existence and effects of cognitive biases;
- to call on public personalities to carry out their media activities with caution if they have little specific knowledge of the topics discussed, especially scientific ones;
- to pay special attention to the needs of different population groups in relation to different skills in the use of new technologies;
- through joint actions involving cultural institutions and social partners, to raise awareness of fake news and, in particular, of its often damaging consequences in material terms and in terms of impact on the fundamental choices of individuals and society.

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