INTERNET
AND THE # PANDEMIC
IN THE AMERICAS

THE FIRST HEALTH CRISIS
OF THE DIGITAL ERA

Elaine Ford
Winfried Weck
(Editors)

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FOREWORD

The COVID19 pandemic has challenged the social and structural model of the world as we know it. Measures to reduce the transmission of COVID19, such as limitations on the free movement of persons, social distancing and restrictions on vehicular travel have led to the need to shift many social dynamics to online platforms, in order to guarantee the economic development of nations, student learning, as well as the transformation of face-to-face public and private services into digital spaces.

Digitalization and Internet advancement worldwide have brought about a number of challenges and opportunities for diverse sectors, including state institutions, business and civil society. The development of a number of information and communications technologies (ICT), Artificial Intelligence (AI), Industry 4.0, Open Data and Big Data allow us to reinforce the access to digital tools and diversified their use in areas such as strengthening democracy, multilateral cooperation, economic development, education, teleworking, and digital security, among others.

The Konrad Adenauer Stiftung (KAS) is convinced that the world's major digital challenges cannot be overcome by national or bilateral states alone. This will instead require multilateral cooperation and research as provided, for example, within the framework of the United Nations and European Union conventions, work by civil society and the development of academic and scientific analysis, in cooperation with their partners worldwide.

In this context, the Konrad Adenauer Stiftung has launched its new Regional Program "Alliances for Democracy and Development with Latin America" (ADELA), based in Panama. The program seeks to help strengthen cooperation between the liberal democracies of Latin America, Europe and other world regions, and to provide spaces for dialogue among the diverse actors. Its target groups include representatives of national governments and parliaments, international and regional organizations, organized civil society and the economic sector, these being multipliers of social, economic, international, security and development policy. In this regard, ADELA promotes dialogue between Latin America and other world regions on international policy, global and regional security, regional and international trade and the implementation of the 2030 Agenda SDGs. In this way, we want to contribute to strengthening a global democratic and liberal order that promotes the interests of democratic states within the framework of multilateral cooperation and international obligations.

This publication is therefore intended as an elementary contribution of our central concern, which is to promote international cooperation and discussion on digitalization and its contributions in a globalized world. As the title implies, this publication balances the health context brought about by the pandemic and the fundamental role played by digital tools in coping withthis crisis. Therefore, this publication is addressed not only to Latin American readers, but also to an international audience, in order to analyze the positions and actions of Latin American countries in the regional and global context of the post-pandemic "new normal".

Winfried Weck

Director of the Regional Program, Alliances for Democracy and Development with Latin America – ADELA, Konrad Adenauer Stiftung

INTRODUCTION

In 2020, humanity was plunged into a scenario difficult to foresee by any stretch of the imagination. The warning issued by the World Health Organization (WHO) on March 11 declaring a global pandemic due to the novel coronavirus COVID19 sent alarm bells ringing around the world at a time when many countries, including China—where it originated—were already suffering from the effects of the deadly virus that nobody knew how to treat and for which there was no vaccine.

The speed of its spread has caused or forcedleaders across the globe to introduce strict lockdown and quarantine measures and to recommend a series of sanitary measures to avoid infection, such as frequent handwashing, mask-wearing and social distancing in public places.

Anguish has quickly overwhelmed the global population as the number of deaths increases at a rapid rate, particularly among the elderly and vulnerable population. The world was thrust into a surreal situation with more than 55 million cases of infection and over one million three hundred thousand deaths. Matters have been made worse by the second wave of cases of infection that has affected some countries. The virus does not distinguish between nationalities, gender, race or social status, and it will be difficult to stop its spread until a vaccine can be found.

In this bleak scenario, the world has switched its daily offline activity to online spaces. Without warning, work, education,

shopping, business, and social life were confined to the Web 2.0 and diverse online platforms. Internet has been the best lifesaver during the crisis because it has allowed us to humanize the virtual world and feel that we can carry on with our traditional pre-COVID19 habits, responsibilities, and customs.

Internet has also been the primary vehicle for transmitting a whole host of information, known as "infodemic", across its digital networks and tools. Individuals are continuously receiving and sharing information, and this has increased sharply due to the climate of uncertainty arising from COVID19. As a result, there has been a spike in disinformation and fake news, along with hacking and online scams.

Other important aspects to consider at this point in time are: i) with regard to Internet access, according to Internet Society (ISOC), almost half the world's population remains unconnected and this represents a challenge because the digital gap is getting bigger; ii) we also need to review how online human rights, data use, big data and privacy are being addressed; iii) regarding the international framework of digital cooperation, it is of utmost importance that we understand how states and actors are participating in the new multilateralism in the midst of the global pandemic; iv) in addition, we must analyze the capacity of business and small and midsize enterprises to reinvent themselves during the pandemic by using innovation to subsist.

Thus, the main themes of the book were quickly identified. They are: Internet access and online human rights, populism and disinformation, privacy, cybersecurity, big data and open data, remote learning, teleworking, digital cooperation and the digital transformation of companies.

This publication seeks to show how, during the time of COVID19 and from diverse perspectives, the Internet has served

humanity, particularly in our region, where a Latin American approach has been adopted to draw from global experiences. It is also intended as a presentation of the new challenges and risks that have emerged, demonstrating how they can be coordinated among actors committed to minimizing their impact.

Once we had determined the topics, we identified the authors in the different countries of our Latin American region. Each of them boasts a reputable professional background, extensive expertise, and rigorous training in a range of disciplines.

An effort was made to broadly define the scopes of each of the thematic areas identified whilst relating them to the specific area of expertise of each author. Below we have included brief summaries of the nine papers that are included in this publication:

Digital access and online human rights

The pandemic has exposed the reality of many Latin American countries, revealing that Internet connectivity is still very low, especially in rural or remote areas. This has led to difficulties for populations to access online schooling, work and services to allow them to carry on with their daily activities. The digital gap is deepening and disadvantaged populations are lagging behind as they are denied access to opportunities for progress and entrepreneurship. This has sparked debate as to whether or not Internet access should be a state-protected human right and about which forms of progress in the world are worthy of consideration in the discussion.

Populism and disinformation

Our hemisphere has hosted a variety of approaches and styles of presidency for addressing the COVID19 crisis. From early and responsible responses to populist and provocative styles. Two extreme positions reflected by the levels of approval of their terms

of office. Disinformation and fake news have also been very present in this context. They have proliferated on the Web 2.0 and social media, often seeking to dismiss the harmful effects of the virus or the hygiene measures recommended by WHO and the scientific community. The question remains as to how this disinformation has proliferated during the COVID19 pandemic and whether populist leaders have exploited it as a resource. What effect has it had on the population?

Privacy

In an effort to tackle COVID19, many governments in the region have designed apps for the population that identify people who have been infected with the virus, geolocate and track cases, and offer health and prevention measures. These apps collect people's personal data. Some accuse governments of exploiting the crisis and invading privacy under the pretext of security, which could possibly allow the introduction of surveillance practices. How ought privacy be weighed up against security rights in the midst of a global crisis? How can we ensure that these extraordinary measures are only implemented at extraordinary times and that individuals can demand respect for their privacy in the *new normal*?

Cybersecurity

The common practice of online scamming has seen a significant rise during the pandemic. Interpol has also reported that more sophisticated methods more sophisticated methods, such as phishing and malware, are being used against infrastructure. Unscrupulous hackers have taken advantage of the global health crisis to attack hospitals, businesses, public institutions and banks, exploiting the social instability and economic crisis spurred by COVID19. Against this backdrop, it is useful to examine the measures taken to counter

the situation in Latin America and which protection and warning mechanisms are being activated among the public.

Big data and open data

Transparency of information has been one of the biggest public demands during the novel coronavirus pandemic. Some Latin American governments have taken important steps to adopt strict health measures and report continuously on the progress made. Big data is key in this context, particularly as regards state purchasing, public health information and all matters relating to cases of infections and deaths. In some countries, when different sources and databases are crossed, the official figures are often found to be well below the unofficial counts. How can we responsibly and transparently manage and validate all this data? Which success stories or good practices should be highlighted? In what way could big data be used to create spaces for population analysis in order to curb the pandemic?

Remote learning

According to UN figures, more than 156 million schoolchildren in Latin America are now taking classes online to avoid contagion. The COVID19 crisis led to mandatory isolation in many countries, meaning that students were forced to continue their learning at home. Schools and all other centers of learning have had to design nationwide education programs, a response that had to be implemented quickly and efficiently with the use of Internet, radio and television. Some effective digital education programs have been designed to ensure an efficient response to the pandemic. What measures have different countries taken to ensure the continuity of education in schools and colleges? Could virtual education replace face-to-face learning?

Teleworking

As with education, work too has shifted to online modes during the COVID19 outbreak. Many workplaces adapted their activities to teleworking by employing diverse digital tools to ensure the effective continuity of employee performance and company results. For example, the Zoom platform registered a considerable increase in downloads and usage in Latin America. This has prompted big tech corporations to develop a range of digital tools in order to contribute to the tackling of the crisis and demonstrate the viability of exercising trades and professions connected to the Internet. What are the pros and cons of teleworking and what are the future prospects of this new model with regard to social competences?

Digital cooperation

In the current pandemic context, we have seen how bilateral and multilateral cooperation between countries has increased in terms of health information, measures to mitigate the virus and slowing the curve, as well as sharing of medical protocols, among others. It is interesting to determine which efforts were driven by a new multilateralism with active participation from governments, business, the scientific community and civil society to deal with the crisis and how digitalization has been a key ally in this, when compared with the devastating impact of the Spanish flu of 1918.

Innovation and digital transformation in business

The repercussions of the pandemic have been severe, not only for health, but also in economic terms. Measures such as mandatory social isolation or quarantine have led to the closure of airports, shops, restaurants and the prohibition of inland mobility. In this context, the digital economy model has been affected to a greater

or lesser extent, depending on the sector; specific cases include taxi, tourism and lodging services. Small and midsize enterprises have had to reinvent themselves using digital platforms that enable commercial interaction without face-to-face contact. In this economic crisis, how has digital transformation helped traditional businesses? Were they able to adapt? Which have been the main weaknesses of the region that prevented some businesses from reopening?

I wish to thank the authors of the papers for agreeing to participate in this project, each of whom has contributed an excellent paper on their topic. They are: Pablo Legorburu (Argentina), Lía Hernández (Panama), Cláudio Lucena (Brasil), Álvaro Ramírez-Alujas (Chile), Germán Escorcia (Mexico), Carlos Vera (Ecuador), Osvaldo Larancuent (Dominican Republic) and Luis Adrián Salazar (Costa Rica).

I would also like to thank the team at the Regional Program Alliances for Democracy and Development with Latin America (ADELA) of the Konrad-Adenauer-Stiftung (KAS), located in Panama. This publication has been made possible by the confidence bestowed by its director, Winfried Weck, to whom I extend my most earnest thanks for the possibility of producing this project together. My thanks also go to Marcee Gómez, with whom I have coordinated every last detail of this volume and who has always shown a great willingness to respond to my queries and requests. I also wish to express my gratitude to Enrique Hulerig, who produced some excellent editing work, doing so with great care and attention to detail, and to Saúl Soria, for his amazing design work. I must also extend my thanks to Gabriela Romero, our team project coordinator, for her generous help in collating information.

At D&D Internacional - Democracia Digital, we are honored to have carried out this project with KAS ADELA, which consolidates the work to encourage responsible Internet use that we have been

doing in both Peru and the rest of the region. Our mission as a think tank is strengthened by publications of this nature. During 2020, the pandemic presented us with new opportunities: we have worked intensively on a number of fronts to tackle the problem from the perspective of Internet use and new digital technologies and their relationship with civil society.

This publication comes at a time of uncertainty, for we do not yet know the outcome of the COVID19 pandemic. And, in this sense, it is indeed a bold effort to have anticipated an analysis of the current reality from diverse perspectives in our hemispheric approach. I sincerely hope that this publication will be a contribution to the academic community and, above all, to every person in the digital era intensely living out this new model of life in the midst of an unprecedented global health crisis.

Lima, November 2020

Elaine Ford
Founding Director
D&D Internacional - Democracia Digital
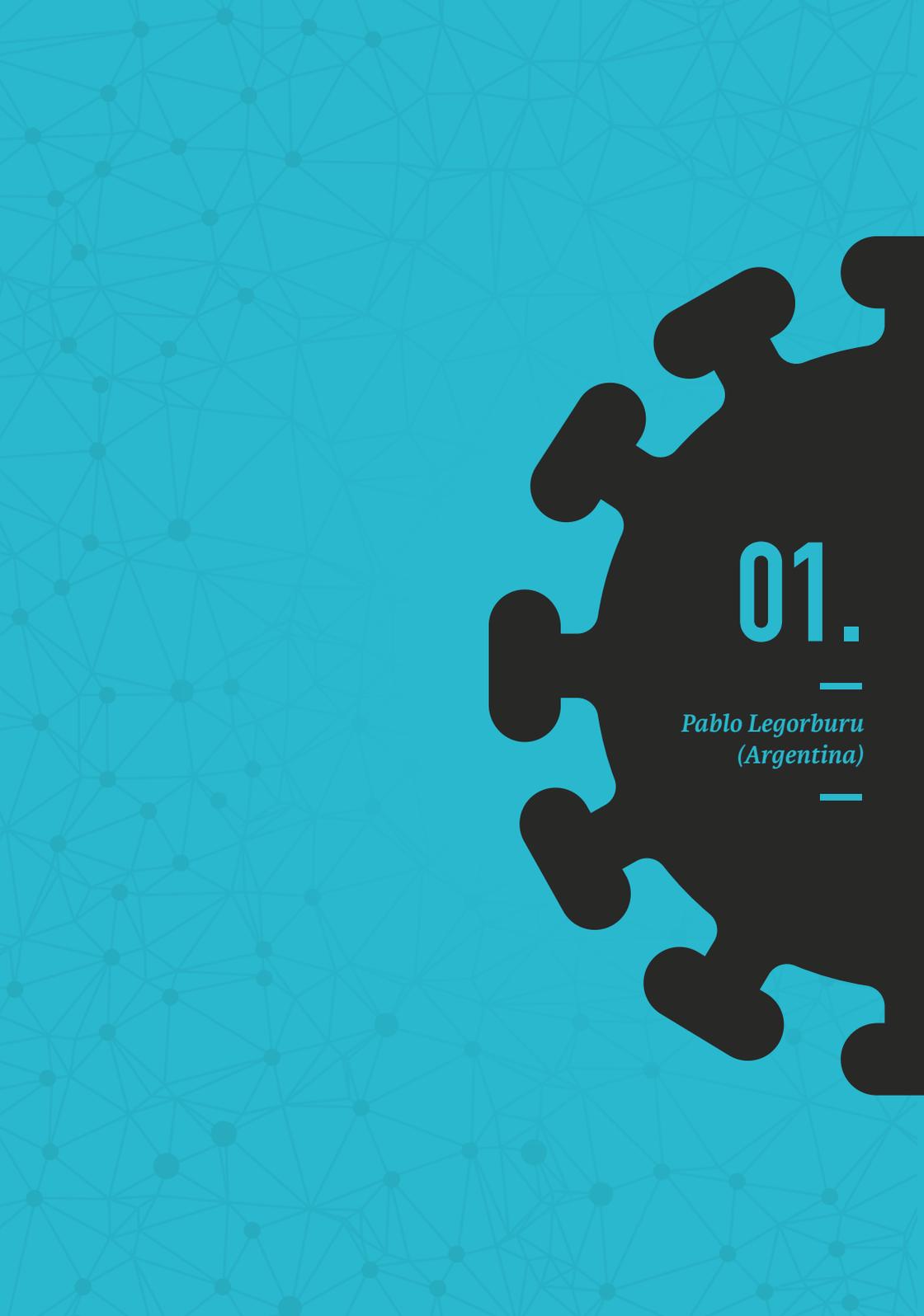
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Pablo Legorburu
(Argentina)

INTERNET ACCESS AS A FUNDAMENTAL RIGHT IN COVID-19 TIMES

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Pablo Legorburu (Argentina)

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I.   Introduction

The COVID19 pandemic, in the sense that it is an effect of many other aspects of globalization, zeroed in on the way that the Internet has, in many ways, sustained the everyday activity of communities and mitigated the effects of what is an unprecedented global crisis.

The virus has worked as an accelerator; it has forced us to use remote options for working, learning, selling, shopping, visiting our doctor, performing banking transactions, entertaining ourselves and communicating with colleagues and friends, all due to the enforced isolation and social distancing. In just two months, we became more digital than we had over the previous five years. We understood the central role of telecommunications in today's society and the need for more capable digital media (connection and devices), along with the need to be better skilled in their use.

However, the pandemic has also uncovered the unequal development of connectivity in terms of accessibility and speed. Even in countries with high total connection rates, there were difficulties—especially during this crisis—in accessing work, education, health, and the services with which we carry out our usual economic and social activities, due to the poor deployment of infrastructure in rural areas away from major urban hubs and constraints on

capacity. The pandemic has sharpened the "digital gap", i.e. the lower relative possibility of some people to access and appropriate the Internet as a means for the effective exercise of their rights.

All this has fueled the debate as to whether Internet access should be a universal human right, and to what extent and through what mechanisms it should be guaranteed by the State.

We will try to address that debate. We will do so by first briefly reviewing the conception and foundations of human rights and their evolution, up to the more recent advent of digital rights. We will then discuss what it means to consider Internet access a fundamental right, what the risks are for those systems to be breached, which countries consider it as such and with what degree of relative freedom or control. We will see how this right is reflected in how services are delivered for its effective exercise: publicly or privately; with what level of provider competition, and with what universality in the products offered.

Quality Internet access is not divorced from the development of the economy in general and of the telecommunications industry in particular. We will then put the spotlight on Latin America, where governments face great challenges to come up with more effective strategies to expand on and secure that right, promote digital transformation, and bridge the gap between citizens. We will illustrate this with the case of Argentina's public policy over recent years.

Lastly, we will attempt to draw conclusions on the most effective means of accelerating the central mission: securing future rights and well-being for the greatest possible number of people in the digital era.

II. Human or fundamental rights

Definition and basis

Human rights are those "instrumental conditions that enable a person to achieve his/her complete fulfillment". Its conception encompasses the freedoms, powers, institutions and demands relative to primary or basic goods that include every person by the simple fact of their human condition, for the guarantee of a dignified life, "regardless of race, color, sex, language, religion, political or other opinion, nationality, social origin, economic status, birthplace or other conditions." They are inherent to the human person, irrevocable, inalienable and unwaivable, universal and timeless.

These are the conceptual pillars on which their international recognition and protection is based, and should therefore be accepted, respected and guaranteed by all states, regardless of their political-ideological, economic or socio-cultural system.

Recognition and respect for human rights is the basis on which prosperous and active societies are founded. The main problem—barring exceptions—is not their basis, but their effective implementation and protection. This is where effective public policy and the harmony of the international community come into play.

Historical development

Throughout modern history, human and civil rights have emerged in successive "generations", each chronologically associated with the ideals of the French Revolution: liberty, equality and fraternity.

The first-generation rights (eighteenth and nineteenth centuries) are the civil and political rights. They are associated with the principle of freedom and seek to limit the action of power and ensure the political participation of civil society: the right to life, freedom of thought, expression, religion and association, the right to security, property, inviolability of domicile and correspondence, the right to vote and to strike. The second-generation rights (nineteenth and twentieth centuries) are collective economic, social and cultural rights linked to the principle of equality whose implementation requires the intervention of public authorities through benefits and services: rights to health, education, work, wages, decent housing. Lastly, the third generation of rights (twentieth and twenty-first centuries) is linked to fraternity and solidarity. These are rights which, given their scale and impact on the life and survival of all humankind, require the promotion of peaceful and cooperative relations between nations: the rights to peace, justice, and a clean and balanced environment.

III. Digital rights

Fourth generation. Human rights of the digital era

We are living in the time of the digital revolution. The progress made in computing, applied mathematics and telecommunications technology, grouped under the umbrella of new information and communication technologies (ICT), has changed social relations so rapidly that our personal freedom and real possibility of intervening in social, economic and political processes are determined by our access to information. We are witnessing the emergence of new social structures, new forms of human interaction and new virtual communities, whose basis of attachment is not a shared territory or language, but a new model of society that finds non-face-to-face communication an element of union among individuals.

It is not that the digital era is leading to the obsolescence of traditional legal concepts and theories, but rather that it requires a new response from the legal order. The profound social transformations, conflicts of interest between the sectors involved and suspect handling in the public and private spheres brought about by ICT have paved the way for the great challenge for constitutional law in the twenty-first century: the development and process of positivizing new categories of fundamental rights, as well as adapting existing ones for the above three generations, to the information and knowledge-based society setting, i.e. the emergence of a fourth generation of human rights, or digital rights, in which universal access to ICT, freedom of expression on the Internet, and the free circulation of information and knowledge play a decisive role.

In this perspective, there are certain legal aspects that will require adjustment:

1.   *Rights that protect private life:* the advent of new ICTs permitting the circulation of millions of data within seconds opens the door to new possibilities for intrusion and control in the private lives of individuals, which must be protected.

2.   *Equal access to new technologies (universal service)*: in the future, there could be different models of information society, just as there are different models of industrialized societies today. We must, therefore, promote equal opportunities to avoid a "dual-speed society" in which one group has access to the new technology and enjoys its benefits, while the other is excluded. We must provide a universal basic service, the definition of which must be formulated alongside technological developments. Skills training will also play a key role in bridging the "digital gap".

3.   *Telecommunications as support for the practice of the rights to freedom of expression and information*: social media and services provide vital support to the practice of the rights to freedom of expression, to inform, and to be informed.

4.   *Integration between communication systems and social media*: due to the convergence between broadcasting and ICT, the old communication systems have ceased to be independent: on the one hand, the two-way or interpersonal communication systems (telephone, mail) and on the other, the one-way or mass communication, with one sender and passive recipients. With new technologies, which are characterized by integration and the possibility of user interactivity (the paradigm being the Internet), the distinction between sender and recipient is blurred.

5.   *Media concentration and the guarantee of pluralism*: this integration process is both vertical (grouping content providers, network owners and manufacturers of electronic and computer equipment) and horizontal across different media. Excessive media concentration, despite being the market response to the extremely high level of required investment, poses a problem of structuring effective formulas to guarantee cultural, social and political pluralism.

6.   *Control of information on the Internet*: another situation that must be clarified is the regulation of content circulating on the Internet, and whether it is necessary to establish rules that limit freedom of expression in addition to those already in place for other media.

7.   *Digital freedom, the fundamental right of the fourth generation*: digital freedom has acquired the category of

a new human right, the purpose of which is to guarantee individuals the power to know and access information about them: to control its quality, to correct or cancel inaccurate data, and to decide regarding its transmission.

Fundamental rights are categories that are open and permeable to new values and rights. This means that they are a response to the demands for respect for human dignity in the new economic, social, political, cultural and technological realities. The emergence of ICT opens up new spaces that require regulation because they have a forceful impact on the dimensions of human freedom.

IV. Internet access as a human right

In June 2011 the United Nations General Assembly declared Internet access to be a human right: "The unique and transformative nature of the Internet not only to enable individuals to exercise their right to freedom of opinion and expression, but also a range of other human rights, and to promote the progress of society as a whole," was underscored by UN Special Rapporteur William La Rue. Governments must strive "to make the Internet widely available, accessible and affordable to all [...] ensuring universal access to the Internet should be a priority for all States."

He also pointed out the ways in which this right can be violated:

1. *Filtering or blocking content*: even in democratic countries, diverse government agencies have been empowered to carry out "cyber patrolling": the punishment of dissenting voices or blocking access to content, typically under the pretext of national security.

2. *Curbing access or disconnecting users*: many governments have resorted to blocking access to or "switching off" the

Internet. The UN has stated that the Internet must always be accessible and that this is particularly important "at key political moments, such as elections, times of social unrest, or anniversaries of politically or historically significant events."

3. *Cyber-attacks and the failure to protect the right to privacy and data protection*: hacking violates everybody's right to privacy, as laid down in Article 12 of the Universal Declaration of Human Rights. According to the UN, states should have clear policies to regulate and punish these violations.

In this regard, the UN, the Organization for Security and Co-operation in Europe, the OAS, and the African Commission on Human and Peoples' Rights signed a Joint Declaration on Freedom of Expression and the Internet, in which they agreed, inter alia:

- To promote universal Internet access to ensure the effective enjoyment of human rights such as the right to freedom of expression, the right to education, and the right to health care and work, among others.

- To create regulatory mechanisms that promote access to the Internet, especially in more vulnerable populations, either because of scarcity of resources or due to their location in areas far from urban hubs.

- To provide public Internet access points.

They have also subsequently expanded the requirements to strengthen the principle of "net neutrality"[1] and to ensure that important developments such as the implementation of 5G

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[1] Neutrality: the net neutrality concept means that service providers and governments should treat all Internet traffic in the same way. In other words, they should not block or slow down traffic on their local networks according to the user, type of traffic, or service sending the content.

mobile networks and the Internet "respect human rights". Further, they have highlighted the need to address serious issues arising in the Internet context, such as disinformation, hate speech, discrimination, unlawful surveillance, and the power of online intermediaries, among others.

Alongside these initiatives, many states have adapted their constitutional texts and laws in order to ensure the population access to and inclusion in the information and knowledge-based society, stating in general terms that Internet broadband services should be provided under conditions of competition, quality, plurality, universal coverage, free and equal access, at fair and reasonable prices, and irrespective of geographic location.

Access to the Internet or the lack thereof is of such relevance today that it alone can mean the difference between prosperity or poverty, knowledge or ignorance, freedom or oppression. It is a basic tool for enabling other rights, not only of information or freedom of expression, but also rights to protest, health, education and work. How could someone living in a rural community with no computer or Internet access compete for a job against a city-dweller with access to free Wi-Fi networks? During the pandemic, we have seen how civil society, unable to take to the streets to protest, has done so on the Internet. Lacking the necessary means to allow people to join in public discussions is tantamount to silencing them.

The digital gap is a social divide: ensuring equal opportunities is one of the most prominent aspects of the defense of Internet access as a human right.

However, almost half of the world's population still lacks the means to connect to the network of networks. Data from the International Telecommunication Union (ITU) reveal that in 2019 46.4% of the world population—3.6 billion people—are not connected to the Internet and, as Table 1 shows, there are major asymmetries:

Table 1

Internet users worldwide				
World population	**2005**	**2010**	**2017**	**2019**
	6.5 billion	6.9 billion	7.4 billion	7.75 billion
Global users	16%	30%	48%	53,6%
Users in developing countries	8%	21%	41,3%	47%
Users in developed countries	51%	67%	81%	86,6%

Source: International Telecommunication Union.

This is precisely why human rights organizations lobby to make Internet access a human right, arguing that **only then can public resources be guaranteed, operators be pressured, or enable their demand by small rural populations, in order for their implementation to become effective.**

Human rights for tackling the COVID19 pandemic

In the context of the COVID19 pandemic, the United Nations, the Inter-American Commission on Human Rights, the Organization for Security and Co-operation in Europe, the World Health Organization, and the Pan American Health Organization have all expressed concern over the restriction of freedoms in emergency decrees, censorship measures, criminalization of opinions on the Internet, and the disinformation being circulated in digital settings, in parallel with the novel coronavirus.

