

The ethical, legal, and social implications of digital healthcare services in the COVID-19 pandemic

Le implicazioni etiche, legali e sociali dei servizi sanitari digitali nella pandemia di COVID-19

CARLO BOTRUGNO
carlo.botrugno@unifi.it

AFFILIAZIONE
Dipartimento di scienze giuridiche, Università degli Studi di Firenze

SOMMARIO

Dall'inizio della pandemia, i governi nazionali e le autorità sanitarie hanno adottato pesanti restrizioni per rispondere all'emergenza sanitaria COVID-19. Di conseguenza, i diritti fondamentali e le libertà individuali sono stati notevolmente limitati. Parallelamente, sono stati fatti molteplici tentativi per spostare le nostre vite verso una "transizione digitale". In tale contesto, le tecnologie dell'informazione e della comunicazione hanno assunto un ruolo fondamentale nel ridisegnare quantità, qualità e significato delle nostre relazioni sociali e professionali. Questo articolo analizza le questioni etiche, legali e sociali più rilevanti poste dall'uso di queste tecnologie per la gestione della pandemia di COVID-19 raggruppandole in tre gruppi: (i) i tentativi di digitalizzare l'erogazione dell'assistenza sanitaria, (ii) il peso del divario digitale nell'assicurare un accesso equo all'assistenza sanitaria, e (iii) e la logica emergente di assistenza sanitaria e controllo, giuridicamente e socialmente legittimata da motivi di tutela della salute pubblica.

PAROLE CHIAVE

Salute digitale

Diseguaglianze digitali

Rischio di sorveglianza

COVID-19

ABSTRACT

Since the beginning of the pandemic, national governments and health authorities have adopted heavy restrictions in order to respond to the COVID-19 health emergency. As a consequence, fundamental rights and individual freedoms were significantly constrained. In parallel, multiple attempts were made to shift our lives towards a 'digital transition'. In such a context, information and communication technologies undertook a fundamental role in reshaping quantity, quality, and meaningfulness of our social and professional relationships. This paper analyses the most relevant ethical, legal and social issues posed by the use of these technologies for managing COVID-19 pandemic by clustering them into three groups: (i) the attempts to digitalise health-care delivery, (ii) the weight of digital divides in ensuring equitable access to healthcare, and (iii) and the (e)merging logic of healthcare and control, which is legally and socially legitimised on the grounds of public health protection.

KEYWORDS

Digital health

Digital inequalities

Surveillance risk

COVID-19

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1. INTRODUCTION

The COVID-19 outbreak has disrupted the lives of millions of people all over the world. To deal with the impact of the pandemic, governments have adopted heavy restrictions such as social distancing, quarantine, and temporary closing of all "non-essential" economic activities (i.e. so-called lockdown measures), which significantly limited fundamental rights and individual freedoms. These restrictions were coupled with the multiple attempts to foster a "digital transition" of our professional and social relationships, including healthcare delivery.

Digital healthcare services (DHSs) assumed a pivotal role during the pandemic, as they ensured healthcare continuity beyond the obstacles created by the health emergency and its management. On the one hand, the use of DHSs has been fundamental in protecting both healthcare professionals and patients from further risk of infection. On the other hand, it supported local authorities in monitoring compliance with the restrictions through a wide array of connected devices and sensors (e.g., biometric bracelets, robots, and drones to check social distancing, as well as contact tracing apps)¹.

The implementation of these technologies raised a number of ethical, legal, and social issues (ELSI), the discussion of which has recently involved a larger part of society than in the past, when interest was mostly restricted to academic and expert debates. Scaling-up the implementation of DHSs contributed to increasing awareness on the (ethical) ambivalence of new technologies². This includes elements such as their potential to overcome distance barriers but also their risk of endangering the fundamental values, principles, and rights that are intrinsic to modern democracies.

In this paper I analyse the most relevant ELSI posed by the use of DHSs to deal with the COVID-19 emergency by grouping them into three clusters: the attempts to foster the digitalisation of healthcare (Section 2), the burden of inequalities in ensuring fair access to (digital) healthcare (Section 3), and the merging of a "control" rationale into healthcare delivery, which was legally and socially legitimised on the grounds of public health protection (Section 4).