At the Geneva Council, Michelle Bachelet, UN High Commissioner for Human Rights, said that "lockdowns, quarantines and other such measures to contain and combat the spread

of COVID19 should always be carried out in strict accordance with human rights standards and in a way that is necessary and proportionate..." adding that "[The virus] is a test for our societies, and we are all learning and adapting as we respond[...]. Human dignity and rights need to be front and center in that effort, not an afterthought" Access to public information —timely, transparent, technically correct, evidence-based, and in accessible formats—must also be a priority in this context. "Being open and transparent is key to empowering and encouraging people to participate in measures designed to protect their own health[...]. It also helps to counter false or misleading information that can do so much harm by fueling fear and prejudice," said Bachelet.

Protecting the identity of those affected by the novel coronavirus was another recommendation. PAHO, in its guidelines for communication during COVID19, urges that patient "privacy" be protected.

Digital surveillance, facial recognition and the indiscriminate use of biometric data draw on the technological potential to track large volumes of data over a short period, but they also pose a threat to human rights: Access Now,[2] a social organization that researches digital rights around the world, warns that a number of countries are using automated systems to track, monitor and control people's movements during the COVID19 outbreak. Hence, the UN is calling for proper use of technological tools and for "individual rights to privacy and non-discrimination to be rigorously protected." It also considers that restrictions on the freedoms of citizens should be considered transitional and applied only in the context of the pandemic: "There are concerns that governments and security institutions may find the use of emergency powers attractive because it offers shortcuts." They recommend that "in countries where the virus is waning, authorities must seek to return

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[2] *Access Now* is an international organization that advocates for human rights, public policy, the defense of digital rights, and a free and open Internet.

life to normal and must avoid excessive use of emergency powers to indefinitely regulate day-to-day life."

Countries showing respect for free Internet access

Internet access is not treated equally in every country of the world: totalitarian governments are not keen on the Internet. Unlike other media, a platform with as many voices as it has users circumvents the most powerful censorship mechanisms unless the authorities issue the order to "flip the switch" and shut down the Net. This has happened on numerous occasions, recently, in early August of this year, in Belarus, during an election process that has been classified as fraudulent. The first shutdown lasted for at least 72 hours: services such as YouTube, WhatsApp, Facebook and Google were taken down along with news sites. Thousands of protesters gathered in the streets to denounce the lack of transparency in the elections. The shutdown was repeated for a few hours later in the same month when images and videos of protesters being repressed by police forces circulated on social media.

Freedom House[3] has produced a map that sheds light on the subject: as shown in Table 2, the territories in green respect the right of free Internet access, those in yellow exert some kind of control, and the countries where access is curbed are shown in red: China, Russia, Egypt, Sudan, Saudi Arabia and Belarus, among others.

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[3] *Freedom House* is a non-governmental organization that measures the status of political rights and civil liberties in every country of the world, conducts research, and promotes democracy, political freedom and human rights.

Figure 1

Source: https://freedomhouse.org/explore-the-map?type=fiw&year=2020
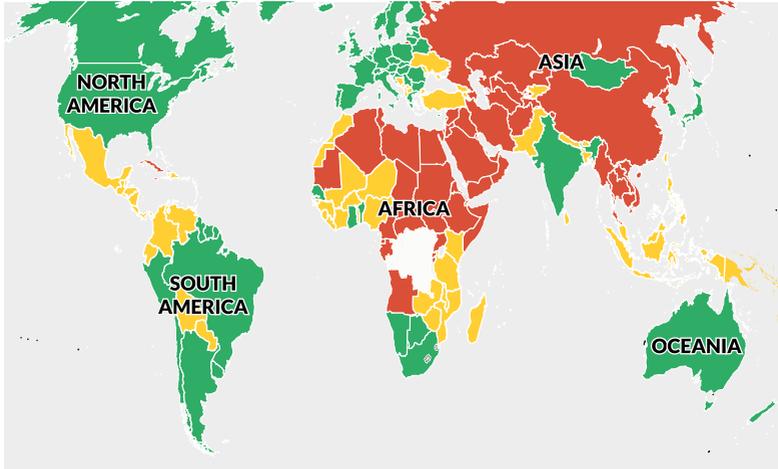
The annual report published by *Freedom House* tracks the subtle and not-so-subtle ways in which governments and non-state actors restrict our digital rights: "we conduct a ranked, country-by-country assessment of online freedom," they explain, noting that the findings are used by activists around the world who are fighting for Internet freedoms.

Reports also evidence the strong correlation between the overall context of freedoms and democracy in countries and freedom of access to the Internet and its content.

Is access sufficient to guarantee human rights?

Internet access alone is not enough. Connectivity, understood as broadband service with adequate speed and devices for access, is a necessary, but not sufficient, condition for appropriating the value generated by digital technologies. Therefore, its recognition as a human right must be accompanied by digital skills training so that

citizens are actually able to use technology as a tool for progress. Being able to communicate by WhatsApp, watching YouTube videos or browsing Facebook is all well and good but, besides access, appropriation of the technology is also important: people must know how to use it in order to make progress in diverse issues, such as online training, job hunting or carrying out their work on platforms.

The pandemic has pushed people who were once reluctant to embrace digital transformation into accepting it, but many have realized that they lack the skills to master it. The digital gap has two dimensions to address.

Internet access may not be a human right in and of itself, but the Internet is critical to the exercise of human rights in the digital era. It is a vast and necessary facilitator of rights.

V.   *Internet as a public service*

The shift from adhering to a declaration that Internet access is a human right to implementing a policy for its effective guarantee, which can be enforced in a country's courts, requires said declaration to be transposed into the constitutional texts and laws of the country in question.

Typically, such protection is reflected in the regulation of the activity of telecommunications in general, or just some of these, as a "public service", given that the recipients are "the public" (all of them) and they are the consumers of the service; in this case, "Internet access".

"Public service" is any activity the fulfillment of which must be regulated and controlled. These are activities reserved for (when state-owned) or demandable from (when they are non-state or mixed) public authorities under state legislation. They are typically

essential services, that is, services intended to satisfy a basic need of wider society.

Based on these criteria and premises, states have put companies (state-owned, mixed or private) in charge of domestic public services throughout their development; in other words, they have made them into money-spinning commercial activities.

The consumers and users of public services are safeguarded by "consumer protection laws" to protect them vis-a-vis providers. These laws establish that, when consumers complain about service faults, the company must record and resolve their complaint.

There are countless domestic public services that we use in everyday life, from the oldest, such as mail, water, electricity and gas supply, as well as trash collection, to the more modern ones of telephony and cable television.

Should Internet access be considered a public service?

Not every country regulates Internet access as a public service in the same way, since the definition and scope of "public service" is not always consistent. There are differences in the extent to which these services can be provided in a competitive or non-competitive framework, with guarantees of mandatory basic services (for example, with minimum guaranteed speed parameters), with regulated or fixed tariffs, in the regulation of service quality, with the requirement of minimum (basic) services in less profitable places, etc. This is true in countries as different as Finland, Mexico, South Korea, Canada, France, Costa Rica, Chile or Estonia.

One notable country that set the benchmark for the welfare state model is Finland, establishing the right to an Internet connection of at least 1 Mbps in 2010 and extending this to 100 Mbps in 2015. The Ministry of Transport and Communications ensures that the country has reliable, secure communication networks with

sufficient capacity. The State guarantees the availability of basic communications services for the whole population, which includes telephony, broadband and mail. For other value-added services, the market is based on open competition, which generates greater choice and competitive consumer prices.

The Finish Government's goal is to create a market environment that offers business opportunities and increases the supply and quality of services, as is set down in the law.

Some say that the debate over Internet access as a public service can be likened to air travel: some passengers are comfortably seated in first class, while many more look on with envy from the economy class. Some providers would like to create a "first class" so that those who can afford it can have access to a "fast track" or preferential line of content. This is contrary to the notion of all data being treated equally, with no exclusive areas; it is the principle of "net neutrality" that we saw earlier and, in defending it, we want the Internet to be treated as a public service like electricity or telephony that can be government-regulated.

Advocates of the neutrality concept also argue that this is one of the founding principles of the Internet, a service created for everyone that should remain equally accessible to all.

However, Internet providers argue that today's Internet is very different from those early days. There are now millions of people around the world who can watch videos on their mobile devices or transfer vast amounts of data. Transmitting that data costs money and providers argue that these costs should not be borne by them alone, while also deeming unfounded any arguments that they would block content or downgrade network operation.

Additionally, providers are concerned about any regulation to which they could be subject, since it would ultimately put

governments in charge of determining Internet prices, terms of service, and the type of products and services offered. This situation generates great uncertainty. The industry has grown in an unregulated environment, so changing this could affect economic growth.

As stated earlier, the problem is ultimately not whether the Internet is considered a human right or what its legal status is, but through which advancement policies and regulatory instruments it can be developed in order to ensure the effective and universal enjoyment of the human rights that it enables.

VI.   *The Internet scenario landscape in Latin America*

According to the Economic Commission for Latin America and the Caribbean (ECLAC), 66.7% of the region's inhabitants had an Internet connection in 2019. The remaining third have limited or no access to digital technologies due to economic and social status, particularly their age and location. This imposes severe limitations on their access to education, work, interaction with banks, and even public services that are provided online.

The COVID19 pandemic has deepened inequalities

The pandemic which forced millions to work, study and consume from their homes, brought to light the inequalities in Internet access across Latin America, where only one third of poor households are connected, according to an ECLAC report published in August of this year.

Looking at twelve countries of the region, in average terms, 81% of rich households are connected, a figure that drops to 38% in poor households. With regard to location, 67% of urban households are connected, while only 23% are connected in rural areas. And by

age, 42% of under 25 and 54% of those aged over 66 do not have an Internet connection.

"The difference between the highest and lowest economic strata conditions the right to education and deepens socio-economic inequalities," stated Alicia Bárcena, ECLAC Executive Secretary as she called for an increase in the digital skills of teachers alongside connectivity and digital infrastructure. A total of 46% of children aged 5-12 in the region live in households without an Internet connection, said the report; this means that, in countries for which information is available, 31 million children are being excluded from the education system during the pandemic.

The regional office also notes that, in contrast to Europe and the United States, where nearly 40% of workers can work from home, in Latin America it is estimated that only about 21.3% of employed people could telework.

Low incomes in many of the region's households also restrict access to and the possibility of using mobile apps. In eleven countries in the region, the percentage of disconnected households is between 60% and 85%; in countries with higher connection rates, it is around 30%. For the population in the first income quintile the cost of mobile and fixed broadband services equals about 14% and 12% of their income, respectively. In the most critical cases, these costs represent around six times the reference threshold of 2% of income as recommended by the Broadband Commission for Sustainable Development in order to classify an Internet service as affordable.

Universalizing ICT to tackle the effects of the pandemic

The development and adoption of technological solutions are conditioned by structural factors: a heterogeneous productive

structure, a markedly informal and precarious job market, a vulnerable middle class, weakened states, poor digital infrastructure, and socio-economic restrictions on access and connectivity.

Latin American countries have taken measures to promote the use of these technological solutions, but the scope of such actions is limited by gaps in access to and the use of such technologies, as well as connection speeds.

The costs associated with connecting households and their relative weight on income, the cost of the necessary devices, and difficulties in financing digital infrastructure (such as fiber-optic cables) are barriers to digital inclusion.

ECLAC has also estimated the annual cost of a basic basket composed of a laptop, one smartphone, and one tablet. For many of the region's countries, it would be possible to provide a basic ICT basket to households that lack these devices at an annual cost of less than 1% of GDP. Connectivity support measures and this ICT basket are complementary and must operate simultaneously for effect.

Despite the aforementioned structural constraints characterizing the region, in average terms, Internet progress has been sustained: in 2016, 56% of the population used the Internet, an increase of 36 percentage points in ten years. In affordability terms, in 2010, around 18% of average monthly earnings were required to sign up for a 1 Mbps fixed broadband service, whereas that figure was just 1.2% in November 2017, with all countries below the above-mentioned 2% affordability reference threshold. Again, these are average figures.

The table on page 45 shows the most representative statistics on access, use, connection type and speed for the main countries in Latin America, provided by ECLAC.

Connection quality also counts

During the pandemic, needs dictated that everything had to be done online, which has highlighted the fragility of our connections and taught us that high access figures can sometimes conceal another reality. Many countries have opted for mobile broadband (MB) Internet connections, which has a higher penetration rate than fixed broadband (FB). While this is a faster and more affordable solution for providing connection and reducing access barriers, there are large quality differences between them. Additionally, those who only used Internet on their phones were found to have a lower level of digital skills and to use Internet for fewer activities: communicating by WhatsApp or Facebook, and for entertainment with video games or social media.

ECLAC STATISTICS (CEPALSTAT) COUNTRY	% households with a computer	% individuals who use the Internet	% households with Internet access	% households with FB connection	Average FB download speed - Mbps -	% population with MB subscription	Average MB download speed - Mbps -
Sources	[1]	[1]	[1]	[1]	[2]	[1]	[2]
	Jun 2019	**Jun 2019**	**Nov 2019**	**Sep 2019**	**Feb 2020**	**Feb 2020**	**Jan 2020**
				Last revision date			
Argentina	69.0	75.8	81.3	66.8	34.0	80.0	24.1
Bolivia	36.3	43.8	32.2	14.6	12.9	76.5	17.5
Brazil	46.3	67.5	60.8	47.6	47.8	90.2	23.8
Chile	60.2	82.3	87.5	63.6	87.7	88.2	19.5
Colombia	44.3	62.3	49.9	47.6	27.2	48.8	18.4
Costa Rica	51.0	71.6	68.5	52.6	26.2	97.6	21.4
Ecuador	40.7	57.3	37.2	49.6	24.8	53.0	21.4
El Salvador	21.5	31.3	18.0	26.6	12.3	56.1	10.9
Guatemala	24.8	40.7	23.6	13.4	11.3	16.5	18.8
Honduras	17.1	32.1	26.5	12.1	13.3	24.5	24.9
Mexico	45.4	63.9	50.9	60.5	33.4	62.8	27.2
Nicaragua	13.5	27.9	18.6	18.3	12.9	30.4	20.9
Panama	46.7	57.9	60.7	46.8	84.5	60.7	12.6
Paraguay	25.9	61.1	20.4	15.3	33.5	47.9	14.5
Peru	32.9	48.7	28.2	32.3	35.1	64.2	22.9
Dominican Rep.	34.1	65.0	28.3	25.8	24.0	51.3	25.3
Uruguay	70.9	68.3	64.0	69.0	46.0	112.1	32.8
Venezuela	45.7	64.3	33.5	36.2	3.6	49.2	7.9

Sources: ECLAC - ICT Statistical Information System - http://www.eclac.org/tic/flash/

[1]   ITU Data, World Telecommunication Indicators Database, 2019.

[2]   ORBA: Broadband Regional Observatory – Ookla Speedtest Global Index

In the case of MB, 67% of countries in the region lack sufficient download speeds to perform data-intensive activities simultaneously. It is, for example, impossible to use digital remote working and online learning solutions with low connection speeds. Additionally, since the outbreak of the COVID19 crisis, demand for broadband communication services has soared. This increased traffic has placed greater demands on network capacity and resilience. Thus, in several countries, the average network download speed dropped over the first few months of quarantine.

In June 2020, the minimum download speed of 25 Mbps, which would allow the simultaneous performance of several online activities, was not reached in 44% of countries in the region. At the other end of the scale, when the speed drops below 5.5 Mbps, only basic activities can be performed and remote working or online education cannot be accessed.

In other words, mode of access, high demand and network resilience determine effective access to and the possibility of using data-intensive services. High overall penetration rates—in some countries around 90—do not mean that these percentages of people can complete procedures or follow online classes without any support or adaptation. This is because some require more experience and skills, while others require better infrastructure. Therefore, high-speed broadband access is a pre-requisite for the population's effective participation in economic and social activities in the digital era. This requires extending FB coverage and improving MB connection speeds.

VII. *Recent experience in Argentina*

In Argentina, a comprehensive program for the deployment and reinforcement of connectivity and digital transformation was initiated in 2016 as a public policy. Through a series of simulta-

neous and complementary initiatives focusing on private sector participation, the aim was to achieve predictability in the ICT and telephony sector in order to boost infrastructure investment under its different technologies, generate quality employment, implement eGovernment, and promote digital transformation across the country. We consider the description of this specific program to contribute to the objectives of this chapter since it reflects the mechanisms addressed, the instruments used and the impacts achieved for the purpose of extending Internet access and quality and reducing the digital gap.

Regulatory framework

In Argentina, the National Constitution, as reformed in 1994, expressly enshrines as a new right, in its Article 42, that of "consumers and users of goods and services"; it states that "the authorities shall provide for (...) the defense of competition against any distortion of the markets"; it therefore states that competition and an undistorted market are means that lead to the guarantee of consumer and user rights.

In this regard, the national government implemented modern and dynamic regulations on telecommunications and connectivity with a view to promoting investment, access and quality of service, and addressing aspects such as number portability, quadruple play and radio spectrum management, among others. These instruments sought to overcome many of the regulatory barriers that delayed the arrival of new technologies across the country, organizing the initiatives into three major areas: infrastructure sharing to reduce costs, the release of radio spectrum frequencies for application to mobile services, freedom of choice of technologies for TV subscription, promoting the development of local providers.

Areas of action and impact

We will briefly outline the initiatives developed over 2015-2019 and the scope of the improvements obtained:

I. With regard to quality Internet access

1. Landline Internet: 2.2 M+ (+20%) of new connected homes.
2. Speed: x 4.6 (from 4.4 to 20.3 Mbps).
3. Public fiber optic network:

    From 6,500 km to 30,000+ km laid.

    From 63 to 1000+ connected towns.

    Private fiber optic network: 109,000+ km laid.
4. 4G deployment: From 588 to 2582 locations with coverage.

    From 76.4% to 92.2% of the population.

    x 6.4 (from 2,616 to 16,668) km of routes laid.
5. 4G roaming: 900+ towns from 500 to 10,000 inhabitants.
6. WI-FI hotspots: 1,000+ free public WI-FI hotspots.

    133+ new connected towns.

    2,000,000+ accesses per month.
7. Home satellite antenna: 2,100+ new connected homes.

    30 new towns in mountainous areas.

    17,000 schools (5 million students).

    3,600 rural schools.
8. 450 MHz band: Internet and phone services in rural areas to boost agro-industrial activity.
9. Remote health services: new network of video-call consultation centers (300 centers interconnected with hospitals).
10. Tourism: improved connectivity in 200 tourist towns through different solutions (4G, optical fiber, Wi-Fi, etc.).

11. State satellite and optical fiber infrastructure for small and midsize enterprises:

    • from 15 to 651 contracts with private companies.

    • from 20 to 263 Gbps contracted.

    • from 33% to 88% of satellite capacity used.

II. *With regard to reducing the digital gap and digital inclusion*

12. *Geographic deployment of digital tools for local government:* more than 5,000 solutions implemented (eProcedures, hosting, Wi-Fi hotspots, citizen procedures, municipal portal, etc.) in 1,600 municipalities.

13. Digital literacy: 350,000+ people trained in digital literacy courses.

14. Digital points: 500+ training spaces.

    2,000,000+ participants per year.

15. Tablets for older adults: 120,000+ delivered.

16. Digital talent: 10,000+ first digital job grants.

In this period, the private sector initially invested USD 2 billion per year in deploying fiber optic networks, extending 4G cellular networks and purchasing equipment. The ICT sector, a driver of economic growth and creator of jobs, accounts for 2.5% of GDP and directly employs more than 250,000 people.

The results of this wide range of actions have allowed for sustained activity during the COVID19 pandemic across large parts of the country.

This year, a Decree-Law (DNU No. 690/20) was issued declaring mobile telephony, cable television and Internet access to be public services subject to regulation by the state

law enforcement authority, and freezing tariffs for all these services until the end of 2020.

While it could be said that this measure is aimed at ensuring the affordability and continuity of these services during the pandemic, given the declining economic activity and incomes of the general population, the unexpected change in the rules of the game has sparked a great deal of uncertainty among industry operators. This is compounded by the tax hike on access devices (cell phones and computers) planned in the 2021 Budget Act, contrary to the plans of most other countries to facilitate the supply of equipment and consequent access to the Internet.

VIII.   Conclusions

Democracy, freedom, development and human rights are four dimensions that complement one another in the language of countries that progress and provide greater well-being. Respect for and the promotion of human rights is a policy that is almost unreservedly embraced and not open to debate.

However, in the digital revolution, which encompasses the present and future of these four dimensions, impacting and modifying all orders of human, economic, labor, educational, social and political life, the legal systems that uphold and guarantee these human rights must be renewed, updated and strengthened.

In our globalized world, the COVID19 pandemic has punished all societies without exception. However, it has shown that the countries best prepared since the development of ICT and the deployment of connectivity and bandwidth—that is, those with improved access to quality Internet—have fared better in

current times, with more teleworking, remote learning, remote health care, and digital commerce, which has allowed for greater social distancing and efficient flows of goods and services, thereby moderating the impact of the pandemic on socio-economic activity. In these countries, "physical paralysis" was compensated by "virtual mobility". These are also the countries best prepared to recover and take advantage of the changes that the new normal will bring.

In Latin America, as we have seen, the lower relative development of the Internet was already well known before the pandemic and is the cause of its biggest impact on the region's economies: a forecasted drop in GDP (-9.1%), value of exports (-23%), business closures (-2.7 million), rising unemployment (18+ million), and increased poverty (45.7+ million).

With the exception of countries under autocratic or populist rule—where the restriction of freedoms correlates with lower Internet access, and where public resources are misspent—it is not the promotion of human and digital rights that is up for discussion, but rather the means that will be used to put the concrete exercise of those rights into practice. There is no doubt that bridging gaps and improving literacy to take ownership of new technologies is now the goal of public policy; it is not the "what", but the "how". And this will be a hot debate.

The recipe is not new: the strategy for Latin America is to open up opportunities with the rest of the world; to incentivize investments intelligently so as to reach the most distant places and the most undeveloped groups; to complement public and private efforts; to provide legal predictability and horizon for investments through regulatory frameworks, and to manage responsibly and with austerity.

Digital democracy, *digital* freedom, *digital* development and *digital* human rights: the four dimensions thus expanded are the path to extending the horizon of wellbeing of our peoples in the new reality.

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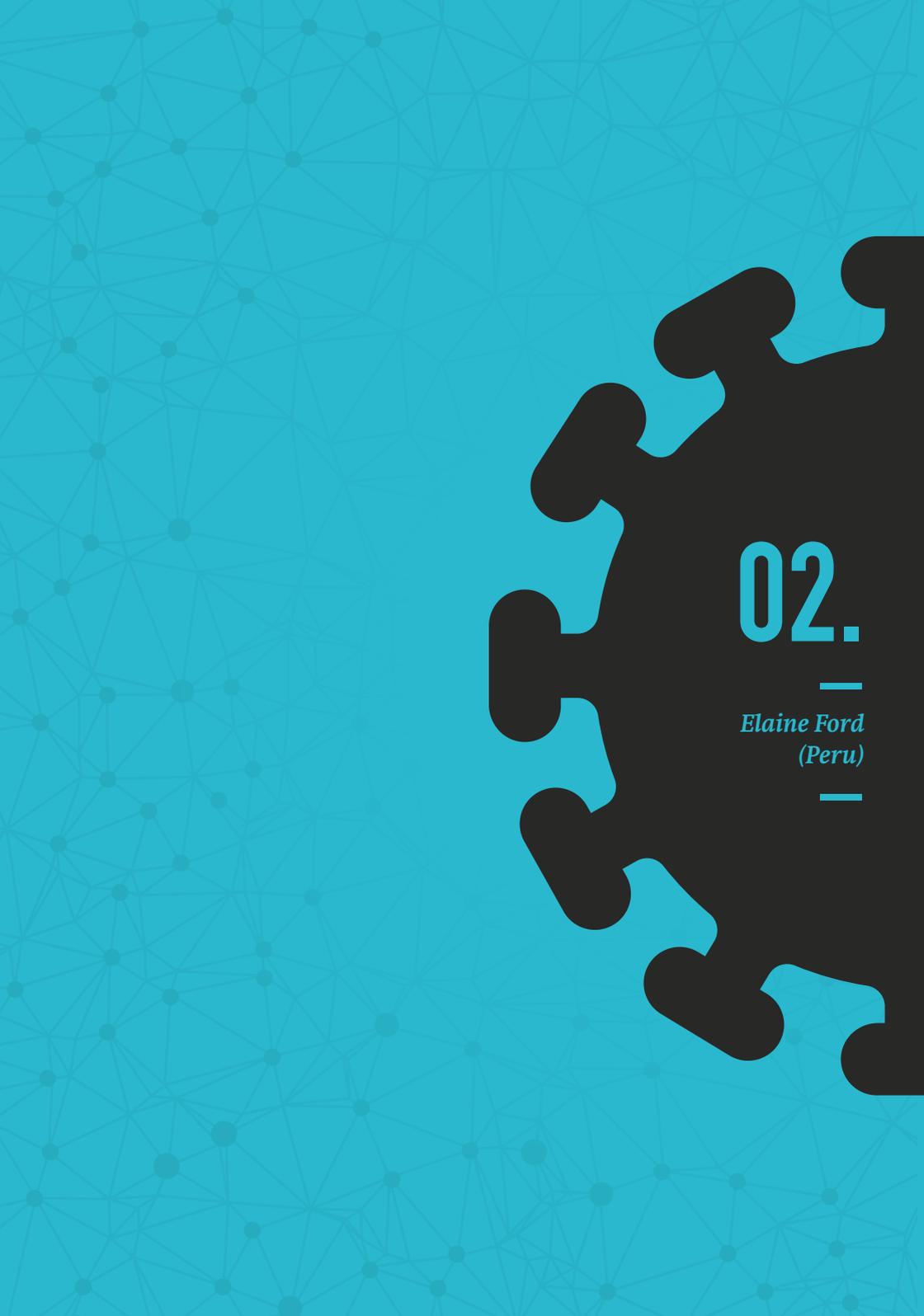
02.

Elaine Ford
(Peru)

THE PANDEMIC: BETWEEN POPULISM AND DISINFORMATION

Elaine Ford (Peru)

The year 2020 has been a year that has exposed the reality of Latin American countries. COVID19 not only triggered a crisis in the population with extremely high infection and death rates, but it also hit economies severely —some more than others, because of the types of policies and measures put in place by their heads of state to address the health problem. It was in the middle of this pandemic that several Latin American countries discovered the precarious state of their public health services, the low quality of their educational systems, low or almost zero connectivity in rural or remote areas, and high rates of informality in workplaces, among other aspects of concern.

In this discouraging scenario, other components have compounded the difficult reality. One of these is directly concerned with the presidential style adopted to deal with the crisis and all of the related topics mentioned above. Across the American hemisphere, diverse presidential approaches have been observed, which we can classify into three broad categories:

a) *Decisive:* those who reacted quickly by implementing draconian measures to declare strict lockdowns, accompanied by curfews and a series of health recommendations to prevent contagion: such as mask-wearing, social distancing of at least one meter and continuous handwashing.

b) **Progressive:** presidents who were slightly lax initially but progressively extended not only their actions in health but also the strictness of these. These measures went hand in hand with increasing rates of infection in their respective countries and global decisions implemented to address the crisis.

c) **Populists:** those who defied the indications dictated by the World Health Organization (WHO) and the scientific community, underestimating the effect of COVID19 and its risk to human health. These presidents refused to introduce actions that could jeopardize their countries' economies and so did not order very long or very strict lockdowns. Unsurprisingly, countries with this type of president have the highest rates of infection and deaths to date, topping the global rankings.