2. ENHANCING THE DIGITALISATION OF HEALTHCARE SYSTEMS

Since WHO declared the pandemic on 12th March 2020, national governments have implemented multiple strategies and attempts aimed at replacing in-person healthcare delivery with DHSs. These include telemedicine, telemonitoring, online educational tools, apps, and chatbots. Enhancing their spread and accessibility was deemed to be a fundamental vector to tackle the significant hindrances created by the above-mentioned restrictive measures. As in previous viral emergencies³, DHSs supported healthcare organisation in multiple ways. These include activities such as "digital triage"⁴, i.e. sorting patients with COVID-19 symptoms to prevent unnecessary access to emergency departments. DHSs have also allowed the remote monitoring of patients in intensive care units⁵, and have allowed quarantined professionals to continue working from home, thus diminishing their colleagues' workload. DHSs were also important in helping people affected by psychological distress (e.g., panic, anxiety, and depression), induced by prolonged isolation, loneliness, and the socio-economic impact of pandemic⁶. Not least, DHSs have allowed the continuation of clinical trials, paving the way for the deployment of "digital clinical trials"⁷.

In light of this, it is possible to argue that those countries that were at the forefront of DHS implementation before the virus outbreak have been able to maximise its use and thus its benefits⁸. Conversely, other countries were forced to adopt emergency strategies in the attempt to digitalise healthcare delivery. For instance, in the UK, the National Health Service Digital (NHSD) provided online tools to help the population contain viral transmission⁹. However, the NHSD did not provide a teleconsultation service despite the high demand reported among the population⁹. Such a demand was therefore satisfied by commercial companies¹⁰, which means that access to teleconsultation services was significantly limited to people that could afford them.

In France, the government allowed the financial reimbursement of all remote consultations that were performed with COVID-19 patients. This resulted in a notable increase in teleconsultations throughout the country, going from less than 10,000

per week prior to the emergency to approximately 486,000 per week in spring 2020, which was at the peak of the infection¹¹.

In Italy, the government launched a "Fast Call on Telemedicine" in collaboration with the National Institute of Health and the WHO¹², with a twofold purpose: identifying technological solutions and software aimed at implementing a national strategy for providing "emergency telemedicine", and selecting the best solution possible for the adoption of a proximity tracing app. However, the call did not achieve the expected results, particularly for what concerns the deployment of telemedicine. Most of the efforts at a political level shifted towards the adoption of a contact-tracing app, in accordance with the provisions released by the European Data Protection Board (see hereafter). Therefore, except for a limited number of public hospitals that were already able to provide telemonitoring and teleconsultation services, the offer of DHSs mostly rested upon the initiative of for-profit companies¹³. However, in December 2020, the Ministry of Health allowed the recognition of digital healthcare services into the NHS. DHSs were considered equivalent to the conventional services from both an economic and a legal point of view, with the purpose of fostering their accessibility by the population.

In the U.S., the Federal Administration lessened the restrictions established to inter-state telemedicine services, aiming to maximise its use in daily practice. In particular, the Centers for Medicare and Medicaid Services were allowed to provide reimbursement of telemedicine services enjoyed by Medicare patients¹⁴. Moreover, the Health Insurance Portability and Accountability Act was temporarily waived in order to promote the use of freely available (commercial) video-communication tools such as Skype®, Apple FaceTime®, Facebook Messenger®, and Google Hangouts®¹⁵.

The efforts to enhance the spread of DHSs were not always successful¹⁶. In some cases, emergency actions proved unsuccessful due to inadequacy or lack of national policies for the reimbursement of DHSs, unwillingness of healthcare professionals to shift to virtual means, and other reported obstacles in the attempt to reshape conventional healthcare to digital care¹⁷. This increased the available knowledge about the im-

portance of adequate regulatory frameworks that help healthcare institutions, professionals, and patients to overcome intrinsic obstacles associated with the use of DHSs¹⁸.