Throughout this article we will make reference to this third category of presidential style named "populist", emphasizing the cases of the United States, with President Donald Trump, Brazil, with President Jair Bolsonaro, and Mexico, with President Andrés Manuel López Obrador. It will be interesting to analyze not only the context of their behavior, but also to explore the nuances shared by these three presidents and perhaps try to understand the reasons behind their actions.

An additional component in this pandemic situation is the *infodemic*, a term coined by the WHO to refer to the large volume of information in daily circulation that reach individuals through diverse communication channels, primarily social media. However, the *infodemic* has a further derivation, *disinfodemic*, that is, all content whose purpose is to misinform for various purposes, but which, in the context of COVID19, serves only to endanger human health and safety.

Disinfodemic includes the proliferation of fake news, which poses a serious threat to societies because it manipulates the behaviors of individuals by blocking their capacity for reasoning. Feelings of anguish, panic, uncertainty and fear of death are the perfect climate for this type of news to spread, proliferate and go viral on social media.

The same individuals relentlessly share this information, often out of naivety or ignorance, although sometimes deliberately. Both cases are just as harmful, which is why action must be taken to counter this wave of fake news. Social media is naturally the preferred platform for the circulation of this content: its speed and reach, in real time and at no cost, are the characteristics necessary for its effective propagation.

But perhaps the most alarming thing about this whole situation is when populist presidents use disinformation as a tool to achieve their goals in the midst of a pandemic, without considering the cost in human lives or the harmful effect on their societies.

Populism and disinformation are a very dangerous cocktail; an explosive recipe that is detrimental to societies and their democratic foundations. Add the current health crisis to the mix and the situation becomes even more alarming, since the damage can be irreversible. There are a number of reasons why it is so toxic:

- It undermines individual freedoms by denying them access to correct information.
- It delegitimizes the actions of doctors and scientists.
- It challenges the professional journalism of traditional media and independent journalists.
- It validates fake methods and remedies that pose a risk to health.
- It inflames polarized feelings in the population.

- It divides societies with intolerant attitudes, creating the notorious bubble filters on social media.
- It threatens democracy because it tends to challenge the *status quo.*

This paper will attempt to explain this reality and describe the most significant events that have taken place in the three countries mentioned in order to understand and analyze the elements contributing to the boom in both populism and disinformation in these modern times.

Emergence of populism and democracies in jeopardy

In Latin America, democracy as a political system is gradually falling to pieces. The Latinobarometer,[1] in its latest study conducted in 2018, shows that there has been a progressive decline since 2010, with democracy only achieving 48% of support in that year. This decline is simultaneous and inverse to the increase in citizens declaring themselves "indifferent" to the type of regime, which is a form of political distancing.

Yet, this distrust of democracy is no accident; its raison d'être is common to many Latin American countries. The ruling political classes and political party systems have not performed well over the decades, weakening institutions and, in particular, the trust placed in them. Pilar Lozano Mac Donald, Mexico's federal deputy, argues that fragile democratic structures immersed in decades of corruption and impunity, injustice, insecurity, economic crisis and abuses of public power pave the way for the rise of populist governments.[2]

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[1] Latinobarómetro, Informe 2018, Banco de Datos en Línea. Santiago de Chile: CAF.

[2] Lozano Mac Donald, Pilar (2020). "El populismo que mira al pasado debe dar paso a un nuevo trato por México", in the newspaper *El Universal* (Mexico), published on September 8. *See* https://www.eluniversal.com.mx/opinion/pilar-lozano-mac-donald/el-populismo-que-mira-al-pasado-debe-dar-paso-un-nuevo-trato-por

Therefore, distrust of democracy as a political system is often accompanied by citizens' dissatisfaction with politics and political parties and this drives the emergence of new leaders with new offerings to replace traditional ones. It is a real situation in the region's countries that has coincided with the rise of social media as a means to access information and deliberation.

Digital platforms are the most accessible channel for Internet users, but they are also the most accessible channel for emerging new leaders, who find in social media - such as Twitter - the optimum vehicle for transmitting their short, radical and often controversial messages with extremist ideas and a strong popular component. Additionally, as we shall see, these are usually messages with a good dose of disinformation. All this has led to an increase in nationalist and populist speeches by leaders of the ideological left and right.[3]

In a recent interview, Lord Anthony Giddens, a sociologist who sits in the House of Lords, stated: "It has to be said that the digital revolution has transformed politics itself and at every level. It is directly linked to the rise of populism and the partial dissolution of the political center. Populist leaders can find their supporters in a way that would have been impossible for them before social media existed. And, indeed, part of the reason for the return of the far right is that, in the digital era, everyone can have a voice and can search out like-minded people no matter where they are. There is also a 'return of the repressed', that is, people can publicly air feelings and ideas that are abhorrent for the majority."[4]

Francis Fukuyama has expressed his concern for the survival of the rule of law and political centrism. He notes: "... A concern that started here in the US where we had a shift towards right-wing

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[3] Ford, Elaine (2019). *El reto de la democracia digital. Hacia una ciudadanía interconectada.* Lima: KAS, JNE, ONPE.

[4] Giddens, Anthony (2019). "La revolución digital ha traído el auge del populismo" [Interview], in *La Vanguardia* (Barcelona), published on May 17. https://www.lavanguardia.com/politica/20190516/462009525669/anthony-giddens-revolucion-digital-auge-populismo-centro-politico-elecciones-europeas.html

populism and nationalism with Trump, and where we also see the emergence of a very intolerant left."[5]

The fears of Giddens and Fukuyama are founded in the sense that we are increasingly seeing politics of two extremes, populisms with radical discourses with no room for political centrism because it is no longer appealing to those disillusioned with mainstream political parties. In this regard, Juan José Garrido, editor of *El Comercio* newspaper in Peru, points out that populism is seen to the right and to left of the ideological spectrum. Once in power, however, ideology is of little importance: the cause of support is what dictates the order of play.[6]

These populisms harness the Web 2.0 to gain more supporters and followers on social media, often appealing to feelings like xenophobia, homophobia, misogyny, and anti-Semitism, combined with a fluid expression that challenges the status quo, exalts emotions, and sharpens the polarization in the population.

One consequence of polarization is that moderate voices lose power and influence. In situations where society is divided in the extreme, the most visible and influential political leaders seek to encourage polarization in order to wipe out moderate center positions and try to align voters to only one or other option. In other words, both far-left and far-right poles feed off each other by means of hateful rhetoric.[7]

These extremist discourses break with the values and principles of any democratic society based on respect and tolerance. The new populism is "politically incorrect" because it seeks to attract

[5] Fukuyama, Francis (2020). "Es un tiempo para las democracias" [Interview], in *El Tiempo* newspaper (Bogotá), September 5. *See* https://www.eltiempo.com/mundo/eeuu-y-canada/es-un-tiempo-muy-peligroso-para-las-democracias-francis-fukuyama-536237

[6] *Garrido Koechlin, Juan José (2020). "La fragilidad de la democracia", in El Comercio newspaper (Lima), pg. 27, November 8.*

[7] El Tiempo editorial (2020). "Polarización política: ¿La otra pandemia del siglo XXI?", El Tiempo newspaper (Bogotá), August 10. See https://www.eltiempo.com/politica/gobierno/polarizacion-politica-la-otra-pandemia-del-siglo-xxi-527860

the masses with promises that are often unattainable, but which are attractive and different from what previous politicians often proclaimed.

This new form of populism in the American continent is being reconfigured in several ways: 1) with new leaders backed by strong parties, where there is not necessarily any militancy within the party; 2) political outsiders who are able to form a new political group or movement, and who are usually successful businessmen, artists or public figures; 3) authorities who have previously held a position at local or regional government level, often making the transition from the Parliament by joining the party where they are active or another party that accepts their political participation.

Presidential systems, applicable to most countries in the Western Hemisphere, are highly susceptible to any of these three options, despite some countries having stable and robust political party systems, whether bipartisan or multi-partisan systems.

The leader's charisma or individualistic position is a substitute for any proposed programmatic content. The population is lured by these new public figures, their natural charm capable of offering their followers everything they want to hear. An anti-establishment leader who refuses to pursue the same policies and maintain the system as it had been previously.

In between an oppressive elite and an oppressed popular class there is a populist government which imbued with the needs of the population, knows and claims to represent them. Authoritarianism, intolerance and violation of freedoms often emerge under the guise of being for the "greater good", remarks Pilar Lozano Mac Donald,[8] also noting that this type of leaders tend to violate democratic norms and rules by rejecting or ignoring the

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[8] Lozano Mac Donald, Pilar (2020). "El populismo que mira al pasado debe dar paso a un nuevo trato por México", op-ed published in the newspaper *El Universal* (Mexico) on September 8. https://www.eluniversal.com.mx/opinion/pilar-lozano-mac-donald/el-populismo-que-mira-al-pasado-debe-dar-paso-un-nuevo-trato-por

viewpoint of their opponents, having difficulty respecting the rule of law, rejecting political negotiation processes and taking decisions unilaterally.

Disinformation, algorithms and manipulation

Besides all the above, there is a reprehensible feature of modern times that concerns the manipulation of information: disinformation. Disinformation is accompanied by fake news, conspiracy theories, and facts and data that seem true but are not. Populist leaders have chosen to use it as a basis for their positions or decisions, to divert attention, or to contradict their opponents. Political or commercial interests always lie behind any fake news and this has been very obvious during the COVID19 pandemic.

Populism, whether nationalist, far-right or far-left, has resorted to these dynamics that run counter to truth and trust. For journalist David Alandete[9], some authoritarian regimes, such as those of Russia and China, invest huge sums of money in publicly funded media outlets for publishing this kind of disinformation or fake news in order to serve their own interests. One of the reasons for this is to create divisions in established democracies, which are antagonistic or adversarial to these authoritarian regimes. However, Alandete goes on to argue that, in their use of disinformation, the extremes meet, this means both the far right and the far left use disinformation for their objectives.

The Internet, social media, algorithm use, troll and bot machinery, and filter bubbles all play a role in proliferating disinformation and fake news and making them viral to obtain a greater reach and a powerful impact on populations. Disinformation has always been a resource for political propaganda, widely used in wartime. However, the effect a hundred years ago or in the early

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[9] Alandete, David (2020). "En el uso de la desinformación, los extremos se tocan" [Interview], in *El Comercio* newspaper (Lima), published on September 6, pp. 8 and 9.

twenty-first century was nowhere near as complex for societies as it is today.

Although the Internet offers a number of benefits for the development and well-being of humanity, over the years, we have seen how different digital platforms and social media have built an entire system on algorithms that induce the online user to consult issues of his or her choosing through news or posts that appear when the user browses these platforms. The use of algorithms is concerning because of the way in which they can manipulate people's behavior, encouraging them to consume or prefer certain information or content that is more readily available, because the algorithms have strategically decided this.

If we take this scenario to a higher level, with millions of inhabitants, the risk increases and could therefore pose a threat to situations that are decisive for democracy, such as a presidential election or a public consultation mechanism. Hence, algorithms are a very powerful instrument of which the individual is unaware. Manipulation through the Web 2.0 has become a popular weapon for politicians.

Author Marc Argemí argues that "Facebook's algorithm has been accused of misinforming users about political issues, because it reinforces more biased views over more balanced ones, as a result of the automated operation of the news wall by means of user inter-action. Facebook's digital helper, the recommendation algorithm, only prioritizes information it thinks that we will like the most and will therefore keep us longer on Facebook."[10]

During this pandemic, the Internet has been a great lifesaver that has enabled people to continue their offline lives online. As a result, the consumption of Internet, the Web 2.0 and various digital technologies has increased significantly over the past year. However, this has also led to the risk of consuming incorrect information as a

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[10] Argemí Ballbé, Marc (2019). Los siete hábitos de la gente desinformada. Madrid: Conecta, Penguin Random House, p. 88.

Elaine Ford

result of the "disinfodemic" currently affecting the world. COVID19 has generated uncertainty because it is an unknown virus that has irreparably altered the planet. This uncertainty has generated fear, anguish and panic, and these feelings create the perfect scenario for authoritarian and populist leaders to take advantage of the circumstances to manipulate and misinform their populations. Furthermore, these types of leaders are often responsible for the proliferation of fake news and information that only advance their own interests and their respective governments.

Liberal democracy, from its origins in the eighteenth and nineteenth centuries, has challenged authoritarian governments. Under this model, the individual is seen as a rational being who distinguishes between truth and falsehood. Truth is no longer seen as the property of power. Individuals have the right to seek out truth and this is considered one of the natural rights of humankind. Therefore, truth sets humans free. Today, at the height of the twenty-first century, it is necessary to go in search of that truth and not accept the lies, deceit and disinformation forming part of the rhetoric and manipulation of authoritarian populist leaders and regimes. As a result, the existence of a free and independent press, removed from the control and influence of the government or regimes of this nature, is also of great relevance.

COVID19 in the United States, Brazil and Mexico

Recently, the presidents of Brazil, the United States and Mexico were awarded the satiric Ig Nobel prize for using the pandemic to show the world that politicians can "have a more immediate effect" on life and death than scientists and doctors.[11] These prizes, also known as the anti-Nobel prizes, are awarded annually by the *Annals of Improbable Research* magazine weeks before the Nobel prize-winners are announced.

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[11] "Reciben anti-Nobel por no educar", *El Comercio* newspaper, page 20, September 19, 2020.

The fact of the matter is that this creative distinction is no coincidence. There are several similarities in how these three leaders dealt with the health crisis arising from COVID19. Their populist styles, despite representing distant political ideologies: Donald Trump (US) and Jair Bolsonaro (Brazil), aligned to the far right, and Andrés Manuel López Obrador (Mexico), leaning towards the left, have been singled out by analysts and the scientific community for their handling of the pandemic.

Donald Trump, a leader who also faced a presidential election in 2020, had a delayed reaction to the pandemic, minimizing its impact and underestimating its effects, although he was made aware of the danger of the virus as early as February. Other countries in the region began to take assertive action from early March, declaring strict lockdowns or mandatory mask-wearing in public spaces. Trump, on the other hand, defied these measures, resisted paralyzing the country's economy with quarantines and restrictions on the population, and considered that mask-wearing and immobilization went against individual freedoms.

By this point, some countries in Europe were recording heartbreaking figures in terms of numbers of contagions and deaths, especially in vulnerable populations and the elderly. Italy, Spain, France, the UK held the top positions in the European classification for infections and deaths. Little was known about COVID19, so doctors and international organizations did their best to combat the pandemic and provided recommendations for prevention, suggesting appropriate medical procedures and thus preventing the high numbers of infections from collapsing health systems in each of the countries mentioned and in other countries that were also beginning to be affected.

Below is a list of the most notable aspects of how President Trump dealt with the pandemic, immersing the country into one of its most profound crises, with more than 240 thousand deaths

and ten million contagions across the US,[12] sending it to the top of the global ranks.

- ***"China" virus.*** From the beginning, President Trump referred to the virus in a pejorative way, suggesting that it had originated in Wuhan, China, and extended from there to the rest of the world. While this was true, the use of such derogatory terms did not help with the global cooperation required to deal with it in unison and in the best possible way. Instead, he was fueling a conspiracy theory that had no place in the effort to solve the health crisis.

- ***Not wearing a mask.*** From the outset, President Trump considered the use of face masks as unhygienic. He was always defiant about their use and rarely used one. However, this attitude took a turn in the middle of the year, amid rising infections across the country, when he conceded that the pandemic "may get worse before it gets better."[13]

- ***Temporary quarantines.*** States like New York and California decreed total lockdowns for their inhabitants. Not all states followed their lead and the US President himself resisted it, continually stating that the cure could not be worse than the problem itself. Trump stated: "More people... are going to die if we allow this to continue. You're going to lose more people by putting a country into a massive recession or depression. You're going to have suicides by the thousands."[14]

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[12] *WorldoMeters* global coronavirus classification, as at November 8, 2020: https://www.worldometers.info/coronavirus/?

[13] BBC Mundo (2020). "Trump cambia el tono y reconoce que la pandemia de coronavirus puede empeorar antes de que mejore", on *BBC Mundo*, published on July 22. *See* https://www.bbc.com/mundo/noticias-internacional-53499957

[14] Infobae (2020). "Las nueve frases de Donald Trump que explican por qué cree que no hay que parar la economía mientras se enfrenta el coronavirus", in *Infobae, published March 24. See https://www.infobae.com/america/eeuu/2020/03/24/las-nueve-frases-de-donald-trump-que-explican-por-que-no-hay-que-parar-la-economia/*

- **Withdrawal from WHO.** From March, President Trump assured that the statistics provided by WHO were false; he also linked the organization to China and to the country's Communist Party. He later warned of his intention to withdraw and redirect funds to other agencies. Finally, the UN was notified of the US exit on July 7, which was due to take effect from July 2021.

- **Challenges to health experts and scientists.** President Trump's confrontational style led him to permanently overrule or underestimate medical or scientific approaches to the protocol for treating COVID19 patients. Anthony Fauci, infectious disease expert and one of America's most respected scientists, was repeatedly discredited by Trump, who argued, "Dr. Fauci is a good man, but he's made a lot of mistakes,"[15] and even called for his dismissal by sharing a tweet under the #FireFauci hashtag.

- **Medical disinformation.** Just as disinformation has been a constant for accusing the scientific community or creating conspiracy theories around the origin of the virus one of the major controversies caused revolved around Trump's own medical recommendations.

  One was the suggestion that the virus could be treated by rays of light or with injections of disinfectant to clean the lungs.

- **Clashes with journalists during press conferences.** Throughout the pandemic, almost daily press conferences took place in many of the countries affected by COVID19. However, President Trump's arrogant style with journalists has been the common attitude, in addition to disdain and belittling due to the content of the questions,

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[15] D'Antonio, Michael (2020). "La absurda trama contra Fauci", on *CNN En Español* (Atlanta), July 15 https://cnnespanol.cnn.com/2020/07/15/opinion-la-absurda-trama-contra-fauci/

creating tense and uncomfortable moments. Even in situations such as, for example, when the journalist was an Asian-looking woman or whether or not a journalist was wearing a mask.

- *Social media posts.* Donald Trump has always been a big social media user, especially of Twitter which has been his favorite and he uses it very skillfully in his irreverent, direct and confrontational style. However, following a wave of accusations of disinformation and due to the proliferation of fake news, the social media giants have taken measures to tackle this problem. Twitter and Facebook reacted strongly to posts by the President himself in which he declared that children are virtually immune to COVID19. The digital platforms deleted the information and Twitter even blocked his account. On other occasions, Twitter has labeled other posts 'misleading content', which sparked the President's fury against tech corporations.

In a recent interview, Francis Fukuyama describes this whole picture, saying:

"The country is facing a huge crisis of trust because many Americans do not trust the government or their fellow citizens. Our response to COVID19 was undermined by the fact that the existing polarization has completely infected the pandemic response. This is seen in silly little things like wearing or not wearing face coverings. There are many American conservatives who think that wearing a mask is a sign of being a liberal and that if they want to support President Trump they should not wear them. Even if the public health experts say that it's a good idea to do so! Similarly, many Republican governors are reopening their economies very quickly. In Florida,

Texas, Georgia and other states, they think that's what conservatives should do. As a result, infection rates in those states started to rise very quickly. In short, these are irrational decisions that respond more to political tribalism than to a scientific assessment of the data and suggestions by health professionals."[16]

Yet Donald Trump is not the only president in the American hemisphere to display a peculiar and confrontational style of dealing with COVID19. Very similar situations of rejecting the science, lack of empathy and prioritizing their own political interests over the health and safety of the population have also been observed in Mexico, with Andrés Manuel López Obrador, and in Brazil, with Jair Bolsonaro.

Since his 2018 presidential campaign, Jair Bolsonaro has used politically incorrect speech and made strategic use of social media to spread his messages. However, his methods were heavily criticized because of: a) his hate speech towards the country's minorities, b) controversial statements, c) spreading fake news, d) defamation of his opponents, e) the use of trolls and bots on social media to send his content viral, among other aspects not fitting of a clean election campaign.[17] Yet his incendiary rhetoric, populist messages and techniques played to his advantage: they won him the election and he assumed the presidency of Brazil on January 1, 2019.

During the pandemic, Bolsonaro has resisted declaring long lockdowns for fear of paralyzing the country's economy and refused to wear a mask or to promote its use or to decree preventive measures. He has also encouraged mass gatherings and the crowds rallied at his political events have defied the scientific community's

[16] Fukuyama, Francis (2020). "Es un tiempo para las democracias" [Interview], in *El Tiempo newspaper, September* 5. *See* https://www.eltiempo.com/mundo/eeuu-y-canada/es-un-tiempo-muy-peligroso-para-las-democracias-francis-fukuyama-536237

[17] Ford, Elaine (2019). *El reto de la democracia digital. Hacia una ciudadanía interconectada.* Lima: KAS, JNE, ONPE.

methods and treatments to cure the virus. From the outset, he likened COVID19 to a minor flu, minimizing its effect and impact on the population. This attitude was challenged by state governors and health authorities.

As Gil Castillo notes: "Another example was the use of hydroxychloroquine, a drug defended by Bolsonaro, which generated an avalanche of fake news about the legitimacy of its use. The consequences of this crisis include the dismissal of two health ministers (Mandetta and his successor, Nelson Teich) and the justice minister, the iconic leader of Operation Car Wash, Sergio Moro. There are numerous interconnected points whose focus is always the same: the intense production of fake news to destabilize enemies or divert attention from issues that are not favorable for the government."[18]

Mexico has experienced a similar situation. Although President Andrés Manuel López Obrador (AMLO) represents a left-wing sector, his populist style is not far removed from that of the two presidents analyzed above at the other political extreme. AMLO too underestimated the effect of the virus at the start of the pandemic. He delayed ordering lockdowns, summoned crowds and, in his lengthy press conferences, he urged people to go out, hug one another and stick with their routines so as not to paralyze the country.

According to the experts, there is no truth to the information at his press conferences. The firm SPIN Comunicación found that from December 3, 2018 to July 10, 2020, the President made a total of 29,703 inaccurate statements, an average of 73 per conference. The President's constant attacks on the media show that he does

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[18] Ford, Elaine (2019). *El reto de la democracia digital. Hacia una ciudadanía interconect-ada*. Lima: KAS, JNE, ONPE.

not value them as a legitimate interlocutor, but merely as a tool to spread his words.[19]

To date, Brazil and Mexico rank 3rd and 10th, respectively, in the global classification of COVID19 infections. Brazil follows the United States and India, with figures of more than 161,000 deaths and over 5,000,600 infections.[20] Clearly, both countries are facing a severe health crisis, but with the populist attitude of their respective leaders it is possible that this situation will worsen along with the conditions of their populations.

Approved pandemic management & success stories

In general, we have seen similar responses to the pandemic from populist leaders in the US, Brazil, and Mexico. Their denial of the virus, questioning of the scientific community, refusal to order social distancing in an attempt to protect the economy, spreading of inaccurate information about treatments, and the harmlessness of the virus have all been common traits during the pandemic in 2020.

Nonetheless, this carefree style of governing also comes at a price: popularity in the polls. A *Political Dialogue*[21] report from April showed the popularity of presidents plotted against the measures they had taken during the first pandemic months. Three variables were used to understand the change in popularity: 1) early appreciation of the crisis, 2) speed of action and 3) scope of lockdown measures.

[19] Espino, Luis Antonio (2020). "La propaganda de AMLO es un éxito. Estas son las claves", in *The Washington Post* (Washington D.C.), published on October 7. *See* https://www.washingtonpost.com/es/post-opinion/2020/10/07/la-propaganda-de-amlo-es-un-exito-estas-son-las-claves/

[20] *WorldoMeters* global coronavirus classification as at November 8, 2020: https://www.worldometers.info/coronavirus/?

[21] "Aprobación presidencial en tiempos de coronavirus" report in *Diálogo Político*, April 28, 2020. https://dialogopolitico.org/comunicacion/aprobacion-presidencial-en-tiempos-de-coronavirus/

Figure 1.

The chart shows that approval in Brazil and Mexico fell, while Argentina, Chile, Colombia and Peru saw a significant increase in that first period. For September, almost six months after the start of the pandemic, an Ipsos[22] survey has shown that only 28% of Mexicans approved the handling of the virus by President AMLO, while President Bolsonaro's approval had dropped to 15%.

The situation with President Trump is different, since the United States held elections in 2020 to vote for the next president and Congress of the country. The result of the elections held on

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[22] "El manejo del virus en la región" special, *El Comercio* newspaper, page 24, September 6, 2020.

November 3, which gave the victory to his Democratic opponent, Joseph R. Biden, was a clear sign of the rejection of his administration. And this is largely due to the way he has handled the pandemic, with a record number of deaths according to global indicators and because the infection peak took place around voting days, with more than 126 thousand cases per day.

While Donald Trump remained popular and won 71 million votes, the US polling booths gave the win to Biden. On this point, Peruvian political scientist Eduardo Dargent notes: "this politicized base explains Trump's popularity in the election, despite the mistakes of his administration and a pandemic that rocked the country. Without the pandemic, Trump would have won." [23]

In his column, entitled "¿Por qué sacar a Trump de la Casa Blanca?" [Why take Trump out of the White House?], journalist Andrés Oppenheimer remarked: "I cannot support Trump because his shocking handling of COVID19 has resulted in a record number of deaths." Trump was aware of the lethal nature of the coronavirus from the beginning—he admitted it in a taped interview in February—but preferred to lie to the American people out of fear that the pandemic would ruin his electoral chances. Instead of leading by example, wearing a mask and practicing social distancing, Trump mocked all of it. And in so doing, he violated his primary duty as president: to safeguard the lives of the American people." [24]

But during the COVID19 pandemic there have also been success stories of leaders who have addressed the health crisis. Digital media has served to show the world that there are also efficient, well-versed, correct leaders who have managed the pandemic successfully, such as the female leaders: Angela Merkel (German

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[23] Dargent, Eduardo, "Polarización", op-ed, *El Comercio* newspaper, page 23, November 7, 2020, Peru.

[24] Oppenheimer, Andrés (2020). "¿Por qué sacar a Trump de la Casa Blanca?", in the *El Comercio* newspaper (Lima), published on October 19, p. 27.

Chancellor), Jacinda Ardern (Prime Minister of New Zealand) and Tsai Ing-Wen (President of Taiwan). They have shown discipline, sensitivity, empathy and capacity for action, controlling the number of deaths and infections in their respective countries, thereby achieving effective results.

Chancellor Merkel has been widely recognized around the world for the way in which she has handled the coronavirus crisis. Germany has had high numbers of infections since the start of the year, but Merkel's scientific rigor and calm communication to the public have been her key strengths leading to successful health measures in the country. And in contrast to Donald Trump, New Zealand's Prime Minister, Jacinda Ardern, was re-elected in October with a historic absolute majority of 49 percent of the vote. Her hard work to tackle COVID19 in the country has raised public confidence and her popularity. At age 40, Ardern is among the leaders receiving the most praise for the results she has achieved, combined with her dedication and fortitude in dealing with the crisis.

As is clear, both polls to measure popularity and ballot boxes in electoral processes have been the most efficient gauge of public discontent or satisfaction with their leaders and how they have steered the COVID19 health crisis. Certainly, the biggest support from the population has been for the top-performing leaders who have acted responsibly, weighing up the type of policy in favor of the common good.

To conclude, it is important to mention that the current digital times have served to unmask populist leaders. Firstly, due to the proliferation of information in continuous circulation on social and digital media. And secondly, because these same leaders and their inner circle of government are active users of online platforms, making them a first-hand source for information, testimonials and statements.

This is in addition to the fact that, in the face of high volumes of disinformation and fake news, the tech giants have taken drastic measures to counter the situation, namely: moderating content, guiding users towards official information and sources, and banning ads with fake content about COVID19, among others. Of course, there will always be more to do because of the importance of social media for the daily lives of digital users, but it is nonetheless an important effort that reflects a commitment to address these issues.[25]

Moreover, platforms like Facebook and Twitter increasingly expose leaders who do not follow the ethical principles of truthfulness, respect and tolerance when posting or sharing information. They employ tags and warnings that invite the user to contrast the content with official sources to learn the facts.

The Internet, technology, and the Web 2.0 will be instrumental in determining the type of future leaders. This will depend on the responsible actions of individuals and the quotas implemented by tech corporations on their platforms to prevent not only the proliferation of false information, but also the rise of new populist leaders who challenge humanity.

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[25] Ford, Elaine (2020). "La desinformación y las *fake news* en tiempos de COVID19", in Castillo Gil, and Juan Sebastián Delgado (coords.). *Entre información y conspiración. Comunicación digital en tiempos de crisis.* Montevideo: KAS, p. 60. *See* https://dialogopolitico.org/wp-content/uploads/2020/09/Entre-informaci%C3%B3n-y-conspiraci%C3%B3n_web.pdf

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Oppenheimer, Andrés (2020). "¿Por qué sacar a Trump de la Casa Blanca?", in *El Comercio* (Lima), published on 19 October, p. 27,

Redacción *BBC Mundo* (2020). "Trump cambia el tono y reconoce que la pandemia de coronavirus puede empeorar antes de que mejore", in *BBC Mundo*, published on 22 July. *Cf.* https://www.bbc.com/mundo/noticias-internacional-53499957

Redacción *Diálogo Político* (2020). Informe "Aprobación presidencial en tiempos de coronavirus", in *Diálogo Político*, 28 April 2020. https://dialogopolitico.org/comunicacion/aprobacion-presidencial-en-tiempos-de-coronavirus/

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03.

Álvaro Ramírez-Alujas
(Chile)

QUARANTINED DATA? THE IMPACT, SCOPE AND CHALLENGES OF OPEN DATA DURING COVID19

Álvaro Ramírez-Alujas (Chile)

"Mother, should I trust the government?"
Pink Floyd, *The Wall*, "Mother" (1979)

How do rates of COVID19 infection increase? How do populations respond to lockdown measures? How is the pandemic affecting the economic and social activity of communities beyond health? What can we do to mitigate risks and support families in this context? The answer to these and other key questions is part of the intense global public debate on the management of the health crisis and how appropriate public policy measures have been taken in order to combat the impact and effects of COVID19 around the world. The common ground to all of them? The availability and use of public data and information.

This chapter reflects on the relevance of public information and the availability, processing and use of open data as the primary hub and key ingredient in the responsiveness of governments and public institutions to the COVID19 pandemic and its multiple impacts on

society. Discussions are underway concerning the scope, paradoxes, lessons learned, and visible challenges with respect to the available evidence and comparative analysis of government strategies in the region, incorporating the urgent need to shift towards a more robust, sustainable data infrastructure anchored in a logic of strengthening the ecosystem of actors (public and private sectors, civil society and the scientific community) to shape a framework of governance, and a strong, emerging institutional architecture based on data management for sustainable development on a human scale.

COVID19 as a catalyst for the need to have a critical data infrastructure in the exponential age

The COVID19 pandemic has marked a crucial turning point in addressing and highlighting the importance of reliable public data and useful real-time (quality and timely) information in order to validate and sustain sound political decision-making in contexts of radical uncertainty, volatility and complexity. After years of debating about data, the facts have crudely shown that, without them, any crisis strategy, regardless of its nature or scope, will have no future, purpose or impact.

As never before, the idea that data is the fundamental raw material for dealing with systemic crises made so much sense and became so much more relevant. Overnight, people became aware that data is not something trivial, it is not something that should be left to chance or managed in some makeshift way. Nonetheless, despite having prepared for years by investing in capabilities, platforms and transparency portals—management, openness, and data processing mechanisms—the results show that these efforts were subpar and should prompt reflection on the need for an urgent rethink to understand once and for all that *public data is a critical infrastructure for development* and a fundamental link in the architecture of our institutions and

their governance mechanisms for public affairs. It is no longer a question of continuing with sporadic hackathons, scattered and fragmented initiatives on the use of data to assemble useful prototypes for specific purposes, or continuing to replicate more and more layers of digital fabric in the form of open-data portals that do not even talk to one another in a desert of interoperability, safety and sustainability, with few exceptions.

COVID19 woke us up from the technological lethargy and we realized that the problem was not necessarily in the technique, the tool, or the digital housing. The evidence suggests that the fragility of response capabilities lies, among other things, in the absence of a *data culture*, a genuine space for institutional appropriation and recognition that *data is the essential flow in decision-making processes and public action, in order to create value and save lives*, and that we cannot continue to regard it as superfluous or incidental, something with which we can feasibly dispense. The certainty, trust and sustenance of public power lies in the management of data, in its transparency and integrity, but all this requires us to resolve nuances, harmonize points of view (on issues of access to public information and protection of personal data, for example) and, in some cases, to respond urgently to paradoxes and contradictions.

In this context, unfortunately, it is possible to show that all the investment of more than ten years in government openness, expensive architecture and digital platforms (transparency and open data portals), as well as regulations and protocols for the publication of information, were not only insufficient and, in many cases, pretty much useless, but have also highlighted the fact that there was no real awareness of how crucial it is to understand that data *is a critical infrastructure, a public good of basic need, fuel for managing complexity and fueling responsible and evidence-based public policy decision-making*, and that much of the public value that can be

generated in it depends on the *construction of a genuine, active and interdependent ecosystem of organizations and actors that can play a fundamental role in this scenario*, processing data, especially the scientific community and diverse civil society organizations that, throughout 2020, have made available their capacity and talent to unite efforts and help mitigate the impact of the crisis on its healthcare, economic, social and even political expression.

In this same line of thinking, and much more seriously, insufficient care in the quantification and data used to inform and construct the narrative on the COVID19 pandemic has not only served as input for poor public-policy decisions and inadequate measures—particularly those on confinement processes, dynamic quarantines and case traceability for effective infection control—but has been incomplete for the (terrible and, in some cases, chaotic) management and communication of risk, among other critical topics, depending on the country and context. The data, or lack thereof (in quantity and quality, reliable and granular), has rendered invisible important percentages of the population who, paradoxically, have suffered the most from the crisis and its various effects, having seen their lives turned upside down, and requiring the urgent and essential care, closeness, proximity and help of the State.[1]

There are a number of cases in this situation. While Latin America had time to prepare better, structural conditions and vulnerability gaps in economy, health and social support ultimately made the region a hotspot for the spread of COVID19, coupled with a lack of preparedness in information management and adequate data infrastructure, some of which was reflected

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[1] Voiceless, invisible communities in the shadows that include, but are not limited to, undocumented migrants and refugees, members of the labor force working in submerged and/or precarious markets such as sex workers, farm workers, indigenous communities, impoverished families, domestic violence victims, and so many others.

in the lack of an apparent relationship *between reaction capacity and measures taken, and the health outcomes achieved.*

A recent study[2] reviewed the early months of the COVID19 response and the strategies implemented in five countries in the region (Brazil, Chile, Colombia, Ecuador and Peru). The study points to a clear inconsistency in the publication of official information and the databases provided by governments, and concludes that the quality and availability of epidemiological data is a significant limitation that brings to light deficiencies in disease monitoring in the selected cases, traceability of infections and mitigation measures, appropriate treatment and confinement. It is an important forewarning for ensuring a well-planned response and recovery strategy, and that decision-making and policies are evidence-driven, data-driven and centered on the most vulnerable population sectors (Benitez *et al.*, 2020).

In addition, despite countries' efforts to improve data publication, there have been constant changes to the information provided to the population and the methodologies used to calculate cases, deaths, and other relevant indicators. In Brazil, for example, the government scrapped the publication

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[2] The study was based on official data published by the ministries for health of each country, although there are several caveats. First, there are many cases under investigation in Brazil and Ecuador. In addition, for Brazil, Chile and Ecuador, inconsistencies have been brought to light between the data reported by the ministries of health and analysis by researchers and academics using public data. Regarding the breakdown of data, Chile, Peru, Ecuador and Brazil publish aggregated data and also include a degree of disaggregation (i.e. age, gender, region) for daily (or periodic) cases and/or deaths. By contrast, Colombia is the only country with detailed microdata for each case (including demographic variables and information on health status: hospitalized, recovered, deceased). Brazil and Ecuador do not publish information on the number of patients in intensive care, while Chile and Peru publish the total number of patients in intensive care each day, although there is no information on how many patients are hospitalized each day for COVID19, or the length of these hospital stays. Since June, Chile began to publish weekly total expense data, but the aggregation level does not permit analysis of daily income or length of stay (Benítez *et al.*, 2020).

of epidemiological reports, which was reinstated after the intervention of the supreme court. In Chile, the Ministry of Health was forced to correct deaths following the publication of studies reporting significant differences between Civil Registry data and official COVID19 reports (Benitez *et al.*, 2020). These events affected transparency and risk communication and undermined public trust in the authorities, but also opened the door to a permanent state of friction and distancing between research institutions, experts and academia, who are still trying to comprehend the situation and support a better management of the pandemic with data analytics and collective intelligence.

Something similar has occurred in Argentina with regard to the active strategy of publishing datasets managed by the Ministry of Health:[3] the complete COVIDSTATS platform (*providing access to official statistics*) is available within the citizen space[4] and employs graphs and maps, diverse information and simplified but detailed data on the pandemic, based on official sources and evidencing the obvious lag in the delivery, quality and timeliness of data made available by the government, especially the chance to non-updating of the death toll, which has made it possible to adjust and improve the relevant information published for the population.

In parallel and as a counterpoint to the data situation, the local government of the city of Buenos Aires developed a system using machine learning algorithms based on voice, breathing and cough sounds that is capable of detecting cases of COVID19, using technology and artificial intelligence to accelerate and enhance the remote testing and diagnostics strategy to combat

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[3] Open data portal of the Ministry of Health of the Government of the Republic of Argentina: http://datos.salud.gob.ar/dataset

[4] See: https://covidstats.com.ar/panorama

the pandemic.[5] The pros and cons are clear and concern the huge challenges involved in integrating more holistic work among data analytics, algorithms and artificial intelligence applied to institutional management, combining skills and talent from the public and private sectors, civil society and academia for the common good in general.

Given all of the above and other factors related to lack of preparedness for an unprecedented global health crisis, many historically marginalized communities have often been disregarded and, in many cases, received the belated support of a distant and sometimes indifferent institutionality. In this scenario, lack of data (real or intentional) is a dangerous form of invisibility that contributes to perpetuating inequalities and delaying timely, responsible and assertive care for thousands of families. If data is a source of power, the crisis has shown that not only is it poorly distributed, it is unpredictably processed and used and, in many cases, poorly managed. It emerges as a new form of asymmetry, a new form of inequality in a digital world that also fails to reach large majorities of vulnerable populations. Were we modern—or were we living the illusion of being modern—until a small and insignificant virus exposed the cracks of a profoundly unequal, exclusionary and structurally deficient development model in key areas for wellbeing, namely the gap in access to digital infrastructure (ECLAC 2020).

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[5] The development involved the task of collecting 1,000 positive coughs tested against 1,000 negative coughs. These databases are used to train a neural network with the ability to learn from patterns of positive patient coughs and distinguish them from the others. The information used is kept strictly confidential in order to protect the privacy of participants and is only accessible to physicians and health authorities. How could it be used? A person who wants to know whether their symptoms are compatible with COVID19 will answer the protocol questions designed by the health authorities and then send a voice note with their cough. The chatbot will recognize and analyze it through a developed neural network to determine whether it matches positive case patterns. Source: El nuevo sistema con inteligencia artificial que reconoce toses compatibles con COVID19 [accessed on October 14, 2020]. *See* https://www.buenosaires.gob.ar/laciudad/ noticias/la-ciudad-creo-un-sistema-con-inteligencia-artificial-que-reconoce-toses

Comparison of government strategies on information and data: evidence and gaps to address

A recent study compared the responses of 21 countries across six continents in terms of public data and information access policy, and identified six emerging functions as key ways in which governments have used these inputs to address the pandemic (Meijer *et al.*, 2020). These functions are:

1. *Information management for crisis management*. The management of information and data on infections, deaths, use of hospital beds, availability of pharmaceutical products, hospital staff, etc. is essential for crisis management responses and management of public resources.

2. *Publishing public information for citizens*. Providing citizens with up-to-date information and data on COVID19 cases, traceability, deaths, etc. is key to generating support for government policies seeking to limit contact, educate the public and legitimize public action.

3. *Providing digital services to citizens*. Government portals play a key role in the development of health services, but they also provide financial support and access to other key government services in times of crisis.

4. *Tracking citizens in the public space*. Monitoring the public space and the movement of people is a key part of government activities to enforce territorial lockdown and quarantine measures for infected persons.

5. *Facilitating information-sharing among the public*. This allows the public to adjust their behavior based on the possible risk of infection, namely through the *Corona-App* for cell phones, which allows the public to share information on the possibility of having close contact with a person who has the disease, risk areas for infection, etc.

6. ***Developing innovative responses to COVID19***. The crisis has required new and innovative responses, with many countries developing specific strategies and interventions to strengthen their innovation capacity through intensive data use.

A detailed comparative study on open data repositories and sources around the world (Alamo *et al.*, 2020) concludes that, unfortunately, the situation is far from ideal due to a number of problems, such as: data inconsistencies, changing criteria, the wide variety of sources, metrics that cannot be compared across different countries, delays, etc. In spite of these difficulties, however, the availability of open data and related variables on the pandemic, such as portals/platforms and re-use mechanisms (Table 1), provide many opportunities for different communities: epidemiologists, data-driven researchers, healthcare specialists, research journalists and activists, data scientists, etc. This is regarded as a vast space of possibilities that expands the scope of the data community and extends, nurtures and helps crystallize efforts to strengthen a genuine global data ecosystem for a development that uses a more holistic and cross-cutting perspective to coordinate strategies capable of responding to present and future challenges in smart data governance.

Table 1. *Examples of COVID19 data portals worldwide.*

Country	Source	GitHub repositories
Argentina	Ministry of Health https://www.argentina.gob.ar/coronavirus/informe-diario	Covid19arData https://github.com/SistemasMapache/Covid19arData
Australia	Australian Department of Health https://www.health.gov. au/news/health-alerts/ nov-el-coronavirus- 2019-ncov-health-alert/ coronavirus-covid-19-current-situation-and-case-numbers	covid-19-au https://github.com/covid-19-au/covid-19-au.github.io

China	National Health Commission of the PRC http://en.nhc.gov.cn/Daily-Briefing.html	JHU https://github.com/CSSEGISandData/COVID-19/, Midas-China https://github.com/midas-network/COVID19/tree/master/data/cases/china
France	Public Health System of France https://www.santepublique-france.fr	opencovid19-fr https://github.com/opencovid19-fr/data/blob/master/README.en.md , FRANCE-COVID19 https://github.com/cedricguadalupe/FRANCE-COVID-19
Germany	Robert Koch Institute https://www.rki.de/EN/Home/homepage_node.html	covid-19-germany-gae https://github.com/jgehrcke/covid-19-germany-gae
Iceland	Government of Iceland https://www.covid.is/data	gaui-covid19 https://github.com/gaui/covid19
Italy	Civil Protection Department of Italy http://www.protezioneci-vile.gov.it/attivita-rischi/rischio-sanitario/emergenze/coronavirus	pcm-dpc https://github.com/pcm-dpc/COVID19
Paraguay	Ministry of Public Health and Social Welfare https://www.mspbs.gov.py/reporte-covid19.html	covidpy-rest https://github.com/torresmateo/covidpy-rest/blob/master/data/covidpy.csv
South Africa	National Institute for Communicable Diseases https://www.nicd.ac.za/	covid19za https://github.com/dsfsi/covid19za
South Korea	Centers for Disease Control and Prevention https://www.cdc.go.kr/board/board.es?mid=a30402000000&-bid=0030	COVID19-Corea https://github.com/parksw3/COVID19-Korea

Spain	Ministry of Health https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/home.htm	datadista-Covid-19 https://github.com/data-dista/datasets/tree/master/COVID%2019
United Kingdom	Public Health England https://www.gov.uk/government/publications/covid-19-track-coro-navirus- cases	covid-19-uk-data https://github.com/tomwhite/covid-19-uk-data
United States	Centers for Disease Control and Prevention https://www.cdc.gov/	JHU https://github.com/CSSEGISandData/COVID19/ , NY Times https://github.com/nytimes/covid-19-data

How much information and data are Latin American governments providing on COVID19?

The transparent communication of data on the impact of COVID19 is a powerful tool to better implement policies to mitigate its impact and to obtain the potential support and confidence of the public in government strategy. On the one hand, it is useful for civil society, scientific communities and public policy experts to be able to evaluate the action taken and make evidence-based recommendations. And, on the other hand, it is a powerful tool for governments to explain the actions that they take in an informed way and be held accountable. Various initiatives have emerged in the region to analyze the availability and quality of data released by governments and to set up platforms for monitoring, contrasting and fact-checking official information.

In July 2020, Chile's Smart Citizen Foundation (*Ciudadanía Inteligente*) published a study that reviews and evaluates the quality of openness of official COVID19 data published by central governments in twenty Latin American countries, considering two categories of analysis: *general statistics*, or aggregated information provided by governments

on data relating to the course of the disease, and *anonymized microdata*, i.e. disaggregated data with which it is possible to identify patient information but where sensitive information is withheld in order not to infringe their data protection (individualized but not identifiable data).[6] The top-scoring countries for the publication of general statistics so far are Mexico and Colombia, while those with the lowest scores are Bolivia and Nicaragua (Figure 1). Notably, only eight countries publish the information (in whole or in part) in a database format. With regard to anonymized microdata, only three countries in the region provide this information: Mexico, Colombia and Paraguay (*Ciudadanía Inteligente*, 2020). This evidences the institutional insufficiency, fragmentation and insularity with which data is managed inside governments and the gaps that can impact the navigation of the crisis due to the lack of appropriate instruments and resources.

Figure 1. COVID19 data provided by governments in Latin America.
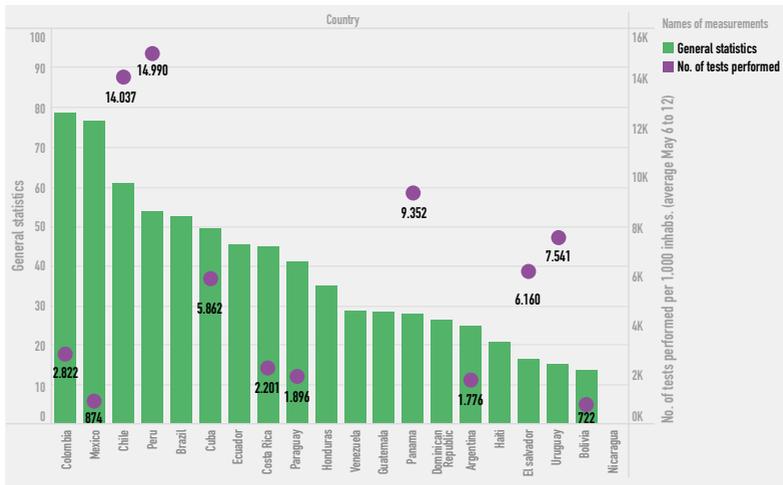
Source: Ciudadanía Inteligente, July 2020.

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[6] The metric was constructed from a set of variables in each case: a) For official statistics, four types of variables were grouped: database characteristic; test; numbers of infected and deaths; and infrastructure; b) For anonymized microdata: geographical variable; demographic, medical condition; test; status of the infected person. For further details of the methodology, selection of variables assessed and scores, see the website: https://ciudadaniai.org/assets/attachments/metodologia-informe-covid19-mayo.pdf

Open public data and COVID19 pandemic. Lessons learned from the health crisis and its effects on the region

As suggested, access to public information and open (transparent) data are a mechanism for control by institutions and citizens in times of crisis and should be considered in the future a priority right of citizens. Considering the regional experience, we can highlight seven lessons for dealing with public data on a pandemic (Baeza-Yates and Peiró 2020):

1. *Data collection errors*: without data, it is impossible to understand how the pandemic is progressing (or not), but this is also true if we do not know how they were obtained. Testing policies are key to data collection.

2. *Data inaccuracy*: In general, officially reported cases are far from accurate, given that the pandemic is a dynamic process that depends on many factors being monitored simultaneously and without a common global standard (tests performed, number of infections, rate of recovery and active patients, mortality rate and lethality, which is not the same for all countries, etc.).

3. *Chaos and inaccuracy in death counts*: Confusion in data processing (due to underlying disease or COVID19, for example), heterogeneous methodologies and errors in the sources used (in medical centers or residences, at home without a confirmed cause, etc.).

4. *Temporal paradoxes*: The effects of the virus are experienced in the past on a daily basis; the data are unable to provide a current picture due to their rapid obsolescence (delayed data flows and proper management), which makes it difficult to model how the pandemic is progressing over time and the multiple effects of this.

5. ***Importance of transparency***: This element is key because data transparency is the expression of the public's level of trust in government. Concealing information serves only to generate distrust and has the effect of reduced legitimacy of public action to tackle the crisis.

6. ***Privacy in pandemics***: Is privacy the price to be paid to survive a pandemic? The false dichotomy that this implies should point us to the need for responsible, ethical processing based on the processing and delivery of anonymized and aggregated population data that guarantees, safeguards and respects privacy and avoids the temptation of prolonging government surveillance and monitoring of the population beyond the exceptional nature of these measures.

7. ***The obsession with comparisons***: If the criteria differ in each country, comparing them is a complex matter, even when we are measuring the same thing: biases emerge and any attempt to contrast is futile given the heterogeneity of the health policy measures, strategies and instruments used in each case (tests performed, lockdown measures, rates of infection, lethality or mortality by population, etc.). While it is feasible to try to learn from the experience of other countries, the design of measures to fit the reality of each context must be the result of a country's own analysis and the joint efforts of the actors in each specific case.

An important lesson learned from the health crisis is that the data is imprecise due to the very nature of the pandemic and the diversity of criteria for recording, accounting and processing it. In this case, *data quality means veracity, not accuracy,* especially when we take into account the time horizon, which further complicates interpretation of the data and its usefulness for validating and

justifying public policy measures. In any event, data is a priority resource for sustaining a robust, reliable and credible government strategy that, moving forward, requires strengthening data collection mechanisms and protocols, strengthening the role and capabilities of units responsible for open public data platforms and regulations, and integrating broader spaces for collaboration, joint work, and cooperation with ecosystem actors in our countries, especially the civic technology community and civil society organizations, experts and scientists and, most importantly, the private sector linked to the technology industry and digital economy.

What can be done? Response, recovery and reform. The 3Rs of Open Government strategies in the open data approach to COVID19

Since the birth of the Open Government Alliance[7] in September 2011, the physiognomy of public governance around the world has changed, and part of that process goes hand in hand with the promise of government openness: *transparency and access to information, citizen participation, accountability and innovation and technology*, all closely related to achieving the 2030 Agenda and Sustainable Development Goals (Naser, Ramírez-Alujas & Rosales, 2017). Open data has played a crucial role in this transit and is now a central axis of global strategies.

In the context of the crisis triggered by COVID19, in April 2020, the Partnership took the decision to design and implement a comprehensive strategy to tackle the pandemic,[8] coordinated around three priority areas: a) capacity for a (rapid) *response* to the crisis and its immediate effects on the population; b) *recovery* with regard to the promotion of measures to mitigate the impact of the crisis in health, but also in the economic and social spheres;

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[7] Open Government Partnership: https://www.opengovpartnership.org/

[3] See: https://www.opengovpartnership.org/es/campaigns/open-response-open-recovery/

and c) exploiting the window of opportunity opened by the crisis to leverage diverse reforms to help improve governance arrangements, ensuring rights and the provision of basic services to the community, and fostering a more resilient, agile and inclusive institutional fabric.

Part of the repertoire of ideas that underpinned the strategy in this area was based on: a) Citizen-led community responses, including volunteer groups and associations helping to inform the public on the risks and steps needed to address the health crisis in general and its implications; b) Participatory disaster response strategies, including working with civil society organizations (CSOs) and citizens; c) Building trust between government and citizens through strong communication and focusing on reaching vulnerable communities with the information they need; d) Transparency concerning forecasting models and data that are influencing government strategies and decisions; e) Digital platforms or apps to keep citizens informed, enable public participation and/or offer open data on COVID19; f) Digital tools to enable public participation and active civic collaboration; g) Digital and/or crowdsourced provision of public and government services; h) Protecting data rights and privacy as corporations help lead the response in many countries; i) Tackling disinformation and online fake news,[9] and j) Publishing proactive information for affected communities, including economic and social support, health measures, etc. Part of the effort centered on strengthening open data as a key area (Table 1).

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[9] A side effect of the health crisis has been the "infodemic", or invisible plague: the superabundance that hides questionable information among the truth and makes it difficult to distinguish what is reliable from what is not, thereby leading to confusion. It can be expressed as disinformation or information overload.

Table 1. Open Government and coronavirus: Open data strategy

The collection and analysis of epidemiological data for whole populations, as well as population access to a safe water source, is a critical element of the COVID19 response. From publishing statistics on the spread of the disease to mobile apps tracking people's location, governments around the world have made efforts to start collecting data in order to help shape public health policies. Open data is key to facilitating a collective and informed response to the pandemic. However, it is critical to ensure that these initiatives open up data to inform and strengthen trust in public policies while protecting privacy. Accountability, transparency and participation are essential to ensure this balance in the design of open data measures.

Source: Open Government Partnership, 2020.

On this basis, the proposed elements for *open response* include: a) Curbing contagion, extending treatment and medical care, providing safety nets for the vulnerable; b) Ensuring proactive transparency and quality information (accurate and timely); c) Providing open platforms to mobilize community assistance to health personnel and vulnerable groups; d) Purchasing medical supplies through open procurement (public and auditable), allowing for traceability, flow of the purchasing cycle and data allowing for comprehensive social control, and e) Integrating transparency, inclusion and citizen surveillance in social programs and policies.

An example of this type of immediate government-led action are dashboards that provide real-time statistical information on infections, aggregate traceability indicators, and deaths in countries such as Colombia, Uruguay, and Mexico, many of which were developed in direct partnership or with the indispensable support of civil society actors or academia and the private sector.

There are several examples of countries promoting a strategy to tackle COVID19, such as Costa Rica, where the government is adopting an open response and open recovery approach, combined with inclusive communication for priority and vulnerable groups, especially with respect to transparency in access to and the provision of support programs and the necessary accountability, open data and statistical models, as well as spaces for citizen participation to improve information on the pandemic to start rethinking what the *new normal* will be like by leveraging collective intelligence. Another example is Paraguay, which has adopted a comprehensive approach using the open government platform to report and guarantee access to information (Figure 1), the adaptation of the *Mapa Inversiones* transparency platform to report on public expenditure on the health crisis (accountability in budgets, spending and social programs), and a combination of government and citizen initiatives to respond to the effects and impact of COVID19 on the community.