2.1 DIGITAL HEALTHCARE AND THE DEHUMANISATION RISK

From an ethical perspective, it must be stressed that the implementation of DHSs into pre-existing settings cannot lead to a complete replacement of in-person healthcare and cannot be intended as a means to cut costs, as this could lead to a lowering of quality standards in healthcare delivery¹⁹. A number of scholars have warned us about the risk that healthcare digitalisation could detract features of humanity from medical practice – e.g. a loss of intimacy, immediacy, and physical proximity. These, at least on paper, normally inspire a good-quality doctor-patient relationship, thus their loss would lead to a further wave of dehumanisation²⁰. Leveraging a personalist perspective, van Wynsberghe and Gastmans²¹ emphasised that humans stand "in an open relation with reality", which entails that good care cannot be detached from the preservation of human dignity. As they argue, humans are "sensible beings, able to perceive their world according to touch, smell, sound, vision and speech. The loss of one or more of these capabilities leaves us in a vulnerable state and threatens to diminish our trust of the situation"²².

Conversely, other scholars²³ emphasised that DHSs could enhance doctor-patient relationships by establishing a kind of "social presence". This has been described as "the actions, understanding and confirmation that appear to result from being there, that is, being present and having available a number of modalities and clues that influence communication"²⁴. Such a presence could be also intended as the "degree of salience" through which each participant perceives the other during the virtual interaction²⁵. Some scholars therefore reject the idea that DHSs would dehumanise healthcare. By contrast, they argue that the digital environment can help patients mitigate the sense of discomfort often associated with typical in-presence consultations, particularly in the field of mental health²⁶.

However, a huge body of evidence and public orientations converge on

the fact that the use of DHSs must be conceived as an integration with conventional healthcare delivery. Just consider the Statement on the Ethics of Telemedicine adopted by the World Medical Association (WMA). On the one hand, the Statement warns that the patient-physician relationship "should be based on a personal examination and sufficient knowledge of the patient's medical history" and therefore "telemedicine should be employed primarily in situations in which a physician cannot be physically present within a safe and acceptable time period"²⁷. On the other, it acknowledges that telemedicine "could also be used in management of chronic conditions or follow-up after initial treatment where it has been proven to be safe and effective"²⁸. Therefore, despite the fact that in-person practice still remains the "gold standard" of healthcare, the WMA suggests an integration of DHSs with in-presence consultations. This is also consistent with evidence from empirical studies on DHSs where patients have shown to benefit from such an integration: "[t]his study demonstrates high levels of satisfaction for Virtual-care and Traditional-care patients, with significantly higher overall and domain patients monitored with a mix of videoconference and in-clinic visits"²⁹. From such a perspective, the digital means is not intended to replace conventional healthcare, but rather integrate it to allow "a more efficient use of human resources and achieve more time actively exercising"³⁰.

Even in an emergency such as the COVID-19 pandemic, it has been highlighted that DHSs should be "part of a wider strategy of remote care for covid-19 that includes automated triage, isolation of potentially contagious patients within care facilities, and electronic monitoring in intensive care units monitoring"³¹.

3. LOOKING AT THE INTERPLAY BETWEEN DIGITAL HEALTH(CARE) AND INEQUALITIES

It has been widely acknowledged that the availability of formal and informal resources is key to managing and reacting to negative events, as well as preventing adverse outcomes³². This also holds true in the health field, and particularly in a pandemic context, where an individual's capacity to control the factors related to infection exposure and to adopt mitigation strategies can be fundamental for staying healthy.

Throughout the health emergency, the protection of the most vulnerable populations represented one of the main challenges for national governments to tackle. Inmates and detainees, undocumented migrants and refugees, homeless people, people with disabilities, and the elderly housed in residences were exposed to higher physical and psychological harm than any other population. This was due to the significant – and in some cases, extreme – compression of their autonomy levels. In some cases, this made it difficult to even follow basic norms against infection risk, such as social distancing, sanitising hands frequently, and using personal protective equipment³³.