Figure 1. Open government platform of Paraguay in the COVID19 context.

Source: http://gobiernoabierto.gov.py/accionescovid19/

Furthermore, the generation of tools such as the citizen platform *Frena la Curva*, which emerged in Spain, has permitted the construction of a map of community aid in times of crisis (Figure 2) that has been successfully replicated in a number of countries in our region, including Chile, Mexico, Colombia, Costa Rica, Ecuador, Brazil, Uruguay, Argentina, and Peru. In this case, the data, location and geo-referencing points of support in the community, provisions and real-time coordination between supply and demand of aid, and horizontal solidarity are the cornerstones of what we could call *data in action for the common good*, without intermediaries, adopting an agile and collaborative approach, without the enormous transaction costs of traditional bureaucratic machinery

and without a cumbersome structure that makes it difficult to come up with timely and effective responses where necessary.

Figure 2. Frena la Curva [Flatten the Curve]. Guide to citizen initiatives to tackle coronavirus, social innovation and civic resilience during the pandemic with data

Source: https://frenalacurva.net/
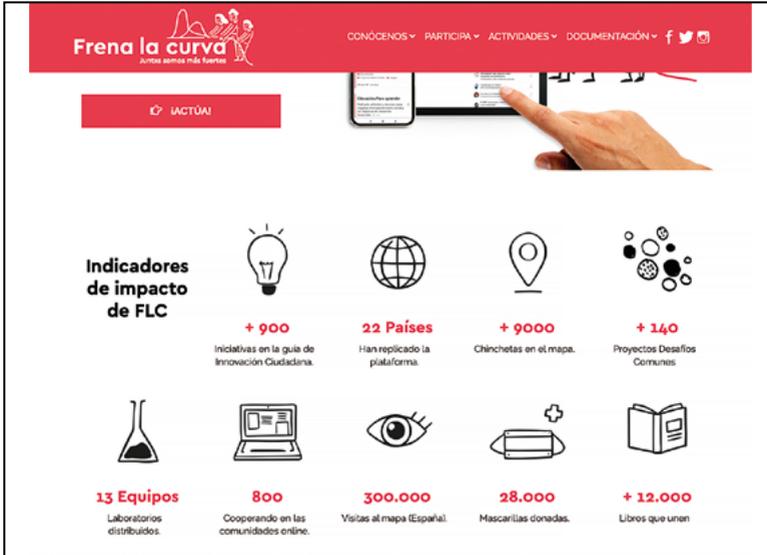
The scope of *open recovery* includes: a) Boosting economic stimulus and recovery, strengthening health systems, improving transparency and being accountable for aid flows; b) Integrating transparency, social participation and auditing/civilian oversight into economic stimulus packages; social support and programs; aid, donations, transfers and public spending; empowering civil society to follow the trail of public money/spending. And all of this takes place in a dynamic that is data-fueled and accessible and understandable to citizens, using clear and simple language.

The strategy also suggests promoting data-intensive practices, which are especially useful when there is a need to build public trust, and mitigating unwanted effects such as corruption, abuse of authority and influence peddling through: open budgets; open procurement; end-beneficiary transparency; lobbying transparency; promoting gender approaches and using gender mainstreaming in policies.

Lastly, the proposals concerning medium- and long-term *open reforms* include: a) Withdrawal of state surveillance and monitoring, establishing clear dates and protocols; b) Protection of whistleblowers, activists and the scientific community, independent media and supervisory institutions; c) Introduction of mechanisms for transparency, participation, inclusion and oversight in critical sectors, and d) strengthening accountability.

Conclusion

In the present time, data opens up a new space of possibilities, with risks and opportunities, by having the backing, evidence and support that allow us to start designing more sophisticated, more effective, and more timely responses to the many complex questions and challenges of a diffuse, volatile and uncertain environment. Data gives us a slight but important sense of certainty that allows us to coordinate and build on capabilities through anticipation and the design of lines of action and strategies appropriate to each context. The new, post-COVID19 map that is unfolding on the role of data as an essential public good, as a key critical infrastructure in the functioning of government, the private sector and civil society, cannot be left to its own devices as a space for improvisation nor can it wait for a new health or economic crisis for us to recognize that a combined, joint, cross-cutting effort is urgently required to define concrete, sustainable, resilient and useful policies in this area. It is hoped that the crisis will teach the necessary

lessons, such as those outlined in this chapter, in order to reinforce our ability to navigate turbulent times and where instruments and resources play a fundamental role, where the compass is calibrated by data, adjusted according to the evidence and data analytics.

In short, in order to manage a pandemic, we have learned that governments require dynamic capabilities, including those of adapting and learning, aligning public services with citizen needs, governing resilient production systems and, clearly, the capacity for governing digital and data platforms (Mazzucato and Kattel, 2020). With this in view, COVID19 and its aftermath will afford us a unique and unmissable opportunity to reconsider the foundations of our institutional architecture and data governance, aligning them with the needs imposed by a world in transition. It is a telling sign that many governments had a delayed reaction because their legal and technical infrastructure for data was insufficiently developed. The future is now and it is the responsibility of governments to design and configure a roadmap that lays the foundations of an open, distributed model with coordinated institutional capabilities—technological, regulatory, technical, and operational—in close collaboration with the dynamic ecosystem and data community in the region, in a genuine shift toward a new *infrastructure for trust* from, for and through data.

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04.

Carlos Vera Quintana
(Ecuador)

STATE OF THE ART OF TELEWORKING DURING THE PANDEMIC

Carlos Vera Quintana (Ecuador)

Introduction

Since the 1970s,[1] teleworking has gone through a number of stages, both conceptually as well as with regard to regulation and application, reflecting the changes in the thinking and orientation of governments, business and workers towards it.

In order to address the topic, it is essential that we first define teleworking under current conditions and for the future. This is because we are talking about socio-economic measurements, public policies and legal and contractual regulations, so we must conceptualize it in order to cover the specific aspect being discussed and to anticipate new spaces that will arise and which must also be treated comprehensively in due course.

We will adopt the definition of teleworking as "working at a distance (including working from home) aided by telecommunications and/or computer devices" (Thesaurus, ILO, 6th edition, Geneva, 2008).

The two key concepts in this definition, with which numerous business, union, and government definitions and approaches coincide, are distance and technology.

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[1] https://www.oitcinterfor.org/sites/default/files/file_publicacion/cas_ors.pdf page 126

Teleworking during the COVID19 pandemic

The world reacted, to varying extents and with diverse opportunities, by trying to minimize the economic and social impact of COVID19, which had forced humanity to retreat into unprecedented confinement. Governments took on the role of proposing emergency public policies and regulations in order to formalize new forms of work, employers reformulated their strategic and productive planning to sustain themselves in an emergency environment with restricted and even zero productivity in certain sectors, workers adapted to the changes and to new labor requirements, and citizens adopted new forms of social and economic relations in order to meet their needs and basic priorities. In days, the world realized that we were in an emergency situation that would last far longer than would have otherwise been expected and that, after overcoming the first wave of psychological impact, it would be necessary to improvise, adapt, innovate, and plan to revive basic services and systemic productivity.

In this line of action, teleworking was the most logical and viable option, which was evidenced by its promotion in the region and in the world, as a number of studies have shown.[2]

To set the scene with figures, let's look at what the Inter-American Development Bank says about teleworking in one of its most recent blog posts:[3]

> "Teleworking has been one of the most prominent issues of the coronavirus context, given that many companies have asked their employees to work from home. In this discussion, there are three fundamental aspects: working hours, private-professional life balance and productivity.

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[2] https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20058en.pdf

[3] https://blogs.iadb.org/trabajo/es/coronavirus-un-experimento-de-teletrabajo-a-escala-mundial/

Latin America is progressively coming round to the idea of teleworking. One study has found that, before coronavirus, Brazil was the country with the most employees working from home, with 12 million teleworkers, followed by Mexico (with 2.6 million), Argentina (with 2 million) and Chile (with 500 thousand). However, teleworking in our region is the subject of a clash between two worlds: that of technology, which allows lots of people to work from anywhere (provided that they have an Internet connection), and that of labor regulations, many of them conceptualized in the nineteenth century (when the technologies that we have today did not exist or were unthinkable). The fifth instalment of the *El Futuro del Trabajo en América Latina y el Caribe* [The Future of Work in Latin America and the Caribbean] series outlines how teleworking is regulated in our countries and highlights Colombia as the most advanced country in this respect.

Teleworking in our region is the subject of a clash between two worlds: that of technology and that of labor regulations."

Furthermore, in a recent study, ECLAC provides some very interesting figures and indicators on work and consumption:[4]

"Data on the movement of people at the start of the lockdown show that, in the countries of the region, the number of people going to food outlets and pharmacies fell by 51%, to non-essential goods and entertainment outlets by nearly 75%, and to workplaces by about 45%. A large share of the population is continuing to follow stay-at-home advice as a compulsory or voluntary preventative measure.

At the same time, website traffic and use of applications for teleworking, distance learning and online shopping shows a

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4 https://repositorio.cepal.org/bitstream/handle/11362/45938/4/S2000550_es.pdf

significant increase in the use of digital solutions. Between the first and second quarters of 2020, the use of teleworking solutions shot up by 324% and distance education grew by more than 60%."

Another relevant reference in this regard is as follows:

"The information provided by the *Financial Times* allows for an analysis of the most prosperous companies taking into account the sector and country in which they operate. By sector, 60% of the companies are engaged in technology and online commerce. By country, 80% of these companies are based in the United States and China."[5]

Taking into account this background, figures and potential conflicts, the question we now need to ask is whether teleworking will grow and become a permanent core activity in all geographic regions and sectors of the economy, in line with expectations that it is here to stay, or whether it is a mode of work that will become entrenched only in certain countries and sectors after the pandemic, due to the diverse factors that we shall also discuss here.

Regulatory aspects of teleworking

Regulations often lag behind practice, making it difficult or impossible to collate official figures and ruling out the possibility of basing indicators on them, promoting informality, and increasing the precariousness of unregulated work. This has occurred in Latin America and it is as a result of the pandemic that laws and other types of regulations have been introduced in order to provide a legal framework for teleworking employment relationships.

The following table was prepared in-house on the basis of the study *Guía laboral comparativa latinoamericana COVID- 19* [*COVID19 Latin American Comparative Labor Guide*],[6] conducted by fifteen legal

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[5] *https://www.ey.com/es_sv/covid-19/las-empresas-ganadoras-en-tiempos-de-pandemia*

[6] https://www.lexvalor.com/ci/public/filemanager/source/boletines/Mayo%202020/ GU%C3%8DA%20LABORAL%20COMPARATIVA%20LATINOAMERICANA%20 COVID-19.pdf

firms in as many countries of the region, and gives us a clear idea of the current situation (May 2020) in a series of countries.

Table 1.

	Specific pre-COVID19 legislation (1)	*Regulation due to COVID19 (2)*	*The worker must accept the mode (3)*	*Assimilated under normal working conditions (4)*
Argentina	NO	YES	YES	YES
Bolivia	NO	YES	YES	YES
Brazil	YES	YES	YES	YES
Chile	NO	YES	YES	YES
Colombia	YES	YES	YES	YES
Costa Rica	YES	YES	YES	YES
Ecuador	YES	YES	YES	YES
Guatemala	NO	NO	YES	YES
Mexico	NO	NO	YES	YES
Paraguay	NO	YES	YES	YES
Panama	NO	YES	YES	YES
Peru	YES	YES	NO	YES
Dominican Republic	NO	NO	NO	N/A
Uruguay	NO	YES	YES	YES
Venezuela	NO	NO	NO	YES

(1)   Specific pre-COVID19 legislation: refers to whether the study mentions the existence of a clear and specific teleworking legal standard in the country.

(2)   Regulation due to COVID19: refers to whether the country implemented a legal or regulatory standard of any kind for teleworking as a consequence of the pandemic.

(3) The worker must accept the mode: refers to whether it is voluntary and by mutual agreement between the parties (employer and worker) to accept teleworking during the pandemic.

(4) Assumed under normal working conditions: refers to whether the working conditions, protections, social security and other teleworking benefits are similar or equal to those of face-to-face work.

Most countries, as we can see from the above study, are developing specific regulations or, in other cases, fine-tuning existing regulations. Latin America still has a long way to go in this area.

The work environment of teleworking

The mandatory spread of teleworking has improved our knowledge of its conditions and characteristics for the benefit of productivity. A number of aspects necessary for the work environment can be evidenced, the most important of which are:

1. Appropriate contractual and compensation aspects for workers and employers.

2. The tools made available to workers.

3. The space dedicated to work activities at the workplace.

4. Working hours and productivity monitoring systems.

5. The participation of the teleworker in the organization for institutional work purposes (meetings, reports, hours, etc.).

Most countries in the region, as shown in the table above, have implemented different regulatory schemes, some more permanent than others, in order to ensure compliance with most of these conditions and to guarantee both the work environment for the benefit of the worker and the productive environment for the employer.

The eruption of teleworking

As the figures above show, the COVID19 pandemic has clearly boosted teleworking in the region and indeed the world, displaying a tendency towards establishing itself further when we return to the new normal, although there is no set date. This is because, employers and workers can, whether on a temporary basis or as a result of emerging conditions, opt for teleworking due to legal obligations or to meet extraordinary subsistence conditions for the economy and employment, and maintaining this mode will depend largely on the employer's ability to guarantee adequate working conditions and on productivity, which must be above or at least equal to worker productivity in face-to-face work.

The side benefits of teleworking (reduction in pollution, easing of traffic in cities or reduction in worker commutes) are also essential and motivate states to promote public policies that encourage teleworking, taking into account its social usefulness. Such policies could include:

1. Fiscal or tax incentives for employers who use teleworking on a full or part-time basis.

2. Appropriate land treatment to encourage teleworking in residential areas, taking into account the conditions in which it is carried out.

3. Fiscal or tax incentives for workers dedicating a specific space in their homes to teleworking (study, library, etc.).

These policies would require agreement among different actors working together to come up with solutions and develop proposals for the continuous promotion of teleworking as a mode of work.

Teleworking and the post-pandemic economy

At the peak of the pandemic, measures to be taken had to be emerging and urgent. Any analysis of consequences or impacts would have to wait. This is how most countries approached the issue, not only in Latin America, but in the rest of the world too. For teleworking, the idea was to reduce job losses and business closures and to put in place options for reopening the economy.

This approach was adopted by diverse actors as they went about their work. Now that a few months have passed, it is possible to conduct studies, impact analyses, proposals and discussions to review the influence of this type of work and to determine whether it will now be a permanent fixture in business settings in the immediate future. An interesting study was conducted in this regard by the Spanish trade union UGT (General Union of Workers)[7] on teleworking, indicating in its summary:

> "The massive increase in teleworking has had a number of consequences. On the one hand, many of the misgivings previously raised by the business sector have all but disappeared as it has become more and more convinced of the advantages that it offers. However, from a trade union perspective—and hence from the worker's point of view—alongside advantages in the personal and family sphere, significant uncertainties have arisen around issues such as working hours, monitoring limits, the breakdown in the boundary between private and professional life, allocation of resources, etc., health and safety, disconnection, and isolation. Uncertainties and shortcomings resulting from a poor and ambiguous regulation that may lead—and, indeed, has led— to undesirable practices and abuses of workers' rights and their working conditions."

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[7] https://www.ugt.es/sites/default/files/documento_teletrabajo_-analisis_y_propuestas_ugt.pdf

As we can see, sectoral positions are reaffirmed, but it is clear that this is an issue that requires discussion, not merely as a temporary option, but as a permanent mode of work.

This framework requires a fourth actor, one that will no doubt further incentivize teleworking: the user or consumer, who could play a decisive role in teleworking's influence on the economy if services generated directly by teleworking are selected. Such services would need to meet the following conditions:

1. Be of equal or higher quality.

2. Be of equal or lower cost.

3. Be available *just in time*.

And all this must take place in a safe and user-friendly environment for companies and workers, with a view to reducing labor gaps, especially in terms of gender, resulting from the social, preventive and mandatory isolation that largely affects teleworking. This is because women have been shown to have less possibilities for working from home, according to estimates of the Center for Implementation of Public Policies for Equity and Growth (*Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento*, CIPPEC), which has stated that:

> "Men have a higher potential for remote working (32-34%) than women (24-25%). This is explained by the types of job that they do: men mainly assume management roles, which are easier to perform remotely, while women are over-represented in the service world, which requires greater proximity. Moreover, regardless of whether or not they are able to telework, the feminization of domestic care sharpened during lockdown: women are still responsible for domestic chores and this can have a bigger impact on their productivity. Clearly, then, flexible working measures that fail to take into account gender perspective cannot promote a better work-family balance or greater co-responsibility."

This evidence, which can easily be applied to Latin America, requires us to work to reduce inequalities and secure rights through public policies, which, while being the responsibility of the State, must always involve the continuous participation of citizens, workers and employers.

As an indirect contributor to production, i.e. through secretarial, accounting, financial or administrative tasks, teleworking has a much less consumer-sensitive space, but it is equally important to consider in cost-productivity strategies.

Appropriate marketing strategies to promote services and consumer confidence in them are decisive factors in the productive commitment to teleworking.

The impact of teleworking on our lives

After just a few months of full immersion in teleworking, we are now able to analyze the impact of intensive teleworking on our lives. Highlights include:

1. It ceased to be a novelty and a temporary relief and began to be considered a serious alternative for working, retaining our jobs and improving our working and productive conditions.

2. Some workers are suffering symptoms of digital saturation, which require the consideration of aspects such as safety, comfort, occupational risks, etc., which we probably would not have spotted previously.

3. There is evidence of the need for greater worker preparation and concentration, since online activity is not as restful as was initially thought, but can actually be more demanding.

4. Aspects of our personal and private lives are being affected; our family privacy and the home space are being invaded by strangers, coupled with other conditions inherent to not having a dedicated space in which to work. We thus end up working in

the living room, bedrooms, dining room, yard, etc., subject to distractions and interruptions that we cannot always control.

Furthermore, if we take into account the numerous stories of embarrassing and sometimes comical situations shared on social media and other platforms, it is clear that we need to professionalize the teleworking space, perhaps with dedicated equipment and resources for doing so, and avoid using equipment, systems or spaces pertaining to our family, personal and private environments.

Leading institutions engaged in aiding development[8] are currently studying the impact of teleworking on society, both as a productive and a social factor. This, as we have said, highlights the importance of data-driven studies that are now sufficiently diverse and consolidated to identify trends or anticipate the future of this mode, especially now that we are at the point of gradual return to socioeconomic normality.

General pros and cons

This is a field under exploration and, hence, more studies, figures and indicators are required. Analyzing the pros and cons will allow us to translate them into benefits and risks, or simply to resolve them with organizational rules or measurements and investments. This analysis is already being addressed to some extent.[9]

The biggest benefits for workers are savings on commuting costs, flexible hours and extended working hours, zero travel time to work and back home, reduced stress from environmental effects and commuting.

The cons include invasion of the personal and private space, extended working hours, digital saturation, difficulty accessing working means and resources due to the use of inadequate and unprofessional personal or household resources (connectivity, equipment, etc.) and a reduction in shared business resources, such as printers, copiers, canteens, etc.

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[8] https://blogs.iadb.org/trabajo/es/teletrabajo-en-america-latina-y-el-caribe/

[9] https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_534817/lang--es/index.htm

For employers, the benefits include savings in workplace costs, improved productivity, especially in indirect activities (administrative, financial, accounting, legal, support, etc.), new workspaces for specialized workers, new professional and productive lines, more space for innovation and creativity.

The cons include less control over workers, higher organizational demands, digital saturation of workers, the need for new investments in equipment and systems, new regulations and standards of work, health and well-being.

For states, the pros include new job creation options, new options for development and growth through teleworking, less population stress for issues that can be dealt with remotely.

The cons include new regulatory challenges, difficulties with technological infrastructure at countrywide level, citizen teleworking culture, public sector teleworking culture, and, naturally, the social impacts arising from changing family living conditions.

For society, which includes both citizens and consumers, the pros include improvements for the environment and social relations, preparation for the digital change of the future, the obvious advantages for the digital generations, and the ideal environment for the development of new professions and careers.

On the flipside, the cons include generational stress, impacts on culture and idiosyncrasy, social and family impacts for women and vulnerable sectors in particular, and social isolation, which could replace distancing.

Clearly, it is evident that we should treat the pros as benefits, given that what we consider that cons are actually issues that can feasibly be resolved with straightforward measures, so there would be no highly complex risks involved in teleworking, especially in

specific sectors and areas of production, which could not be solved in its implementation.

The future outlook

Many countries have been working since the turn of the century[10] to change the production matrix with new, technology-based work and professional modalities. To determine what the future of teleworking could look like, we must, in the light of the issues discussed here, try and reflect on and provide answers to key questions such as:

- Is teleworking efficient?

- Is there a business culture for teleworking?

- How will teleworking evolve with disruptive technologies?

- How can we build on experiences and transform them into best practices?

- What are the recommended practices for ensuring the safety and productivity of teleworking?

- Are our human resources, technology and OHS managers trained to ensure that working from home is a success?

- How do we deal with the social and economic challenges and demands of teleworking?

Answers to several of these questions are already being developed[11] based on evidence obtained during the pandemic. Some of the keys to ensuring that teleworking is a success are progress in regulations, an improved understanding of its scope and benefits, investment by countries in technological infrastructure and connectivity, removing barriers to technology adoption and social

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[10] https://scioteca.caf.com/bitstream/handle/123456789/174/127.
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[11] https://www.economiadigital.es/directivos-y-empresas/coronavirus-el-teletrabajo-im-
provisado-no-salvara-a-las-empresas_20041035_102.html

incentives to promote leisure time, reduce social and household tensions due to permanent coexistence and ensure that teleworkers have separate and individual spaces to exercise a profession and carry out teleworking tasks under optimal conditions for all concerned to reduce the asymmetries inherent to the economy and social factors.

Teleworking figures are not yet robust enough to consider its adoption. The percentage increase in teleworking must also be analyzed to determine whether it is a partial and temporary upturn or if, on the contrary, the situation is already leveling off and it is now a direct and permanent source of primary household income.[12] Nonetheless, these figures do show a favorable trend towards the adoption of teleworking, especially in countries and firms with access to the appropriate technologies, efficient communications and a better working climate for teleworking.

A sci-fi scenario

As explained in *Teletrabajo, ciencia ficción y cibergeografía: contribuciones para comprender las nuevas realidades laborales desde las utopías y las distopías* (Teleworking, Science Fiction and Cybergeography: Contributions to Understanding New Working Realities from Utopias and Dystopias), "There are undoubtedly very telling and relevant advances in the geographic and social research on work, but for teleworking, the analytical, epistemological and conceptual frameworks are somewhat insufficient and limited. Here, we propose a reference to science fiction and sci-fi movies in particular, as a contextual and imaginative input that can contribute to the multitemporal, multiscale and multidimensional analysis of teleworking, from both the utopian and dystopian approaches."[13] This 2015 statement is wholly applicable

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[12] https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/new-evidence-platform-workers-europe

[13] http://www.ub.edu/geocrit/xiv-coloquio/ChaparroVelandiaGiraldo.pdf

today. We must begin to develop scenarios that consider elements already being studied in relation to the professions and jobs of the future, which indicate that "In the digital era, eight out of ten young people aged 20 to 30 will be in jobs that do not yet exist." Obviously, the digitalization of processes and increasing access to first-rate technologies and connectivity will boost the emergence of new professions and modes of work, since many professions could and will be automated over the next twenty years,[14] making certain professions and tasks redundant and bringing in new ones.

In a prospective exercise, we can step inside the future of this mode of work by using supposition to select the best option for building an appropriate scenario for the permanent adoption of teleworking in Latin America and the world.

Some key conditions for business to overcome the crisis and embrace teleworking.

Clearly, the economic sector needs to test its ability to adapt to change based on the restrictions of the pandemic, biosecurity requirements and the challenges of the new economy during and after this stage.

Countries and their companies will have to reformulate their production strategies, opting for diversified modes for the administrative services that support their core business or the core business that can be managed through technology.

In a world of asymmetric conditions, with some companies and countries displaying more capacity than others to take on the challenge under favorable conditions, dialog and public consensus policies will mark the difference in competitiveness during this lengthy pandemic, which is the most likely scenario today, and in the post-pandemic economy.

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[14] https://revistaempresarial.com/gestion-humana/
empleos-del-futuro-de-ciencia-ficcion-a-la-realidad-del-escritorio/

Multilateral cooperation and political and economic affinities may make regions like Latin America and the Caribbean suitable spaces for the development of teleworking hubs and services to support the global goods and services industry.

Service companies are precisely the ones promoting intensive technology use, the ones that, although still a minority, maintain innovation, adaptability and business resilience as their common factor, and the ones with the most favorable reaction during this period.

The pandemic is now an opportunity for new ventures and the development of new business management models and modes of work, among which teleworking is a very serious contender, as demonstrated by the figures and conditions that we have discussed here.

The World Economic Forum underlined three recommended measures for overcoming the crisis and achieving significant growth in the post-pandemic future. These are:[15]

1. *Combine speed and stability:* At this point in time, business needs to be nimble and responsive, placing an emphasis on innovation and dynamism in its thinking and actions. It must also maintain a solid backbone to ensure the sustained success of the business.

2. *Turn digitization into an advantage:* The pandemic has forced companies to implement digitization. This has led to structural changes, including customer preference of digital engagement and moving to remote working models for employees. The challenge for companies during this period was not only to sustain productivity through

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[15] https://www.ey.com/es_sv/covid-19/las-empresas-ganadoras-en-tiempos-de-pandemia

digitized operations, but to refocus on new opportunities spurred by digitization for the workforce.

3. *Drive systemic change through cooperation:* The Covid-19 pandemic has reminded us of how interconnected societies are today. The pandemic has brought to light the importance of collaboration among the different stakeholders and the need for systemic resilience. Partnerships between businesses will be important for their operability in the future.

The conditions for teleworking to establish itself as a permanent mode in diverse economic sectors and geographical areas lie in the macro dimension.[16] A country's ability to adopt technologies, to increase connectivity to the required levels, to prepare its workforce for this challenge and, above all, to adapt its regulations, personal and social aspects in order to consolidate and sustain teleworking will modulate the social and cultural acceptance required to take the decisive step, since the path has already been mapped.

Teleworking is no longer an emergency measure to weather the pandemic storm; it is now an option for a circular and eco-friendly economy where cooperation, strategic partnerships and agreements among the system's different parties will set the pace for survival and resurgence.

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¿Cuáles son los beneficios y los riesgos del teletrabajo en las tecnologías de la comunicación y los servicios financieros?
https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_534817/lang--es/index.htm

Teletrabajo en Colombia
https://www.teletrabajo.gov.co/622/w3-article-8228.html

Acuerdo Marco Europeo sobre teletrabajo
https://www.uned.ac.cr/viplan/images/acuerdo-marco-europeo-sobre-teletrabajo.pdf

Living, working and COVID-19First findings – April 2020
https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20058en.pdf

El teletrabajo en la encrucijada. Análisis y Propuestas
https://www.ugt.es/sites/default/files/documento_teletrabajo_-analisis_y_propuestas_ugt.pdf
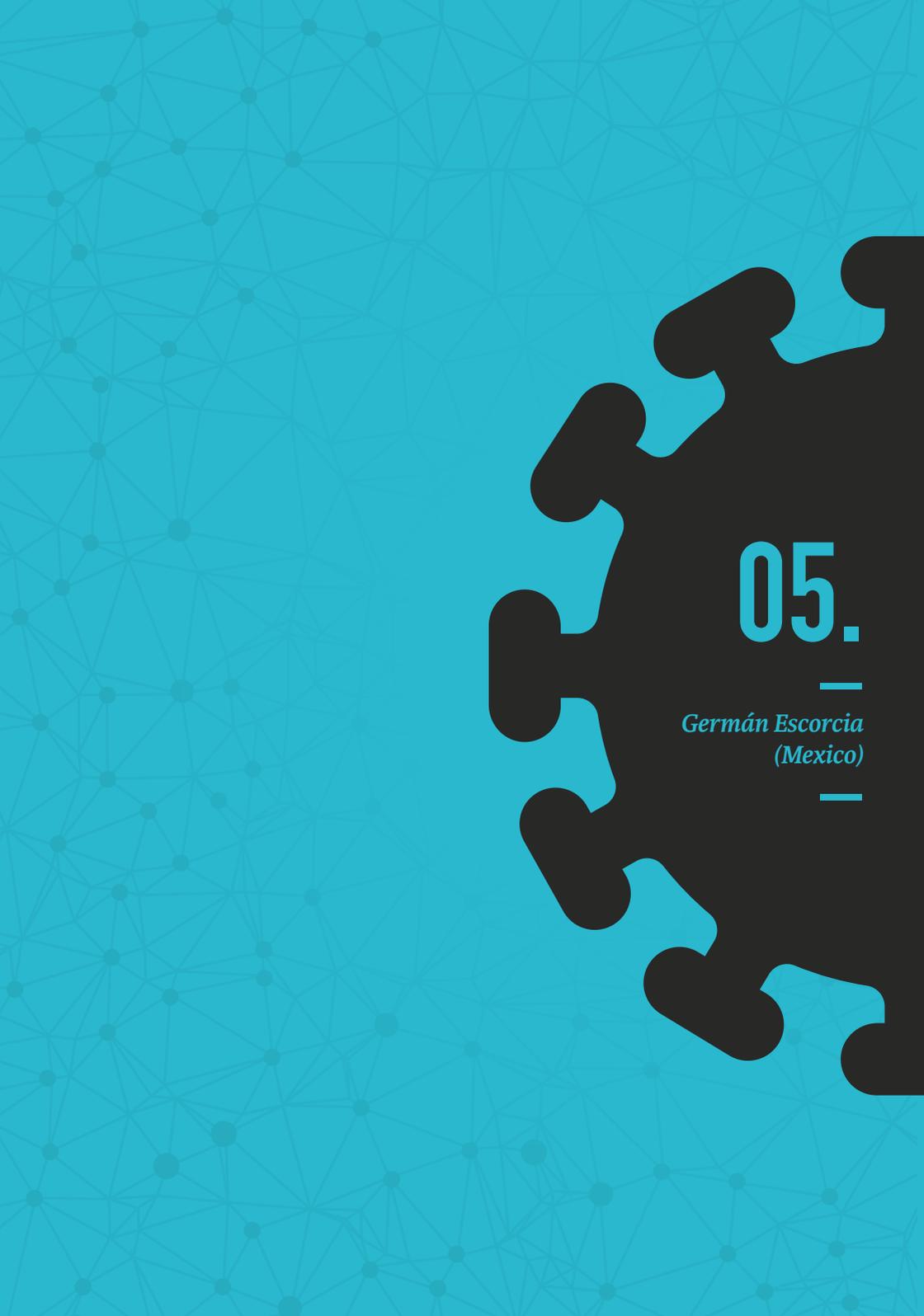
05.

Germán Escorcia
(Mexico)

THE ROLE OF THE INTERNET DURING THE COVID19 PANDEMIC IN LATIN AMERICA. REMOTE LEARNING

Germán Escorcia (Mexico)

1. Distance-less learning

We knew it...

The conventional teaching-learning model based on face-to-face interaction in a physical space was brought to a standstill by the social distancing effect of the global COVID19 emergency. In Latin America, millions of students were affected but, with the support of technology, options were offered to keep the current educational process active, possibly for the immediate future.

Remote learning and equity

The term *Remote Learning* groups a number of teaching modes mediated by technology. They were incorporated to complement traditional face-to-face learning. For some years now, driven by the possibility of offering improved quality and flexibility to remote communities, the idea emerged of offering transfer elements to equip these communities with resources that they would not otherwise obtain. A social equity function was sought, supported

by remote learning, also known as distance, virtual or online education, depending on the technology involved.

However, a different term is proposed here: *distance-less learning.* With a paradigm focused on enabling symmetric and two-way systems for sharing information and knowledge, doing away with the prevailing view of knowledge residing at the center, and ignorance residing in the periphery. Remote learning thus becomes an instrument of inclusion and, in the present times, a necessary and urgent response to the pandemic.

The crisis brought about by COVID19 has forced the immediate adoption of remote or virtual learning modes in order to continue to provide service to educational communities, regardless of their location. Technologies such as the Internet, radio and television were adopted as a basic response that would allow the continuity of learning processes, even amid severe restrictions.

Such modes are expected to be continued for the immediate future because it has already been acknowledged that the pandemic may become endemic. Therefore, it is important to focus our priorities: coverage, content development, teacher training, curriculum adjustments, assessment, and family relations. These are immediate challenges for authorities and communities.

Remote learning as a tool not only helps us to rise to the challenges; it also promotes equity because it reaches indigenous communities, older adults, people with disabilities, displaced persons, migrants and vulnerable populations in general. It represents a significant opportunity for girls and to guarantee gender equity, given that they are more vulnerable now. The Regional Office of the United Nations Educational, Scientific and Cultural Organization (UNESCO) estimates that 160 million students have remote access to educational resources despite the difficult conditions, and points to a hopeful path to stop them from falling behind in their education.

A regional perception of country responses by the Inter-American Development Bank (IDB) highlights the pathways adopted, which seek to leverage elements of remote learning to keep the education service partially functioning.

Measures for educational continuity	Argentina	Bolivia	Brazil	Chile	Colombia	Costa Rica	Ecuador	El Salvador	Guatemala	Honduras	Mexico	Panama	Paraguay	Peru	Uruguay	Venezuela
Learning platforms	■														■	
Digital content	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Physical material or social media	■		■	■	■	■	■	■			■	■	■			
Television or radio	■		■	■	■	■		■	■	■	■	■		■	■	■

IDB. Education Division

Exponential technologies

We also knew that new technologies were important for learning processes and that it was necessary to invest in their implementation for education systems. Technologies quickly emerged that were termed exponential due to the speed of their growth and their capacity. As a milestone of their recognition, the Chairman of the World Economic Forum introduced them to heads of state, corporate leaders and academic leaders under the name *Fourth Industrial Revolution.*[1]

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[1] Schwab, Klaus. WEF (2017). *The Fourth Industrial Revolution.* https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab/

A number of families have now been recognized that converge and create synergies with one another, accelerating and extending their impacts on society. While they are multiple and diverse, one proposal for their observation includes:

- *Artificial Intelligence*, which includes topics such as machine learning and mobile cognitive computing;

- *Augmented reality*, with layers of information about objects, which are associated with virtual realities and create mixed ones;

- *Intelligent robotics*, including connected cyber-physical systems and three-dimensional printing and scanning;

- *Internet of things*, which interconnects all kinds of objects and includes cloud computing and big data analytics.

Emerging scenarios point to profound economic changes, starting with virtually intangible companies—which do not handle assets —and with an intangible production.

The synergies—some of which are surprising—drive a redefinition of concepts such as the value of goods and services, due not to their scarcity but to their use, which in turn redefines the notion of ownership. Later we shall see: *economies based on the mind, not on territory.*

We likewise knew that we coexist with a scenario marked by four guiding forces that require skills for which we were not prepared, with appropriate intellectual tools:

- Accelerated and turbulent change,

- High complexity,

- Permanent uncertainty, and

- Ubiquitous ambiguity.

The effects of this anticipatory scenario, which does not allow the use of low-complexity tools to govern highly complex phenomena, were already foretold. Factors of uncertainty and ambiguity became more visible in times of accelerated change.

Remote learning emerged as a mode of service highly suited to the conditions of the identified scenarios and was already being considered to address uncertainty and complexity.

The COVID19 crisis accentuated this scenario and, as it turns out, progress was made towards one that we could term: the "R" world, which requires us to rethink organizations and re-imagining the scenario of the future.

A number of recommendations are summarized in the table below:

"R" world

Rethink organizations	Reimagine scenarios
Reaction	*Redefinition of value proposition*
Restart	*Redesign of futures*
Resilience	*Refining of skills*
Return	*Relearning*
Renegotiation	*Reinvention*

G. Escorcia. Prepared for this publication.

2. *Case-by-case reactions*

Disproportionately devastating

In Latin America, government reactions shifted from the expectation of reopening schools to recognizing the need to explore alternatives to avoid cancelling school years and keeping the student population active. Lockdowns and social distancing threatened to affect almost the entire student population.

Remote learning emerged as almost the only option to address the education crisis and, even with no time to piece together school materials, train teachers correctly, and with no important educational adjustments, actions were taken along three main lines:

- Generating access to online platforms,

- Generating mass access through educational television systems, and

- Radio broadcast programming, especially for communities where other options are unavailable.

Obviously, the responses could not all be just in time and coordinated. Instead, a criterion of speed and moderate investment was adopted, with the expectation of reopening by 2021, or with a change in the school calendar.

There was a conspicuous lack of common tactics coordinated across countries. Each ministry of education was narrowly focused on its own national territory. One recommendation would be to continue with strategies for evaluating and sharing experiences, taking advantage of common spaces created by international cooperation agencies operating in Latin America.

The authorities faced challenges on a number of fronts, from guaranteeing minimum conditions for the learning process to implementing monitoring and assessment systems, including infrastructure development, accelerated teacher training, and attention to the family setting.

In some cases, the opportunity to redesign systems, methods and materials was considered in order to construct more long-term responses. Overall, however, critical needs for change are observed in institutional culture, security, equity, and decision-making. There is a rapidly growing awareness of the need to extend coverage and access to systems via the Internet with remote learning and content

in new formats. These actions help to improve the quality offered in the short term.

Nonetheless, the responses have faced significant challenges to achieving relevance and sufficiency. During the COVID19 crisis, they started with what is possible, although it may not be desirable. This produces a setting that some sources have criticized as having a disproportionate and devastating impact.

We can attempt to summarize the dimensions of the crisis in education systems with a map of challenges. Cross cutting all of these is the accelerated training of teachers and leaders, which must be given high priority.

Map of challenges

Learning	*Assess-ment*	*Technolo-gies*	*Contents*	*Environ-ment*	*Future*
Core topics	Evidence	Infrastruc-ture	Resources	Face-to-face	Gaps
Preparation	Scoring	Access	Design	Distance	Innova-tion
Interactiv-ity	Monitor-ing	Platforms	Sequences	Family	Change
Attention	Compila-tion	Massive-ness	Relevance	Spaces	Paths
	Report	Acquisition		Trauma	

G. Escorcia. Based on the Inter-American Dialogue conference.

Few countries have managed to tackle this map of challenges in time and most have only a handful of innovations or notable actions. By way of example, there now follows on a case-by-case basis, a series of brief profiles that are innovative or worth highlighting here in country responses to the challenges of the scenario.

Chile. Teacher training: Special offer to combat the crisis.

The Ministry of Education's Center for Training, Experimentation and Educational Research (*Centro de Perfeccionamiento, Experimentación e Investigación Pedagógica*, CPEIP) produced a new offer of virtual courses and workshops for the continuous professional development of educators. It consists of thirty programs focused on *curricular prioritization*, socio-emotional learning and digital tools to meet immediate needs. This is clearly a long-term approach.

Prioritization is used for analysis of the curriculum by subject and educational level, reflecting on its foundations, methods and resources, and selecting aspects that are applicable to the context, since the current structure would generate overload.[2]

Costa Rica. Leadership for offsetting connectivity.

Over the past ten years the budget of Costa Rica's Ministry of Public Education (MEP) has doubled to today's figure of 7.4% of GDP. The World Bank notes that, with a net primary school education rate of 97%, the country is an educational leader in Latin America, behind Cuba and Uruguay and ahead of Honduras (80%), El Salvador (81%) and Guatemala (87%).

Still, the MEP reports that it is making efforts to improve connectivity in its schools in order to help offset limits and inequalities in Internet access. The Minister states: "Of the one million one hundred thousand students in Costa Rica, half have good or average connectivity possibilities, with devices, while the other half *have no connectivity*, although some have devices."[3] The goals are clear with remote learning, the country's priority response to the crisis arising from COVID19.

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[2] Ministry of Education. Chile (September 2020). https://desarrollodocenteenlinea.cpeip.cl/

[3] Ministry of Public Education. Costa Rica (2020). https://www.bbc.com/mundo/noticias-america-latina-53976051

Peru. Recarga Minedu.

Under the emergency plan, "Recarga Minedu" gave more than 400,000 teachers and directors free access to telephones and data, allowing them to accompany students in their learning process and communicate regularly with families as part of the national *Aprendo en casa* (*I Learn from Home*) strategy. To achieve this, says the Government, the Ministry of Education entered into partnerships with service operators Claro, Movistar, Entel and Bitel.

The Ministry purchased 1,056,430 tablets to support rural communities as part of the strategy to close the digital gap. Minedu notes: "The country was ill-prepared to learn remotely, but we responded immediately with *Aprendo en casa*, which allowed us to carry on with distance learning. Had we not acted in time, it would have been a tragedy for the education system."[4] *Intensive school recovery actions* will be implemented in 2021. The challenge has been addressed with remote learning.

The Teachers' Association of Peru (*Colegio de Profesores del Perú*, CPP) notes that, five months after the start of the virtual school year, 45% of schoolchildren had stopped actively participating in remote classes. The CPP explains that "If students connected once a week, it is counted and considered as a positive percentage. But if we consider daily connectivity effective, about 45% of students have been lost."[5]

Colombia. Face-to-face learning. Biosecurity under an alternating scheme.

The Ministry of Education issued a protocol containing "guidelines for the provision of education services at home and face-to-face

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[4] Ministry of Education of Peru (2020). http://www.gob.pe/institucion/minedu/noticias/302134-minedu-contratara-planes-de-telefonia-y-datos-para-celulares-de-mas-de-400-mil-docentes-de-escuelas-publicas

[5] Colegio de Profesores del Perú. https://cppe.org.pe/blog/

under the *alternating scheme* and the implementation of biosecurity practices in the educational community". An innovative response was sought to the risks posed by reopening face-to-face learning.

Two notable actions were: making a formal change to the Budget Law to make education the driver of recovery, and the introduction of the National Education Forum (*Foro Educativo Nacional*) for meaningful learning for life. Both are highly visionary tools for the country's recovery.[6]

Uruguay. School inclusion and canteens.

The IDB notes that this country was one of the few that managed to mobilize its students to a purely virtual mode of learning, connecting teachers and students. This allowed attention to be focused on the well-being of the school community. The Chairman of the National Administration of Public Education (*Administración Nacional de Educación Pública*, ANEP) has stated: "This is a different year, one in which we will have to adopt strategies to continue to include everyone, especially those in vulnerable situations, which have become more acute and resulted in disconnection." We expect 2021 to be a continuation of 2020.

Notably, the reopening of school canteens was considered with a view to social inclusion. Outsourced canteens, which prepare food consumed by children in or outside school, were opened first. At a later time, the other canteens will start operating.[7] Sensitivity to the family-nutrition issue was observed following academic pressure.

Region: IDB. Comprehensive changes are needed.

In a recent study, the Inter-American Development Bank (IDB) found for the region that: "Radio and television have been the most used technologies to reach and educate students. An analysis of

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[6]   Ministry of Education. Colombia. https://www.mineducacion.gov.co/portal/

[7]   National Administration of Public Education. Uruguay. https://www.anep.edu.uy/

the twenty-three countries in the region that closed their schools due to the pandemic found that 74% used radio and television, 52% made available digital content and 35% combined textbooks with social media for learning, even during the crisis."

In the study, the IDB detects that "computers are increasingly commonplace in schools. However, many other elements, including the curriculum, student learning and teacher education, which together define the quality of education and determine successful reform, have remained largely unchanged."[8]

Region: OECD - CAF - ECLAC - European Commission

The LEO report is an annual joint publication produced by the Organisation for Economic Cooperation and Development (OECD) Development Centre, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), the Development Bank of Latin America (CAF) and the European Commission. The report notes that "Internet access, in particular, is far from universal: in 2018, 68% of the LAC population used the Internet regularly, almost twice the share in 2010, although lagging behind the OECD average of 84%. Moreover, while 75% of the richest population in Latin America use Internet, just 37% of the poorest population do so. The difference between rich and poor is far greater (almost 40 percentage points) in LAC than in OECD countries (below 25 percentage points)."[9]

Digital transformation brings with it huge challenges because more than 20% of jobs in some countries will be subject to some form of automation. The region therefore needs massive investment in training to equip workers with the necessary digital skills.

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[8] IDB (2020). *Tecnología: lo que puede y no puede hacer por la educación.* https://publications.iadb.org/en/publications/spanish/document/Tecnologia-Lo-que-puede-y-no-puede-hacer-por-la-educacion-Una-comparacion-de-cinco-historias-de-exito.pdf

[9] ECLAC. LEO report (2020). https://bit.ly/31RQIgu

ECLAC points to dramatic magnitudes for Latin America: forty million households are not connected, twenty million of which fall into the bottom two quintiles. Further, 46% of children aged 5-12 years do not have connectivity and 32 million children are excluded from education.

The IDB study *La educación en tiempos del coronavirus* [Education in the Time of the Coronavirus][10] and the *Declaration of the 27th Ibero-American Conference of Ministers of Education of the Organization of Ibero-American States (OEI)* is telling in this sense for the region.[11] The two benchmarks provide a collective vision and will be updated shortly.

Global. Portugal. Special access fund.

Although Portugal already had a strong tradition of incorporating technology into its education system, the health crisis called for special public actions, which have been notable. The Council of Ministers approved a EUR 400 million fund to purchase digital resources for schools.

The measure is included under the Government Program and focuses on increasing school access to the Internet and providing resources to promote the integration of technologies in diverse areas of the curriculum, the use of digital educational resources, and the teaching of programming and robotics. This emphasis on innovation is maintained for 2021.[12]

Global. Belgium. Effects of long-term closure.

One of the country's most traditional universities conducted a study on the *long-term effects* of losses caused by school closures.

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[10] IDB (2020). *La educación en tiempos del coronavirus.* https://publications.iadb.org/es/la-educacion-en-tiempos-del-coronavirus-los-sistemas-educativos-de-america-latina-y-el-caribe-ante-covid-19

[11] OEI (2020). *Declaración final. XXVII Conferencia Iberoamericana de Ministros y Ministras de Educación.* https://www.oei.es/Educacion/Noticia/los-ministros-y-ministras-de-educacion-de-iberoamerica-acuerdan-medidas

[12] Council of Ministers. Portugal. https://bit.ly/2J5Xw3h

By carrying out direct assessments with students and parents, the results not only confirm the fear of significant losses but also show that the effect is large-scale.

This also meant that schools with a higher proportion of affluent students, due to their family environment or grades, reveal fewer learning losses than those in schools with disadvantaged students. The study warns that these effects will be more lasting than we can currently anticipate.[13]

Finland. Friendly digital innovation.

In September 2020, the organization HundrED conducted a study into the effects on the ability to maintain innovative capacity in students and the education system. Known as one of the most advanced education systems in the world, it is understood that innovations are not automatically good on a global scale. In fact, at its core, the system reveals that a lack of competition between schools and equity can reduce innovation. It is the kind of challenge imposed for a robust system.

The political basis for the approach is to ensure that the education system evolves into a setting that is attractive to continuous innovation. During the crisis, the capacity of its components and actors for seeking out innovative answers to new problems is considered to be its strength and measured by the impact on its *effectiveness and scalability.*

It is an interesting exercise to consider the vision by animating it with two additional variables: *Transcendence* and *consistency,* because they seek to achieve it for the whole system, which is very difficult in most countries. The work is conducted with the view that collaboration is a notion of collective impact involving the school community in a common vision for which everyone is on board.[14]

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[13] Maldonado, De Kristoff (2020). *The effect of school closures on standardized student test outcomes.* Leuven: Ku Leuven University.

[14] Finnish National Education Agency (2020). *Development of an Innovation-Friendly Education System.* https://hundred-cdn.s3.amazonaws.com/uploads/report/file/25/hundred_development_of_an_innovation_friendly_education_system_digital.pdf

Global. Save the Children - UK. Low level of learning among vulnerable children.

Save The Children conducted a multi-country study on learning during the months of lockdown. Alarmingly, it found that the health emergency has had devastating effects on poorer communities, with eight out of ten surveyed children saying that they learned little or nothing while schools have been closed.

More vulnerable children have been disproportionately excluded from access to education, health and food, and experienced rising violence at home.

The study estimates that the pandemic has triggered the most profound education crisis in history, with children falling behind in education and at risk of not returning or being forced into child marriage or labor. One unsurprising observation is how the crisis "can compound existing inequalities by risking or reversing difficult achievements made in gender equality."[15]

Global. European Commission. Digital Education Action Plan.

In the drafting of its action plan, the European Commission outlines a vision focused on high-quality, inclusive and accessible digital education. It is a call to action for stronger cooperation at a European level to learn the lessons of the pandemic, during which technology was used at an unprecedented scale and where it is highly critical that education systems are adjusted for the digital era.

The plan proposes two areas of action for the entire European space:

- Fostering the development of a high-performing digital ecosystem.

- Enhancing skills and competences for the digital transformation.

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[15] Save the children. https://bit.ly/31TxXch

The serious concern of the Commission and its focus on digital strategy as a guiding force for recovery and action for the period 2021-2027 is of note. The proposed actions include launching a strategic dialogue with heads of state to identify critical success factors and agree on the joint renewal and updating of digital infrastructure. It also emphasizes the need to ensure the development of basic and advanced digital skills for all actors, even modifying the renowned Erasmus program for global teacher training.[16]

Global. Unesco. Nine ideas for action

Admitting, with a clear conscience, that there are no ready-made, tailored formulas, a call is made for mobilization and participation because "We cannot return to the world as it was before" and it will be necessary to shape the future through inclusive dialogue and decision-making with a collective effect. Unesco, in the document issued in September 2020, proposes nine ideas for public action with regard to the crisis. These actions are summed up here because they constitute a return to basics by looking to the future:[17]

- *Strengthen education as a common good.*
- *Expand the definition of the right to education.*
- *Value the teaching profession and teacher collaboration.*
- *Promote children's participation and rights.*
- *Protect the social spaces provided by schools.*
- *Make technologies available to students.*
- *Ensure scientific literacy within the curriculum.*
- *Protect financing of public education.*
- *Advance solidarity to end inequality.*

Unesco (2020).

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[16] European Commission. https://bit.ly/3kG1vBz

[17] Unesco (2020). *Nine ideas for public action.* https://unesdoc.unesco.org/ark:/48223/pf0000373717/PDF/373717eng.pdf.multi

3. Investing in hope

In order to see change, you must invest in it...

Redefining the necessary skills

One of the few positive things to come out of the crisis is the fact that it has changed the consideration and view of actors with regard to virtual learning. Online systems have actually been around for years, but they have been seen as complements rather than alternatives to regular systems. There is a lively discussion about their real contribution to improving student performance. A strong appreciation of face-to-face interaction remains, as an irreplaceable component of learning.

At the peak of the pandemic, the Virtual Educa organization held an important virtual congress, *Connect* to analyze responses, warnings and proposals from multiple perspectives. Inspired by ideas for the future and long-term, broad-spectrum factors, discussed with Dr. Tony Wagner of Harvard University, the following table provides a summary that we consider to be relevant:

Factors	Knowledge	Culture	Error	Performance	Motivation
Tradition	Compart-ments	Compliance	Penalize	Individual	Scoring
Future	Interdisci-plinary	Questioning	Risk-taking	Group	Relevance

G. Escorcia. Based on conversations with T. Wagner.

The main idea is to use the crisis to rethink and re-imagine the entire education system and learning processes. With this inspiration for leaders and with regard to the incorporation of exponential technologies for the children of the generations to come, it is suggested that:

> *There is no error in a public policy that puts the most powerful tools at the service of the most powerful minds.*

The new generations now have the opportunity to take risks and fail, to learn how to make a difference and evolve to achieve a sense of purpose and a passion for transcendence. The pandemic has provided an unprecedented opportunity for radical change. A short formula for innovation in students might be:

Fun → Exciting →Purposeful → Transcendent

Experiential content

One of the harsh lessons learned from the pandemic is that we must improvise digital technology to bring learning processes directly to the individual. A detailed review of what is being sent reveals the alarming discovery that the previous paradigm of creating content aligned with a curriculum structured in a hierarchical, linear, textual, non-dynamic, non-interactive manner without feedback has not been forgotten.

We already have the technology to incorporate new types of educational materials into the process. Numerous studies concur that users of all ages access platforms like Facebook at any time for an average of six hours each day. They happily navigate highly dynamic content with shareable and trackable video formats with audio. With this amount of dedication, they could earn a master's degree.

If the expectation is for the migration of lots of populations and activities to virtual learning platforms, the urgent priority is to redefine the content and materials in two ways:

- What is relevant? The pandemic forced us to select what was sent out.

- Radical change of formats to create attraction, inter-activity and mapping.

In exponential technologies, mention was made of the rise of augmented and virtual reality apps, which will soon be available on any mobile device. These apps are expected to have a strong impact on education.[18]

> *This will introduce a shift from the transmission of information to the experience.*

With simulation processes, the dynamic generation of mobile or static images and high playful interactivity, this is a great opportunity to redesign content and revive strategies proposed to create banks of digital materials and networks for sharing and updating.

Initially, reusable learning objects and open educational resources were discussed. Augmented reality technologies will enrich content with added layers of information, while virtual reality will render its borders indistinguishable in a place where individuals learn to learn from experiences.

This is a wake-up call to ministries of education, publishing houses and, most importantly, the entrepreneurs behind the development of apps and platforms to change the level of content that they offer from now on in educational systems.

Connectivity: new orbit

Lack of connectivity was used as an excuse to not redefine learning processes using digital technologies and content. The pressure

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[18] Escorcia, G. (2016). *Educación exponencial*. Washington, D.C.: Secretaría General de Virtual Educa. https://drive.google.com/file/d/1DfqTapeEodJcVw-AL2KJtC-CxrpQwAmQ/view

of the crisis forced us to use what we had and fight for sufficiency and relevance. Investing in connectivity is a high and immediate priority, as well as a condition for improving the scope and coverage of remote learning in the medium term.

At the very peak of the pandemic, three of the world's largest companies decided to make major investments, creating nearly half a million jobs, in initiatives called *Satellite Internet Constellations.* SpaceX, Amazon and Google have announced low earth orbit devices to generate high-speed connectivity and capacity anywhere on the planet in less than two years. Governments in our region should be alert to the opportunities that this will provide to address local connectivity, along with its risks.

The Starlink project has announced that it will put 32,000 satellites into orbit, which will involve a total of 420,000 interconnected Linux processors learning from each other to configure *smart flocks.* Of that total, 860 are already in orbit, which score 75 nanoseconds in signal-latency tests, lower than the figure required by US authorities.