Not only was the protection of some of these population groups from infection unfeasible under many circumstances, but providing them due assistance in case of infection also proved to be complicated³⁴. The severe pressure faced by many healthcare systems led to a reduction in hospital admissions except for patients that reported acute symptoms. Moreover, access to emergency departments and primary care services were restricted overall, to prevent them from becoming "infection hubs"³⁵. In parallel, as already mentioned, multiple strategies were implemented to digitalise healthcare access and delivery, in order to prevent any non-essential physical contact between patients and healthcare professionals.

During the emergency, DHS availability turned into a vector for increasing inequality. DHSs widened the gap between those that already had good access to healthcare and had the opportunity to unfold formal and informal resources, and those who already suffered the burden of health(care) inequalities and digital divides. Evidence shows that, even today, material access to internet resources and availability of related technologies are unevenly distributed among the general population, thus representing the "primary digital divide"³⁶. Even before the virus outbreak, we were aware that the benefits of DHSs were limited to some population groups, i.e. those who can rely on a range of abilities such as "awareness, attention, ambition and self-discipline"³⁷, which are deemed fundamental in order to use DHSs for better health outcomes. We were also aware that "[t]hese capabilities are "by-products" of formal education; they describe cognitive and behavioural habits

learnt and adapted from peers in particular social contexts from an early age³⁸. In light of this, it is possible to argue that the successful use of DHSs is determined by individual skills, namely levels of health and digital literacy. This led some scholars to talk about "knowledge" (i.e., a group of knowledge-related abilities) in terms of a "secondary digital divide"³⁹, which makes DHSs particularly attractive for well-educated and resourceful people but not effective for others⁴⁰.

Undoubtedly, the pandemic provided a further definition to the interplay between social and health inequalities and digital divides. Socially and economically disadvantaged people were (and still are) among those "more at risk of suffering from chronic health conditions and faces barriers to access health systems"⁴¹. Given the current trend towards digitalising healthcare delivery, the "unequal distribution of vulnerability" and inequalities are likewise expected to increase⁴². Some scholars have emphasised the link between digital inequalities and infection exposure risk, showing significant differences in individuals' exposure risk profile (CERP), a notion that depends on "preexisting forms of social differentiation such as socioeconomic status, as individuals with more economic resources at their disposal can better insulate themselves from exposure risk"⁴³. Given that digital inequalities are strictly connected with CERP levels, it becomes clear that people "who can more effectively digitize key parts of their lives enjoy better CERPs than individuals who cannot digitize these life realms"⁴⁴.

Digital inequalities therefore increased individual exposure to COVID-19, making some population groups more vulnerable to both the infection as well as to the social, psychological, and economic impact of the health emergency⁴⁵. The prolonged interdiction of social contact, coupled with quarantine and lockdown restrictions, turned the internet into a crucial source of information, particularly with regard to "the latest national and international developments, and guidelines on behavioral norms during the crisis"⁴⁶. Access to internet resources was therefore fundamental for knowledgeability of relevant information and guidelines for the general population. As has been emphasised, if people "understand the need and rationale behind government-enforced measures, they are more motivated to

comply and even adopt measures voluntarily"⁴⁷. Besides the spread of information, digital tools also enable people "to share news and experiences with people they cannot meet face-to-face, remain in contact with friends and family, seek support, and ask questions of official agencies, including health agencies"⁴⁸.

As highlighted before, DHSs were also pivotal for ensuring psychological support to patients with mental health problems as well as to any other people who suffered the impact of the pandemic. Given the difficulties experienced by most of the healthcare systems to ensure continuity of care during the pandemic, digital divides turned into an additional cause of psychological suffering⁴⁹.

From a different standpoint, evidence shows that the intersection of digital inequalities and the pandemic generated an epidemiological distribution informed by "race"⁵⁰. It has been argued that blacks and Latinos "have been disproportionately affected by the coronavirus in a widespread manner that spans the country, throughout hundreds of counties in urban, suburban and rural areas, and across all age groups"⁵¹. Considering that the epidemiological distribution of COVID-19 is unrelated to genetic factors, it must be framed in the body of knowledge of social determinants of health and health inequalities, which takes to acknowledge that:

"it is already clear that low-socioeconomic status (SES) populations are becoming infected and dying at much higher rates than their privileged counterparts. Due to longstanding social inequalities, their risks are higher, and their communities are suffering disproportionate losses in terms of infection, death, and economic devastation due to the pandemic. Low-SES groups are also much more likely to labor in high-contact, public-facing jobs such as supermarkets; provide essential transportation services; and do essential work in congregate workplaces such as food-processing facilities"⁵².