Similarly, Amazon's Kuiper Project obtained authorization to launch 3,236 Internet satellites as part of a plan to put 18,000 into orbit. Google, in turn, has reactivated its Loon initiative to place helium balloons in the stratosphere and generate wide-ranging wireless connectivity for rural or difficult areas.

Similar initiatives were announced, with all the perplexity that this generates, so we need to understand that connectivity is changing orbit. But all that glitters is not gold: astronomers claim that the satellites will send their telescopes out of focus, while internationalists claim that private corporations will take over outer space.

There is now talk of a *new space race.* And it is not merely a paradigm shift in connectivity; opportunities, professions and knowledge are all opening up. Imagination could run wild dreaming up cyber apps that could harness such a satellite infrastructure:

highly accurate positioning systems, mapping of resources, such as minerals or fish stocks, natural disaster detection, precision agriculture and smart communication between objects.

If the lack of connectivity excuse disappears soon, remote learning will become the most viable response to the challenges. Latin America must explore this option precisely because it will integrate marginal and rural communities with a low infrastructure investment and a high return. It is time to prepare our investments in training and content so that we may take advantage of the new connectivity and give a boost to the remote learning model.

At the same time, the priority emerges for reworking the design of experiential content and activating high-level plans for the development of renewed teaching skills, consistent with the time and its technology.

Large-scale teachers

Everything points to the need for greater accessibility to networks and content, even if schools do gradually reopen and operate with alternating mechanisms. The COVID19 crisis brought to light another shortcoming: teacher skills for managing virtual spaces, mastering tools, creating content and ensuring learning.

It is incomprehensible that, after so many years, teaching colleges and normal schools do not train graduate teachers in digital skills. This has long meant that they must train on the job, which is a costly and inefficient option.

With this in mind, a special initiative has been proposed. At the 7th Annual mEducation Alliance Symposium,[19] attended, among many others, by the University of Hong Kong, it was agreed to create a *coalition of international cooperation agencies* to develop digital

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[19] The author was part of the delegation of the University of Education of Hong Kong at the 7th Annual mEducation Alliance Symposium. He is also the co-founder of the Learning @ Scale Coalition, with that same university.

skills in teachers on a large scale using remote learning in the form of a Massive Open Online Course (MOOC).

The studies of Dr. Diane Laurillard (University College) have opened up the possibility for the world's top developers to create content for basic digital skills and teaching them in *large-scale simultaneous courses* for hundreds of thousands of educators, with adaptations and follow-up relative to their local context.[20]

In response, *Coalición del Sur Global para formación pro-fesional docente a gran escala*, TPD @ Scale Coalition for the Global South was created, supported by the *Digital Learning for Development* (DL4D) network.[21] In Latin America, they coordinate bodies such as the IDB and SUMMA.[22]

This is just one example of remote learning initiatives that can be implemented in a novel way in Latin America with the support of digital technology to resolve two detected weaknesses—teacher training and new content development—for the recovery of education systems.

Economy of the imagination

Desperate not to lose the school year, forums of ministers and authorities gathered with hundreds of experts at virtual conferences to visualize *hybrid models* of action in the education system. This means redefining physical spaces and redefining face-to-face times.

This begs the question, naturally, of how to reduce the number of students per classroom and, at the same time, how to make better use of time. The responses from some countries revealed the need to eliminate overload, redundant materials, curricular areas and

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[20] Laurillard, Diane (2018). *Digital Technologies and their role in education.* https://www.researchgate.net/publication/320194879_Digital_technologies_and_their_role_in_achieving_our_ambitions_for_education

[21] TPD at Scale. https://tpdatscalecoalition.org/

[22] BID - SUMMA. https://www.summaedu.org/

the types of work to be carried out when in the physical space and when in the virtual one. The *Inverted Class* notions returned in order to make a radical change in use of time and the distribution of activities among students and teachers.

The discussion of the future of learning also reared its head again. Topics such as experiential content (hinting at technology's involvement in transforming school practice) were explored, along with how better to exploit the new digital resources paving the way to a redefinition of the learning process.

According to Dr. Seymour Papert,[23] learning is conceived as *based on exploration and discovery*, where error is the generator of experience. What is the main focus? Collaborative building and creativity.

The shift towards creative economies, which results from exponential scenarios, technologies and economies, opens up unexpected opportunities for the region, particularly in harnessing the value generated by creative actions and achieving imaginative power.

If businesses emerge, now more than ever, with non-present customers, operating in virtual modes, information management will be important, but even more crucial will be the reinvention of business models, products and relations. We can say the same for governments and their functioning and relations with citizens as we can for educational organizations.

Imagination plays a critical role here. Imagination can now be confirmed as the value-adding component. For this to happen, we will need to fine-tune *algorithmic and heuristic thinking* skills. This will add value to the non-routine or non-codifiable. Skills such as connected programming, problem-solving by approximation or intuition, disruptive thinking, and what is currently termed

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[23] Papert, Seymour (1987). Desafío a la mente. Buenos Aires: Galápago.

"system hacking" are all being reconsidered. Innovative thinking and capacity for the intentional design of desirable and possible futures add value.

The intangible products used today are evolving towards this human capacity for symbolic handling, which will, in turn, lay the foundations for a new economy. Human cognition draws on the ability to create scenarios, come up with alternatives, model situations based on assumptions, and change them. Imagination and attention are required.

We must understand how this will affect the way in which we live, and it will have two expressions: immersive spaces, which communicate with people, and the need to develop skills to design and govern them.

These visions must permeate the design, functioning and expectations of schools. The new directions will also apply to remote learning. The question that remains is: is this the future of education?

Human attention is a resource. By using it, it becomes a scarce and limited asset. This is why the idea of an economy of attention is incorporated into the foundations of an economy of imagination. New economies will compete for the attention of individuals and groups, and will afford value to highly imaginative production.

Human attention is a scarce resource

One lesson learned is that of concentrating on the scope of attention. In the context of this highly complex economic, social and health crisis, we set off on a human adventure that requires a shift from territory-based economies to mind-based economies.

This paper proposes a new approach:

We are shifting from a society of information and knowledge towards a society of imagination and creativity.

Dr. Fernando Reimers alludes to the importance of rethinking what we teach because most of these studies fail to converge on the most essential aspect: creating good citizens. He believes in the importance of intentionally building a global citizen and rethinking in various iterations, which is the true significance and relevance of all the elaborate constructs that students are taught today.[24]

He also proposes that we cease our institutional obsession with the curriculum and experiment instead to create a new education system.[25] He argues that: "The purpose of education is to produce a viable society, not an assessment."

Looking forward to the creation of a desirable and viable future in education includes the idea of digital citizenship. Remote learning will be an instrument for collectively building a *digital democracy*. This is an emerging concept that harnesses the powers of digital technology.

In accordance with the approach of Elaine Ford,[26] this encompasses highly relevant issues: enabling an interconnected and more collaborative society capable of achieving deliberate democracy based on interactions and exchanges. It connects citizen and state, empowering direct democracy as an option for the representative

[24] Reimers, Fernando (2017). *Empowering Global Citizens: A World Course.* https://wcfia.harvard.edu/publications/empowering-global-citizens-world-course

[25] Reimers, Fernando. https://elpais.com/educacion/2020-07-22/fernando-m-reimers-el-fin-de-la-educacion-es-producir-una-sociedad-viable-no-la-evaluacion.html

[26] Ford, Elaine (2019). *El reto de la democracia digital. Hacia una ciudadanía interconectada.* Lima: JNE, KAS. https://www.kas.de/documents/269552/269601/El+reto+de+la+democracia+digital+hacia+una+ciudadan%C3%ADa+interconectada.pdf/3c571428-98b1-c3b7-c47c-63cc5fb715ef?version=1.2&t=1574964153718

democracy of intermediation. These connections will be more useful and frequent when we consider the social distancing and lockdowns associated with the pandemic.

Yet, the aim is to increase access to public information, which, in turn, allows for greater transparency and helps in the fight against corruption. These are key stages in the modernization of the state as part of a continuous optimization of citizen relations. Participation is, therefore, a right and a responsibility supported by the new instruments. As was mentioned at the start: with free, symmetrical and two-way flows, seeking inclusion, equality and non-discrimination.

It is necessary, however, to address the influence of social media on the manipulation of consciousness through disinformation and polarization. Through education, the power of digital tools acts as a trigger for the power of minds to avert subjugation.

"We understand that the pandemic is a tragedy and that it will be necessary to take on the responsibility of influencing every person we can so that hope is not lost".

F. Reimers

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Acronym	Organization	Acronym	Organization
IDB	Inter-American Development Bank	OEI	Organization of Ibero-American States
CAF	Development Bank of Latin America	UNESCO	United Nations Educational, Scientific and Cultural Organization
ECLAC	Economic Commission for Latin America United Nations	WB	World Bank

06.

*Osvaldo I. Larancuent
(Dominican Republic)*

THE ROLE OF THE INTERNET DURING THE COVID19 PANDEMIC IN LATIN AMERICA AND THE CARIBBEAN

Osvaldo I. Larancuent (Dominican Republic)

1. Introduction

We are living in a fast-paced era in which different news sources, media and communities share information, interact and converge to and from the palm of our hand, impacting the behavior of a society that is shaken, hears news that puzzle it, that stimulate it to interact, bewildered, sometimes powerless. Thus, with an estimated global population of 7.65 billion people, users connected to the Internet account for 53.1%, browsing through fixed or wireless connections, using everything from desktop computers to increasingly powerful, portable and small devices such as tablets and smartphones, among others (ITU, 2019).

One phenomenon that has highlighted the aforementioned acceleration and capabilities of digital technologies has been the health crisis affecting the world, the figures of which present a terrible outlook. Indeed, following the declaration of the COVID19 pandemic in March 2020 by the World Health Organization (WHO), high levels of disease spread were reported, exceeding 118,000 infections in 114 countries with 4291 people killed. All countries

were called to take urgent and aggressive measures to prevent infections, as pandemics are not controllable (WHO, 2020).

As of October 2020, an estimated 37.2 million people have been infected, in countries such as the US (20%), India (19%), Brazil (14%), Russia (3%), Colombia (2%). An estimated 1.1 million people have also died from the disease, in the US (20%), Brazil (19%), India (14%), Mexico (8%), the UK (4%), Italy (3%) and Peru (3%), among others (Johns Hopkins University and Medicine, 2020).

Not everything is grim. The WHO, supported by alliances and networks of pharmaceutical and scientific research laboratories, has developed 154 potential vaccines, of which 74 have already been filtered and tested on humans around the world, in different phases according to established protocols (GAVI, 2020).

The WHO has been issuing recommendations, coordinating efforts to tackle the pandemic in the neediest countries, implementing containment protocols and organizing efforts with scientific research networks and communities in order to implement effective logistics to tackle the crisis (Deutsche Welle, 2020).

This article explores how international cooperation has contributed to managing the COVID19 health emergency, the role played by the internet and digital technologies to make cooperation more effective, to contrast, measure and evaluate the current situation. To this end, the following research questions arise: (1) How does the current preparedness to deal with the COVID19 pandemic compare with the experience undergone following the 1918 Spanish flu pandemic? (2) How has international cooperation been crucial in the development of society and in overcoming the crisis in this era? (3) How have digital technologies and the internet been adopted to accelerate or improve cooperation? (4) Which have been the challenges, lessons learned and expectations relating to this crisis?

I.   Learning From History: the 1918 Spanish Flu and Today

Spanish flu or influenza was a terrible pandemic that emerged in the second decade of the last century, with the greatest impact in 1918. It happened during a troubled period in history, the First World War (1914-1918). According to the Center for Disease Control and Prevention, the pandemic is estimated to have infected a population of five hundred million people globally, killing fifty million people. The highest-risk adult population ranged in age from 20 to 45, especially military men who were in the war and carried it back home. It also caused high infant mortality, especially among children under 5 and adults over 65. It was a time when there were no vaccines to treat influenza, or antibiotics to treat associated infections. Its treatment was limited to isolation, quarantine, hygiene, use of disinfectants and social distancing.

Due to the absence of advanced research methods supported by computer simulations, in addition to the period of war and financial crises, among others, it took about eighty years to identify the lessons learned from this pandemic. In effect, in 1997 Drs. Taubenberger and Reid succeeded in sequencing the virus, a technology that enabled them to understand and decipher the virus's genetic code for the analysis of the immune response used to accelerate research for vaccine development. Through this technique, they determined that it originated in pigs and humans, identifying the pathogen that caused influenza as H1N1 (Jordan, 2020).

Comparing the current response capacity to deal with the COVID19 pandemic with the response to deal with the Spanish flu pandemic in 1918, differences are observed in the speed in identifying the pathogen element, the alerts, the levels of contagion and the mortality, it being estimated that the outbreak started in October 2019, although identifying the pathogen element was achieved on 31 December 2019. The Chinese authorities immediately alerted the WHO of the outbreak of the new coronavirus strain that causes the

serious and contagious disease and also determined the origin to be in the city of Wuhan, Hubei province, in the People's Republic of China. In January 2020, COVID19 was found to be of animal origin, probably bats or pangolins, acting through an intermediate host, thus ruling out that it had been developed in a laboratory applying genetic engineering techniques. This type of coronavirus already had a close precedent, as it had caused the epidemiological outbreak denominated Severe Acute Respiratory Syndrome (SARS), which first appeared in Arabia and China in 2003. It is the seventh coronavirus with the capacity to infect humans and is denominated by the technical name of SARS-CoV-2 (Anderson & Rambaut, 2020).

COVID19 is highly contagious, particularly risky in the elderly population over 65 years of age which is estimated at 727 million, equivalent to 9.3% of the global population (UDESA, 2020), with a probability of mortality of 116 per 1000 (Mallapaty, 2020).

To date, the recommended treatment includes social distancing, hygiene and especially the use of masks, which have proven effective when strictly applied. Likewise, to the extent that new recommendations are discovered, they are distributed by the WHO electronically, through the established global network, to reach health authorities worldwide.

According to a report by GAVI, the Global Vaccine and Immunization Alliance, an aligned public-private alliance working with the WHO, while no approved vaccines are yet available, 154 potential vaccines have been explored, 44 of which have been identified as candidates after passing tests on animals. Methods for testing results in humans meet ethical standards, through four phases. In the first one their safety is tested and dosages and side effects are identified in few people. Twenty-one candidates are currently in the first stage of testing. Meanwhile, in the second stage, thirteen candidates explore their effectiveness in larger groups of

people. In stage III, ten candidates explore in larger groups while keeping an eye on their safety and side effects (GAVI, 2020).

It is important to mention that GAVI emerged in 2000 as a WHO alliance with different entities promoted by the Bill and Melinda Gates Foundation, Unicef, the World Bank and a network of pharmaceutical laboratories, among others. The initiative has accelerated the creation and distribution of vaccines against different diseases, which have been given to more than 822 million children in poor countries, estimating a prevention of fourteen million deaths in that population.

II.   *International Cooperation and its Impact for a Better Future*

The efforts deployed to address the health crisis by the WHO as an entity of the United Nations, or by GAVI as a public-private alliance, to prevent diseases through the creation of vaccines are part of the action of multilateral international cooperation organizations, in this case the United Nations (UN). In this regard, this section will attempt to answer the following question: How has international cooperation been crucial in the development of society in this era and, in particular, in addressing the health crisis? Not only will it respond to it, others will also be addressed, such as: What are multilateral organizations, how do they emerge, who is a member, what is their purpose?

Day-to-day cooperation happens insofar as two or more people join forces to achieve common goals or interests. We see this on a social level within families, between friends, in sports, at work. However, on a political and international level, it takes on another form in which respect between countries must prevail, recognizing principles of sovereignty, non-interference and non-intervention in internal affairs. They usually interact on a bilateral basis, in such a way that public policies of one state give priority to

the relationship with another for agreement, meeting or handling of issues in the areas of military defense, foreign policy, the economy, trade or any other matter.

The principle of sovereignty goes back to the Peace of Westphalia of 1648, when the first world congress or meeting took place between representatives of different nations, with defined geographical demarcations, in order to establish a political and global order, recognizing the participants as nation states without subordination to any authority as was the case in the feudal period. The gathering brought together the great powers of the time, which comprised the Germanic Holy Roman Empire, the Hispanic monarchy, the kingdoms of France, Sweden and the Netherlands and their respective allies. It is also important to mention that a century later, at the Concert of Europe established in Vienna in 1814, different alliances were forged to deal with the Napoleonic wars, an occasion involving the victorious Allied countries including Austria, Prussia, Russia and the United Kingdom. France was later integrated, establishing a global order to maintain and manipulate the balance of forces, giving rise to multilateralism (Gross, 1984).

A new milestone came a century later, after the end of World War I in 1918, when the United States of America (USA), as a new power that participated in its final stage, influenced the adoption of a new order, promoting the creation of a multilateral institution to coordinate and promote actions for security, freedom, trade, respect for the rule of law and international law, adopting the principles of non-interference and non-intervention in internal affairs, and avoiding wars of aggression. This initiative was founded by the League of Nations in 1919 as a coordinating institution as part of the peace conferences in Paris, which concluded with the signing of the Treaty of Versailles. However, this first attempt to establish a special institution charged with preserving peace and promoting international cooperation failed, affected by the economic crisis

caused by the war, the effects of the Spanish flu epidemic (1918), the Great Depression and financial crisis of 1929, combined with the outbreak of World War II in 1939 (Ikenberry J., 2009).

At the end of World War II, in 1945, the victorious Allied countries, comprising the US, the United Kingdom, the Union of Soviet Socialist Republics (USSR), the People's Republic of China (PRC) and France, again influenced by the US, founded the United Nations Organization (UN), following the signing in San Francisco, by 54 members, of the Charter of the United Nations at the end of the United Nations Conference on International Organization, which came into force on 24 October of that same year. Each signatory member represented a sovereign nation state committed to respecting the rules of international law, principles of sovereignty and non-interference, among others (Ikenberry J., 2009).

At the end of World War II two ideological forces confronted each other, affecting multilateral and global development efforts. On the one hand, the powers of the West (USA, UK, France and allies), later called the *first world*, which promoted democracy as a system of government and capitalism and liberalism as an economic model, based on principles of private ownership, free market, obedience to the rule of law and respect for the law. On the other, the powers of the East (USSR, China and allies), subsequently referred to as the *second world*, were characterized by adopting socialism as a system of government, which promotes centralized planning by the state, communism or the shared production of common goods. Meanwhile, at the same time, the other nations later considered as the *third world*, comprising the countries of the Middle East, Latin America and the Caribbean and Africa, among others, which were in the initial stages of development, were easily influenced by global trends. Thus, to prevent changes in US governance models, public policies were developed after the war to promote, from 1948 onwards, the Marshall Plan as a form of horizontal cooperation,

or among countries of similar levels of development, to rebuild the allied countries and Europe in general in exchange for tariff and regulatory reforms and for opening up to free trade, among others (Ikenberry K., 2018). For its part, the USSR did not accept the aid and also prevented its allies from accepting it because it was an unbalanced, or vertical-type, cooperation in which they would have had to accept conditions that would affect their model of government. Subsequently, different actions led the US and the USSR to enter a period of low levels of cooperation called the Cold War in which both adopted imperialist, interventionist or interfering strategies to protect their interests and to spread their ideology and influence in so-called third-world countries or developing countries, as they were later called (Doyle, 1986).

By the late nineteen-sixties, many countries affected by the war were showing signs of recovery. They developed international policies, promoting development, justice, the rule of law, peace and international cooperation, with the prominent role played by West Germany, with a positive impact on the development of Latin America. The Konrad Adenauer Stiftung (KAS) was one of the most influential ones, promoting ideals for the adoption of a moderate type of democracy based on a scheme of inclusive liberalism that focused on human development, with Christian values, independent justice, modernization of the public administration, the rule of law and social justice (KAS, 2010).

At the same time, the UN was evolving in its role as a negotiating forum for negotiating and securing peace, especially in the Security Council but also developing its capabilities through different agencies specializing in different topics. To date, the United Nations has a 193-state-strong membership. It has implemented different programs to promote inclusive development, supported by multilateral-type international cooperation, especially since 1989 when, after the fall of the Berlin Wall and the establishment of Perestroika, a process of

reforms in the USSR political and economic system was set in motion that led to the independence of the different nations that integrated it. It was consequently from 1992 onwards that the UN promoted new models of international multilateral cooperation for fulfilling the Millennium Development Goals (MDGs) which, while potentially achievable, were restructured in 2015 to establish the 2030 Agenda for Sustainable Development, made up of 17 Sustainable Development Goals (SDGs) in favor of peace, sustainable growth, equality, inclusion (UN, 2020).

SDGs #3 and #17 deserve special mention for the purposes of this text, as they are closely related to health and international cooperation in this time of pandemic and health crisis. In fact, SDG #3 addresses the issue of ensuring a healthy lifestyle and promoting wellbeing for everyone at all ages, highlighting important achievements in vaccination programs, reduction in maternal and infant mortality and various infectious diseases, among other established targets (UN 2020f).

In addition, SDG #17, on Revitalizing the Global Partnership for Sustainable Development, has facilitated the emergence of public-private partnerships between the public sector, private sector, academia, civil society and technical communities, among others, stimulating the reduction of import tariffs, the donation of non-refundable resources, debt relief in developing countries and expansion of internet access, among other goals (UN, 2020h).

As a result, different bilateral or multilateral collaborations have been activated, focused on different regions of the world. This is an unprecedented scheme of solidarity between multiple parties and has opened up new sources of funding for the UN. The UN is headed by its secretary-general, who is appointed by the Security Council and is the world's top diplomat. Since its founding nine secretaries-general have been appointed, with António Guterres currently occupying the position since 2017.

As a result of the epidemic declared by the WHO, the secretary-general announced the Humanitarian Response Plan and the revitalization of the Central Emergency Response Fund of the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), with an estimated budget of US$2 billion drawn from G-20 donations and philanthropic foundations. In line with this, for humanitarian reasons it also advocates relief from sanctions affecting countries such as Cuba, Venezuela and Iran (UN 2020a).

Although the UN has a global approach, it is structured into different regional agencies. In the case of Latin America and the Caribbean (LAC), a region with an estimated population of 650 million, it is one of the most closely affected and is served by different specialized agencies.

The impact of the pandemic has been particularly strong in countries such as Brazil, Mexico and Colombia, which have not followed health recommendations to prevent contagion. At this juncture, countries that have led international cooperation in LAC through different bilateral programs include the US, China, Japan, Taiwan and the European Union (EU) among others, and multi-lateral programs through solidarity and humanitarian funds set up by the Inter-American Development Bank (IDB), the Central American Bank for Economic Integration (CABEI), the Andean Development Corporation (CAF) and the European Commission. The Pan American Health Organization (PAHO) has also played a leading role in coordinating with different interregional health authorities. Mercosur has activated its humanitarian aid and cooperation mechanisms. In financial management, the role of the Economic Commission for Latin America and the Caribbean (ECLAC) has been critical in unifying efforts. Of importance in the different sub-regions, including those of Central America and the Caribbean, are the Central American Integration System (SICA) and the Caribbean Community (CARICOM) as well as the Community of

Latin American and Caribbean States (CELAC), the Latin American and Caribbean Economic System (SELA) and the Organization of Eastern Caribbean States, which coordinate with the Chinese National Health Commission (Hirst & Malacalza, 2020).

III.   Internet, Digital Technologies and Their Role During the Pandemic

Although international cooperation for humanitarian purposes is embodied in different multilateral assistance programs, the overall picture on productivity after the pandemic looks bleak and discouraging. The World Bank (2020) estimates that the measures adopted by countries to reduce contagion will lead to an unprecedented global paralysis, estimating a 90% reduction in global growth expectations, an unprecedented situation since 1870, with a profound impact on investment reduction and rising unemployment, school dropout rates and global trade paralysis (World Bank, 2020).

Against this background, this text seeks to explore answers to the following questions: How do these global efforts, international collaboration and cooperation converge? Which role can the internet and digital technologies play in mitigating this crisis?

It would appear that given the quarantine and social distancing measures and the restrictions in productive activities, the internet and digital technologies are the natural alternative to the health emergency in which the global population is immersed.

According to a survey conducted by McKinsey (2020), given the social distancing and quarantine measures, demand for customer service via digital channels has jumped from 36% in December 2019 to 80% in July 2020, showing a trend in society towards using digital platforms in order to access services provided by companies.

Similarly, on the supply side of goods and services, companies' response to demand for services through the adoption of digital platforms has accelerated 20-25 times faster than expected. One finding of interest is that it is not limited to the supply of goods and services but also to teleworking or remote working via digital platforms, to which end they have adapted their platforms, leading to a migration 40 times faster than they thought possible before the pandemic.

In the context of the health emergency, one area to be highlighted is the production of dynamic digital content by different global entities specializing in health such as the WHO, which we already mentioned and which has played an active role in the transmission of protocols, recommendations and COVID19-related health measures as well as the capturing and recording of contagion data from the network of health centers worldwide through digital platforms. Notable in this regard is the projection of statistical graphs and data generated instantly on the website of the Coronavirus Resource Centre of the Johns Hopkins University School of Medicine, which has developed a digital dashboard that is the main source for different media and entities interested in monitoring the behavior of the pandemic. This effort would be impossible without comprehensive collaboration, led by the WHO and its network of worldwide epidemiological centers and entities of health professionals that have adopted different methods according to suitability for the capture and transmission of their respective data (Ensheng, Hongru, & Lauren, 2020).

Although the above news reports demonstrate the achievements made in the processes of adopting digital platforms to improve effectiveness and productivity, 47% of the population is not ready to react to the crisis so swiftly and unexpectedly, and this affects productivity, schooling and information for decision-taking in relation to the crisis (ITU, 2019).

Understanding why so many people still do not access the internet or adopt digital technologies requires stepping back in time in order to understand the concept of the digital gap, how it has evolved from the past to today and future expectations.

The internet is a telecommunications platform publicly promoted by the administration of US President Bill Clinton between 1993-1997 and 1997-2001. However, its origins go back to the late nineteen-sixties and ARPANET, a telecommunications network created specifically to interconnect computers shared by different universities distributed from coast to coast in the US for the execution of basic and applied science research projects funded by the US Department of Defense's Advanced Research Projects Agency (ARPA), which also funded its development and deployment. This network facilitated the exchange of documents, texts and remote collaboration tools between the different teams of projects being executed electronically. It evolved until the late 'eighties, with significant improvements in the adoption of standards, protocols and interfaces, allowing for universal scaled growth to become what it is today: the internet. Different services or protocols were developed, provided by different national and international contributors. An international collaboration deserving special mention (CERN, in Switzerland) combined a series of protocols denominated the WWW (World Wide Web), a set of computational resources interconnected through network links and a programming language for managing them (HTML), to streamline, facilitate and make user experience and access to different resources and content in different digital formats more user-friendly. Although it was already being adopted by society at large, it was during the Bill Clinton administration that the internet was placed at the service of society, accompanied by a plan for its use and adoption by the US government. The group of scientists and engineers had also created a technical community of volunteers to drive forward the development of the internet (IETF). In 1992 they established a nonprofit, civil-society organization, the Internet Society (ISOC), devoted exclusively to the worldwide development of the internet, which drove its global

adoption to boost digital content consumption and development, productivity and learning (Isaacson, 2014).