In virtue of this, digital exclusion must be considered as an emerging form of social exclusion, as it contributes to worsening social and material deprivation. Such exclusion has a severe impact on other health determinants such as "education, work, and social networks", which, in turn, affect the possibility of ha-

ving access and using digital technologies and services, therefore feeding a "digital vicious cycle"⁵³. This mechanism adds to the available evidence showing that discrimination, racism, structural violence, and stigmatisation forces some groups into a condition of social marginalisation leading to healthcare deprivation⁵⁴.

4. REDEFINING INDIVIDUAL RESPONSIBILITY?

As mentioned above, the pandemic fostered the adoption of severe restrictions to curb the virus outbreak, which were paralleled by attempts to promote the use of a wide array of DHSs by the population. In some contexts, digital tools were also conceived and used to verify the population compliance with imposed restrictions such as quarantine and self-isolation. The pervasiveness of these tools led scholars to raise concerns about the interference of public authorities in the private sphere of their citizens, particularly concerning the enjoyment of fundamental rights and freedoms. The biggest threat was certainly related to privacy and data protection, given the huge amounts of personal information collected by these tools on behalf of collective health. This has generated a wide debate on the features, purpose, and legitimacy of this kind of "control", which for some assumed the contours of a surveillance system⁵⁵.

As for the European Union (EU), the General Data Protection Regulation (GDPR) has prevented the pandemic from being used to manipulate users' fundamental rights and has contributed to keeping a high standard of privacy and data protection. The GDPR indeed establishes that data processing must follow some fundamental principles, i.e. lawfulness, correctness, transparency, limitation of purpose, and minimisation (GDPR: art. 6). It states that personal data cannot be collected without the data-subject's consent, except in a number of circumstances (listed in art. 9). It must be acknowledged, however, that these exceptions allow authorities to collect personal information on their citizens in a wide number of situations, including public health threats such as a viral outbreak. Furthermore, the data subject's consent is not required when data processing is needed for

protecting against serious cross-border threats to health or ensuring high standards of quality and safety of health care and of medicinal products or medical devices, on the basis of Union or Member State law which provides for suitable and specific measures to safeguard the rights and freedoms of the data subject, in particular professional secrecy (GDPR: art. 9, *sub i*)".

Globally, the core of the privacy and data protection debate related to the use of "proximity tracing apps". Sometimes also known as "contact tracing apps", their main aim was to create an alert once the app user came in contact with (or came close to) another infected user. However, in most cases, the alerts generated were also forwarded to and processed by public health departments. The degree of privacy intrusion of these apps was highly variable and mostly depended on their technical features. The European Data Protection Board (EDPB) followed the development of these apps in the EU and issued guidance documents to support policymakers and privacy authorities in complying with the EU rules, including the European Charter for Fundamental Rights. In one of these guidance documents, the EDPB highlighted that the introduction of these services could be legitimate only when it was deemed to represent a "necessary, appropriate, and proportionate" measure for a democratic society⁵⁶. It highlighted that their introduction and functioning should respect the provisions of the Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms, and should be subject to the judicial control of the European Court of Justice and the European Court of Human Rights. Not least, the EDPB stated that these tools should not be used beyond the duration of the health emergency that justified their introduction⁵⁷.

From a technical standpoint, the EDPB emphasised that these proximity tracing apps should be developed "in an accountable way, documenting with a data protection impact assessment all the implemented privacy by design and privacy by default mechanisms, and the source code should be made publicly available for the widest possible scrutiny by the scientific community"⁵⁸.

"reasons of public interest in the area of public health, such as pro-

Among the aspects that triggered further discussion was whether

or not the use of proximity tracing apps should have been imposed on the general population by law. In this regard, the EDPB clearly stated that the voluntary adoption of these tools was the most compatible with EU legislation and principles⁵⁹. The EDPB stigmatised location tracking of individual users, given that the purpose of the contact tracing services was not

"to follow the movements of individuals or to enforce prescriptions. The main function of such apps is to discover events (contacts with positive persons), which are only likely and for the majority of users may not even happen, especially in the de-escalation phase. Collecting an individual's movements in the context of contact tracing apps would violate the principle of data minimisation. In addition, doing so would create major security and privacy risks"⁶⁰.

Besides the technical problems and delays encountered during the implementation of contact tracing apps, they also ended up being part of a multiple-source data collection system regarding COVID-19 patients. The creation of these data pools was supposed to help health authorities adopt data-driven policies for tackling the virus outbreak, so in most cases they were processed by public health departments. However, both in the EU and the US, access to these repositories was also granted to other subjects, including police officers, which was meant to enable them to check the population's compliance with imposed restrictions⁶¹. Therefore, a huge amount of personal information collected for health purposes was further used for crime repression purposes. Still today, there are other circumstances in which health data can be re-used to pursue police purposes. Consider the imposition of HIV tests on migrants and refugees as a condition for entering destination countries, which is a practice banned by international conventions⁶² and highly condemned by the United Nations⁶³, but still practiced in several areas in the world⁶⁴.

Another example is currently represented by the "scoring system" or the "health credit", mechanisms that allow healthcare insurance companies to reward "model patients" on the basis of attitudes, behaviours, and choices adopted in the health(care) domain⁶⁵. This is supposed to discourage all individual choices that are deemed "deviant" to the

idea of a good patient. However, behind this there is a stigmatisation of behaviours that are considered to go against the interests of the insurance companies themselves⁶⁶. Likewise, a combination of personal and non-personal data can be used to predict the risk that insurance companies' potential customers could get sick in the future.

Considering the amount of health data re-usage during the pandemic, as well as the ease with which it was carried out, it is possible to argue that this represents something unprecedented in the history of our constitutional democracies. Although such re-usage was deemed "necessary" to implement effective strategies to fight COVID-19, it nevertheless represents a dangerous "precedent", particularly in light of the current digitalisation processes – not only in healthcare and the pervasive datafication of our daily lives through a huge array of digital tools and services. Digital technologies greatly facilitate the proliferation of logics that combine healthcare and control, given their voracity in collecting and processing data, and their intrinsic capacity to convert any input into new output, i.e. new data.

To some extent, these (e)merging logics of healthcare and control evoke a sort of "infra-penalty" perspective in healthcare which draws on Michel Foucault's *Discipline and Punish*⁶⁷. Their spread can contribute to establishing a governmental frame in which individuals would be ever more scrutinised, rewarded, or penalised based on their attitudes, choices, and behaviours related to health(care). This perspective can be framed into a wider shift of responsibility for health protection from a state activity to an individual (and private) ability and interest. Such a shift can be considered as the application of *homo economicus* to the health(care) domain, which gives rise to the *homo medicus*⁶⁸. This is an individual who is expected to be responsible for their own health by balancing the costs and benefits of their choices. Given that such a re-definition of individual responsibility in health(care) is ever more pursued through the reliance on DHSs, *homo medicus* is reconfigured as *homo medicus digitalis*⁶⁹. Behind the commercial appeal of this figure lies the consolidation of commodification forces in healthcare⁷⁰, which promote an incremental rationale where the higher the frequency and pervasiveness of the control, the

better the health protection. Such a rationale could be highly detrimental for individual wellbeing as well as for fundamental rights and freedoms. In parallel to this, a risk exists that this infra-penalty will not embrace just behaviours and attitudes but will also be extended to statuses such as the circumstance of being sick (as in the case of a positive HIV test, whereas a negative result can be used as a condition for entrance into another country). This would increase discrimination and stigmatisation already suffered by people whose lives are placed at the interplay of law and healthcare, such as undocumented migrants and asylum-seekers.

5. CONCLUSIONS

Although unpredictably, COVID-19 has fostered the digital transition of healthcare systems in industrialised countries. This has increased the need to work on the ELSI posed by the massive spread of DHSs in routine healthcare. Despite the benefits of such a transition, the significant disparities generated by the interplay between digital divides and health inequalities negatively affect the most marginalised and vulnerable population groups. Tackling this side-effect of the digitalisation processes requires putting aside rhetorical views about technological innovation in healthcare, which are often inspired on a sort of determinism that depicts technology users as all-equal, free, autonomous agents, who are equally able to join in on the benefits of DHSs. Critical scholarship in this domain have already shown that technological innovation is not a neutral process, nor can be seen as a "discrete and meaningful" factor⁷¹. In contrast, the functioning of technological devices acquires a significance only in relation to their use, meaning that technology users confer a "situated meaningfulness" to technological artefacts, alongside the context in which they are embedded. Awareness of this enables us to shed light on the mechanisms that allow certain population groups to have access and effectively use digital tools, while at the same time others find these tools to be unusable, and thus acting as a barrier. This is especially true when considering the replacement of conventional healthcare services with DHSs that took place during the pandemic, and in some cases even after the end of the health emergency. Clearly, the digital transition of our healthcare systems risks exacerbating health inequalities rather

than widening service accessibility and fostering the digital inclusion of underserved and marginalised communities.

From a different standpoint, the digitalisation of healthcare also brought out the potential of health data to trace new (virtual) maps of medical knowledge⁷². In a Foucauldian perspective, these maps not only refer to knowledge, but also to power relationships. Their emergence indeed seems to be guided by a "principle of production", i.e. the creation of a new utility or new knowledge that can be used for health and health-related purposes. As argued by Foucault himself, "[w]e must cease once and for all to describe the effects of power in negative terms: it "excludes", it "represses", it "censors", it "abstracts", it "masks", it "conceals"⁷³. As Foucault further explained, power also 'produces' as "it produces reality, it produces domains of objects and rituals of truth. The individual and the knowledge that may be gained of him belong to this production"⁷⁴.

The production process cannot be understood if we disregard its main attribution, i.e. its ethical ambivalence. On the one hand, the huge amount of data generated and processed by DHSs can be used for many useful purposes including data-driven research. On the other hand, data can also be accessed by unauthorised subjects or for unauthorised purposes, or may be stolen or misused, i.e. used for a reason that completely diverges from the reason that justified collection and for which data subjects gave their consent. For the purposes of this work, it must be underscored that health data has an intrinsic economic value. Indeed, access to users' personal information, preferences, or circumstances such as care needs and health conditions – or other health- or illness-related factors – can be used by commercial companies to promote the appeal of their services, regardless of whether they are located in the health(care) domain or not.

It is worth emphasising that the delimitation between lawful re-usage of personal information and its abuse or misuse is very fluid, especially when considering that big tech and medical corporations are already able to access and manage huge data sets. Indeed, such a delimitation seems to be destined to disappear in the meat grinder of digital technologies, particularly in

a post-COVID scenario, where resistance to digitalisation collapsed and public policies have prompted a more favourable context for the huge spread of DHSs. Notions such as "risk exposure" and "emergency prevention" heavily permeated our collective consciousness, thus conferring a sense of legitimacy to mechanisms that perpetrate the overlap between healthcare and control. And nothing prevents the "State" itself from promoting or endorsing this "digital healthism imperative" as something that is in the interest of its citizens. The pandemic showed us several utilitarian attempts at rationing available resources – e.g. hospital beds, ventilators, and vaccines – according to preestablished criteria. We cannot exclude that, in the future, these criteria will also include the logic of deservingness based on the digital scrutiny of any individual attitude, choice, and behaviour deemed relevant on health(care) grounds.

NOTE

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The ethical,
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implications of
digital healthcare
services in the
COVID-19

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The ethical,
legal, and social
implications of
digital healthcare
services in the
COVID-19

Articoli

Volume 7 ■ 2022

theFuture
ofScience
andEthics

79

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