ISOC's vision was "the internet is for everyone," emphasizing the digital platform's inclusive approach to boosting productivity and knowledge. By 1998, the number of users accessing the platform was estimated at five million users worldwide, especially universities using it to facilitate research but also communities that developed search, entertainment, social interaction and digital content tools (Isaacson, 2014). Given its rapid adoption, and despite being managed by the US Department of Commerce, the Clinton administration designed an organization that was civil in nature to manage these resources through a multi-stakeholder governance model. The organization was created in 1998 under the name of Internet Corporation for Assigned Names and Numbers (ICANN). It managed the domain name system (DNS), a kind of directory in which internet address numbers (IPs) with which resources were designated on the network could be assigned alphanumeric names, similar to the scheme used for telephone numbers stored on a mobile device from this time but with a special nomenclature to make it easier to manage. ICANN was created with a global approach, assigning responsibilities to the different continents for managing Regional Internet Registries (RIRs), comprised of the American Registry for Internet Numbers (ARIN) for the United States and Canada, RIPE Network Coordination Centre (RIPE NCC) for Europe, the Middle East and Central Asia, Asia-Pacific Network Information Center (APNIC) for Asia and the Pacific Region, Latin American and Caribbean Internet Address Registry (LACNIC) for Latin America and the Caribbean, and African Network Information Centre (AFRINIC) for Africa (ICANN, 2020).

In the same year, 1998, at the Conference of Plenipotentiaries of the International Telecommunications Union (ITU) held in Minneapolis, the World Summit of the Information Society

(WSIS) was approved in two phases (2003, in Geneva, and 2005, in Tunisia), instructing the definition of an action plan to promote the adoption of universal Information and Communications Technologies (ICTs or digital technologies) by UN member states. The results of the WSIS led to the development of a digital agenda for adoption by the members, which promoted digital public policies to improve efficiency in the management of public services and the different goals considered within the Millennium Goals (MDGs). Different UN agencies were thus in charge of their coordination. In the Latin American and Caribbean region, ECLAC is in charge of monitoring the Digital agenda with the different nations. The Internet Governance Forum (IGF) was also established, a special forum or event for discussing topics relevant to the adoption of ICTs, the internet and their overall impact on related aspects, e.g. ICT infrastructure; internet access, regulations or standards, cybersecurity, digital economy or e-commerce, culture, society and digital content creation, human rights advocacy and freedom of expression in the digital sphere.

In 2015, when the MDGs were also assessed, a process was developed to review the achievements of the 2003 and 2005 WSIS agreements, to measure the effectiveness of the digital agenda for the adoption of public policies driving the closing of the digital gap, especially for developing countries, improving the ICT infrastructure to access the internet and the knowledge available in the form of digital content as well as innovations that contribute to development, innovation and productivity.

The results revealed a different world of promising progress. By 2005, the internet had less than 1 billion users, with rapid exponential growth, connected mainly through low-speed landline internet in developed countries. By 2015, more than 3 billion people, almost half the planet, were connecting to high-speed Internet. The novelty was that, in addition to

landline internet, they were also connected wirelessly through mobile devices, with a variety of affordable collaborative digital tools and platforms to produce and consume digital content, such as consumption of public services or digital governance, distance learning, buying and selling goods through e-commerce and social networks for immediate interaction, among others (Larancuent, 2015).

While the performance of the indicators has been commendable, there are still challenges to be overcome in order to achieve a more inclusive, open, affordable, secure, point-to-point and useful internet that respects human rights, freedom of expression and inclusive development. The governance model of the internet established by WSIS is also evolving, seeking greater inclusion and participation of different sectors and stakeholders, including governments, the private sector, academia, civil society, international organizations and the technical community, among others. The IGF, a forum established for dialogue and debate on the internet and emerging technologies, is traditionally held in the second week of November by a host country, in coordination with the United Nations Multi-Stakeholder Advisory Group (MAG-UN) as well as the ITU. It is also staged in different countries by the chapters of the Internet Society or different technical communities of civil society, for national and even regional reflection on the adoption of the internet and digital platforms.[1]

Since 2018 a new initiative advanced by António Guterres has emerged. He formed a High-Level Panel on Digital Cooperation (PACD) to submit proposals for strengthening cooperation in the digital field between governments, the private sector, civil society, international organizations, academic institutions, the technical community and other relevant sectors. Jack Ma and Melinda Gates

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[1] For example, in Dominican Republic, the IGF-DO is staged; in Mexico, IGF-MX; in Peru, IGF-PE; in the Caribbean region, CIGF; in the Latin American and Caribbean region, LACIGF; and so on in other global regions

were appointed co-leaders of the PACD, along with twenty leading digital tycoons, accompanied by a team of prominent leaders and experts who, last June, presented a Roadmap for Digital Cooperation (HRCD). Jack Ma chairs the Jack Ma Foundation and is also the founder and majority shareholder of the Ali Baba Group, a successful Chinese corporation specializing in e-commerce and digital services. Melinda Gates heads the Bill and Melinda Gates Foundation, which promotes poverty eradication, health and education innovation as well as other foundations such as the Konrad Adenauer Stiftung, a German cooperation foundation that promotes an inclusive democracy focused on human beings and on sustainable growth.

In 2019, the PACD presented a preliminary document inviting different global sectors of society, including governments, academia, civil society and the private sector, to collaborate and participate in the document, generating a report with the recommendations: building an inclusive digital and social economy, developing human and institutional capabilities, protecting human rights, promoting digital trust, security and stability.

In June 2020, the PACD introduced HRCD, which promotes digital cooperation to focus efforts on turning the internet into a hub for social wellbeing, especially as a consequence of the impact made by COVID19, which has accelerated the need for digital transformation for everyone's productivity. HRCD focuses on the following goals: universal connectivity, public digital assets, inclusion of the most vulnerable, capability building, adherence to human rights, a vision on Artificial Intelligence (AI) and cybersecurity (UN, 2020e). It also promotes and creates digital public assets such as open source, doing away with gender gaps in access to technologies, and social inclusion of indigenous, rural, youth and migrant populations, among others. The report also identifies threats to achieving this roadmap, such as: fake news, cyberattacks to breach cyber security, privacy and protection of personal data, protection of human rights, digital identity.

The Digital Cooperation Roadmap put forward the appointment of a UN special envoy to evangelize the members on the Digital Cooperation project. Also, innovate the discussion and discussion platform through three possible mechanisms: (1) an Internet Governance Forum (IGF), reinforced (IGF+ or IGF Plus) to expand inclusiveness and influence digital public policy makers, (2) a co-governance architecture, (3) develop a shared commons architecture.

Within this framework, different entities from around the world but also from the LAC region[2] organize events to promote the dissemination of these initiatives, collaboration and participation of all stakeholders, to reflect on HRCD. This reflection encompasses the IGF model under review. In the LAC version of the IGF (LACIGF), it has been observed that in practice it has negligible influence in engaging governments in dialogue and in getting them to adopt public policy changes for the region's transformation and digital agenda (ASIET, 2019). On the other hand, it is important to involve actors such as the telecommunications sector (TELCO) and internet providers (ISPs), the private sector, which is essential for developing ICT infrastructure, innovation and digital transformation. In the LAC region, the infrastructure was managed as a state monopoly. It was subsequently privatized and attracted different actors, evolving and making it more competitive, but more regulatory effort is needed to reduce ISP interference in consumer preferences and performance to access available IT applications in a competitive environment (Belli & Cavalli, 2018).

The digital gap is therefore a pending issue. According to ITU (2019), the penetration rate in internet adoption stands at 86.6% of the population in developed countries compared to 47.0% in developing countries and 19.1% in the least developed countries. Africa is also the region with the lowest internet access rates, which are estimated at 28.2% of its population, followed by the Asia-Pacific region

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[2] Entities such as ECLAC, KAS, LACNIC, Internet Society and Digital Democracy, among others.

at 48.4% and the Middle East and Arab states at 51.6%. Europe came out on top with 82.5% of its population, America with 77.2% and the Commonwealth of Independent States (CIS) with 72.2%.

Gender gaps have also been identified within the digital gap, with 48.4% of women having access to the internet globally compared to 58.3% of men. However, there are higher levels of differentiation in Africa (22.5% women, 33.8% men), Arab states (44.2% women, 58.5% men), and Asia-Pacific (41.3% women, 54.6% men).

This is why some observations worth mentioning are: (1) the digital gap, which has narrowed between 2005 and 2019, improving penetration rates from 16.8% to 53.6% respectively, with average annual growth of 10%; (2) in terms of the gender gap, between 2013 and 2019 there was positive change from 11.0% to 17.0% respectively; (3) the least developed countries suffer from a greater digital gap, with internet penetration reaching 19.1% of the population, followed by the African continent, with 28.2%; (4) only in 8% of countries do women outnumber men in internet use; (5) the installation of landline telephone lines, estimated at 12.1%, is also down in comparison with the wired Internet, estimated at 14.9%; in fact, there is a lower proportion in contracting cellular services as compared to the wireless Internet.

IV.   Conclusions: Challenges, Lessons Learned, Expectations

Last September 2020, the UN held the General Assembly in virtual form for the first time in its 75 years of operation, affected by the restrictive measures of the pandemic and air transport restrictions. The fifteen-day quarantine period established in New York has set the standard for other global and regional events that have adopted it to prevent contagion and encourage greater participation.

Undoubtedly, the opportunity provided by physical contact at these events in the past allowed participants to enter into negotiations and improve diplomatic relations and interactions. However, this is not a one-off action: since March, various events have been held via online video conferences, a turning point in multilateral diplomacy whose tradition is based on negotiations with a physical presence in the different diplomatic forums. Yet under this modality, in which the tradition of in-person event diplomacy was broken, a peak was reached in the active participation of 170 heads of state, something never before seen, and although the presence of one diplomat per country was allowed, which together with administrative staff amounted to about 250 people, it was still a significant reduction compared to the 2500 who usually participate in the event (CNN, 2020).

Moreover, multilateralism has also evolved, extending participation beyond diplomatic and plenipotentiary government delegates to include representatives from the private sector, academia, civil society and technical communities who engage, contribute and participate. This has further made it possible to balance out and find new sources of funding by involving non-state actors who are willing to collaborate and coordinate matters unrelated to state issues, driving the very evolution of the concept of diplomacy from the purely commercial to the cultural and scientific, from the private sphere to public diplomacy. In fact, public diplomacy manages a more diverse agenda in the sphere of culture and national identity, forging closer links with society in the host country and with resident nationals where missions are established. The advent of the digital world has also encouraged the adoption of digital technologies for diplomatic work, which has led to the emergence of digital or electronic diplomacy, leveraging interactions with followers through social networks to exercise public diplomacy, bringing communities closer to engagement, stimulating dialogue, promoting greater interaction and discussions on cultural and

social issues and even managing knowledge and memory, which is recorded in the form of data. Digital tools have facilitated greater inclusion of countries with fewer financial resources for diplomatic efforts, improving their participation (Bjola, 2018).

This journey answered questions on the quest for solutions to tackle the COVID19 pandemic, revealing challenges relating to vaccination, economic recovery, education, work, whose solutions should be based on international cooperation, supported by the internet and digital technologies.

And even within these different resources there are challenges and vulnerabilities, especially relating, within the framework of liberal ideology, to international relations, competition for global political and even technological leadership, which has come to light in the current era.

On one hand, the US works with an agenda tinged with signs of protectionist measures, threats of authoritarianism and restrictions on immigration, abandoning the traditional torch of liberalism, multilateralism and the spaces of power it has occupied as a leader for so many decades, stimulating the development of international trade, respect for human rights and the rule of law, international cooperation, liberal democracy and the emergence of a civil society.

On the other hand, the People's Republic of China has promoted an agenda for improving different indicators of human development, including poverty, multilateral collaboration and inclusive economic development while maintaining the socialist centralized planning ideology. This model does not generate much credibility in the West but would allow it to improve its levels of influence; but even though since 2015 it has adhered to an agenda of expanding its political and diplomatic influence, supported by global investment in infrastructure, it has improved. And since early 2017, it has set out to achieve

supremacy in artificial intelligence by 2030. Nonetheless, China has found a space in digital technologies with comparative advantages with regard to the West. Likewise, as a result, major investments are noted in different areas such as telecommunication networks, supported by fifth-generation technology (5G), with far higher speeds than the current 4G. This will impact the digital transformation, addressing problems to do with current internet capabilities for critical applications that are in need of these advances as well as problems with quantum computing, robotics and other digital technologies; although it remains to be seen how the ideological barriers will be overcome so that they can be absorbed by the West without the concerns relating to cybersecurity, privacy and personal data protection (Ding, 2018).

Simultaneously, despite the backlash, this is a very different era from that of the twentieth century thanks to the development of technology, liberal democracy, respect for laws and social justice. This civil society, allied with technical communities, academia and international organizations, has strengthened its social capital, creating spaces for collective participation, making commitments and demanding respect for established rights. Likewise, large corporations with new digital business models create on a daily basis disruptive new paradigms, ubiquitous emerging technologies that not only impact business but become paradigms of catalytic innovation for social change.

We are in an era of greater appreciation for tolerance, fewer wars, longer periods of peace, with greater awareness of environmental protection and the need to boost trade and negotiations while respecting interests and stakeholders. Knowledge is more affordably attainable through the web, and best practices are at the service of humanity, which shares and defends gained spaces, converts them into common assets and displays a global solidarity that is every day less dependent on public funding, with more sustainable and responsible

management models, one that finds in social responsibility units of large corporations and in philanthropic groups alike a greater interest in channeling resources in favor of social change, freedoms, development and in achieving the SDGs.

As Gilder (2013) would say, digital technologies operate according to the laws of centrifugal force, decentralizing affordable access to resources for the general population, including education, innovations, entertainment and productivity when compared to the past, which operated under the laws of a centrifugal force that mainly benefited the ruling, religious and multinational elites in an irrational way, as they preferred them for maintaining control and surveillance over society. However, we must add that virtualization operates outside the laws of physics, in a digital environment where resources are unlimited, reproducible, inexhaustible.

There are still dilemmas to be resolved, like the need for leadership to emerge, the latent threats to the current economic and political model and in the digital sphere, threats to privacy and the use of personal data and to human rights. The risks inherent to being online are increasing every day, such as cyberattacks on critical infrastructure that affect the operational continuity of organizations as well as data integrity and trust building. Social networks amplify each individual's freedom of expression, but threats in the form of abuse and the dissemination of uninformative news have an emotional impact, triggering fear, anger, uncertainty and powerlessness, threatening the comfort zones of society, reputation and prestige (Pennycooka & Randa, 2018).

International cooperation is expanding, creating opportunities for advancing global solidarity and collaboration on digital technologies whose assets prevail and contribute to the search for intelligent, interconnected solutions for the benefit and good of humanity.

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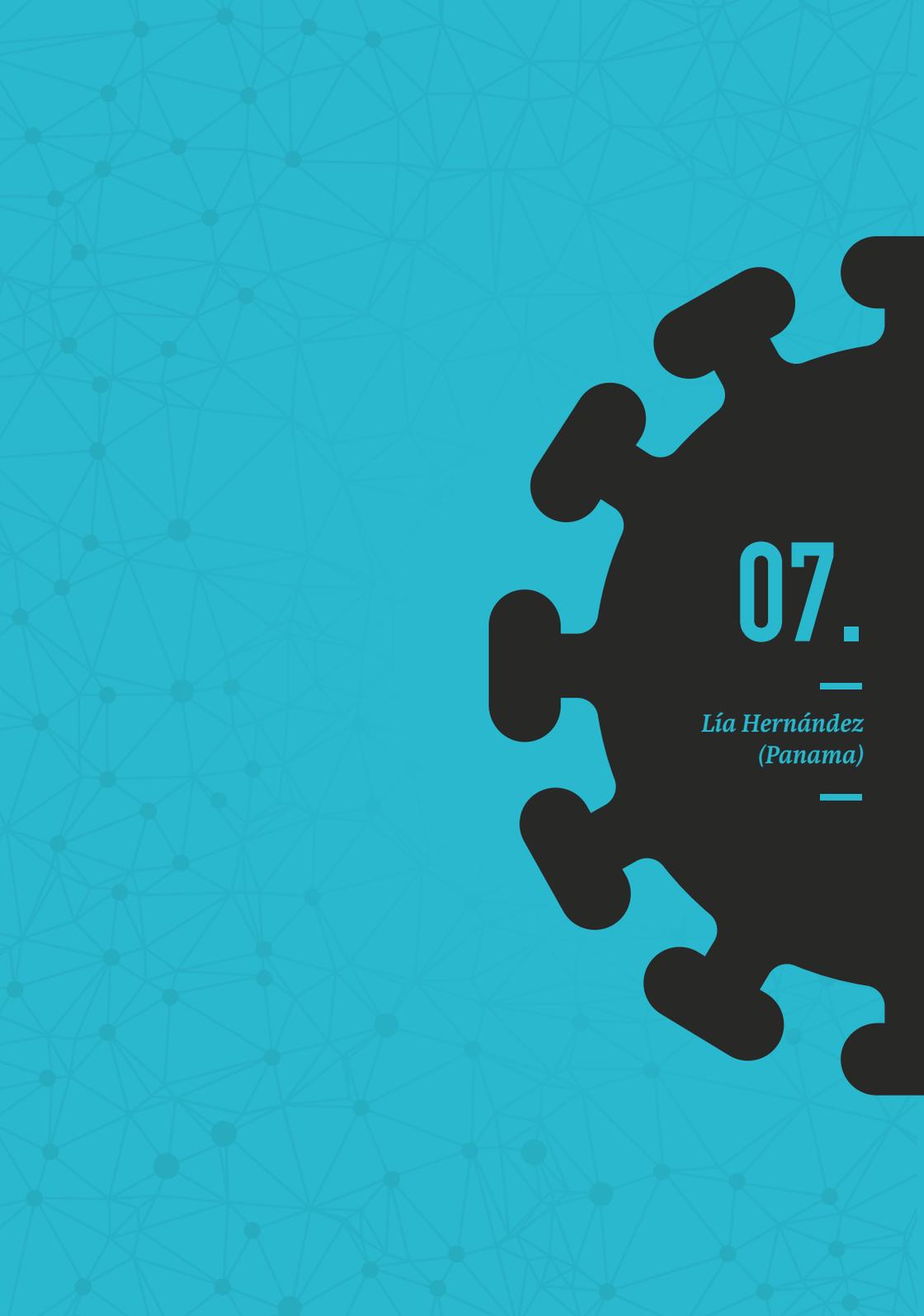
07.

Lía Hernández
(Panama)

THE RIGHT TO PRIVACY AND ITS TREATMENT DURING THE COVID19 PANDEMIC

Lía Hernández (Panama)

Simply visiting a building and going through its security checks, joining a local gym or downloading a mobile app to protect and self-diagnose in a pandemic involves the collection and processing of personal data and, depending on where we live, breaching the protection such data require can have serious legal consequences.

Discussions in our region about the need to regulate the protection of personal data and provide greater privacy for citizens is not new. Since the turn of the century to the present day, some countries have tried, some more successfully than others, to enact such laws.

However, their need for Latin American legal systems is more necessary than ever as we face an unprecedented pandemic, which has led to the mass use of personal data by the health sector, personal data going viral on social networks and the proliferation of using technology to fight the virus and doing activities from the comfort of our homes.

Let's explore the right to privacy and to a private and confidential life, the birth of the personal data protection mechanism as a right, and how our region protects our data during the pandemic.

Background

The concept of confidentiality and privacy has undergone changes and has evolved over time, depending on each society's characteristics, and in order to understand the current landscape of both concepts we must make a journey to its inception. In Roman law and in the Greek world we find no clear background for the legal concept of privacy, and it was not until *The Confessions of Saint Augustine* were written that we were able to observe it. In this classical work of early Christianity, St Augustine of Hippo speaks about the intimacy of the soul and the process of intimacy of the inner man.[1]

A few centuries later, the Italian revolutionary and republican Giuseppe Mazzini suspected that his correspondence was being monitored by the British authorities during his exile. To confirm his suspicions, he sent letters to himself with remnants of certain objects inside the envelope; by receiving them and finding them without these items, he was able to confirm them. This occurrence sparked an outcry that reached the very doorstep of the British Parliament, forcing a discussion on the secrecy of private communications.

Years later, an article titled "The Right to Privacy" would be published in the *Harvard Law Review* that conceptualized privacy as the right to be left alone. This article is vitally important because it laid the foundations of what we now know as the right to privacy.[2] One of the authors of this essay would become a Supreme Court judge and would advance various rulings and dissenting voices on this right.[3] However, it was not until 1965 that effective recognition of this right

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[1] St Augustine of Hippo was the greatest thinker of 1st-millennium Christianity. His biographical *Confessions* is described as a great philosophical and theological work. See the bibliography for more information.

[2] The article analyzed privacy in the light of the different forms of defamation as well as privacy and its convergence with intellectual property. See the bibliography for more information.

[3] In 1916 Louis Brandeis became a US Supreme Court justice. See the bibliography for more information.

was achieved, with the Griswold vs Connecticut judgment, when it was declared that: "The right of the people to be secure in their persons, houses, papers and effects shall not be violated."[4]

While this was happening in the United States, in the rest of the world, through the Universal Declaration of Human Rights, the term private life was recognized and family life and correspondence were protected.[5] Similarly, the International Covenant on Civil and Political Rights, better known as the San Jose Covenant, would protect this right.[6]

It evolved until some European countries adopted its regulations on privacy and pushed for personal data protection in the 'seventies. Personal data are described as any "information regarding an identified or identifiable living natural person".[7] These could be our names, IP addresses or email addresses, our home address or national identification number, to name a few.

The first country to have a law protecting them was Sweden, through Sweden's Data Act of 1973. This was the answer to various problems and question marks that had arisen from the proliferation of computers in the public sector and the completion of the Swedish 1969 census. Later, other European countries discussed and enacted similar laws.[8]

However, although the vast majority of European states belonged to the European Union, they showed differences between

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[4] Griswold vs. Connecticut originated as a prosecution under the Connecticut Comstock Act in 1873. See the bibliography for more information.

[5] The Universal Declaration of Human Rights was adopted in 1948 and includes in its thirty articles the human rights deemed to be basic. See the bibliography for more information.

[6] The International Covenant on Civil and Political Rights is a general multilateral treaty that recognizes civil and political rights and establishes mechanisms for their protection and guarantee. It came into force on 23 March 1976 and has been ratified by 167 States. See the bibliography for more information.

[7] Standardized definition of the European Commission. See the bibliography for more information.

[8] The piece mentions the history of open data protection regulations from their beginnings in a German state to their current development. See the bibliography for more information.

their privacy and personal data protection regulations, leading to obstacles to the cross-border flow of data. An initial breakthrough was made in 1980 when the Organization for Economic Cooperation and Development (OECD) issued a document to facilitate the exchange of data between its members.[9]

Despite this achievement, the disparity between the privacy and personal data protection regulations of the European Union member countries persisted, so it was not until 1995 that the European Union adopted Directive No. 95/46/EC,[10] better known as the Data Protection Directive. This directive ushered in the changes from globalization and digitization up to the current General Data Protection Regulation (GDPR).[11]

GDPR is a regulation that brings together a set of guidelines and rules to be followed by natural or legal persons processing or storing personal data of European citizens. The regulation presents the ARCO rights, which have been replicated in various legislations around the world. The ARCO rights govern access to the information contained in the databases, rectification of these data, cancellation due to inaccuracy or inconsistency and opposition to their collection. However, GDPR introduces new rights that can be exercised by data subjects, such as the right to suppression, oblivion, limitation and portability of data.

The right to be forgotten refers to the data subject's power to request that his/her personal data be de-indexed from the data

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[9] Organisation for Economic Cooperation and Development (OECD) is an international cooperation body comprised of 37 states whose objective is to coordinate their economic and social policies. See the bibliography for more information. See the bibliography for more information.

[10] Directive 95/46/EC of the European Parliament and of the Council regulated the processing of personal data within the European Union and remained in force until 2016. See the bibliography for more information.

[11] GDPR is the most cutting-edge document in data protection and is emulated and studied by many countries when discussing and enacting a regulation on personal data. See the bibliography for more information.

subject's database in the following cases: If the personal data are no longer necessary in relation to the purposes for which they were collected or processed. This right is connected in some way with the so-called "right to be forgotten", so that the controller who has made personal data public is obliged to instruct controllers who are processing such personal data to delete any links to them, or copies or replicas of such data.

Whereas the right to portability refers to receiving the personal data in a structured and standardized format that can be transmitted to another controller.

The regulation also gives special protection to sensitive data, which are those whose use and improper processing could result in breaching various fundamental guarantees as a result of the discrimination which the data subject would suffer. Some sensitive data refer to our sexual orientation, trade union membership, partisan ideology and religious denomination, among others.

All these international regulations have forced various states to update their laws in order to remain valid and competent in addition to the various situations posed by the emergence of the digital world, and Central America has been no exception.

The Legal Situation in Latin America

Several initiatives to regulate personal data protection are being discussed in the Latin American region. On a constitutional level, all countries have articles on private life and privacy and, in the specific case of Costa Rica, the constitutionalization of this right is being discussed. This would make the Central American country a regional and global pioneer in providing this protection.

On a regulatory level, only three Spanish-speaking states belonging to the Central American Integration System (SICA) have

enacted personal data laws. Let's take a closer look at the situation in this region.

Regionally, there is a practice of regulating the protection of personal data through supplementary laws. This is the case in Guatemala, El Salvador and Honduras.

In the case of Guatemala, its constitution provides the right to inviolability of correspondence and in 2009 an initiative was presented to Congress that was meant to approve the region's first personal data law. However, it is still awaiting approval.[12] In the absence of regulation, the Law on Free Access to Public Information is currently the only one regulating personal data and sensitive data as well as establishing a mechanism for the protection of such data and classifying offences in this area.[13]

This situation is repeated in El Salvador where, aware of the needs brought to light by the pandemic, a law to protect personal data is currently being discussed.[14] The Salvadoran constitution provides protections for personal and family privacy.[15] At the

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[12] Initiative 4090 was presented in 2009 and analyzed by the various committees of the Guatemalan Congress, including bodies such as the World Bank and the Center for Latin American Monetary Studies as well as the European Union. See the bibliography for more information.

[13] This law defines personal data as any information concerning identified or identifiable natural persons. See the bibliography for more information.

[14] The main discussion within the project is the need to create a new body or to assign regulator powers to an existing authority. See the bibliography for more information.

[15] The Constitution of El Salvador proclaimed in 1983 mentions, in its Article 2, the guarantee of personal and family privacy as an individual right. See the bibliography for more information.

regulatory level,[16] various laws[17] provide protection[18] for data,[19] depending on their characteristic.[20]

A similar situation exists in Honduras, where its constitution establishes protections for personal privacy and the inviolability of communications. In Honduras there is currently no current law governing the protection of personal data. However, efforts have been made in this regard.[21]

In the absence of special legislation, personal data in Honduras at least has protection recognized in the Institute for Access to Public Information Act, Legislative Decree No. 170-2006.

Although non-regulation of data protection is a general rule, three other countries in the region have succeeded in doing so. The first country in Central America to have a personal data protection law was Costa Rica in 2011.[22] At the constitutional level, privacy is regulated and a project to raise data protection at the constitutional level as an autonomous right is currently being discussed.[23]

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[16] The Access to Public Information Act of 2011 regulates transparency and access to public information in El Salvador. See the bibliography for more information.

[17] The Electronic Signature Act defines personal data and public personal data in addition to configuring the technical and legal issues of electronic signature in El Salvador. See the bibliography for more information.

[18] The Credit History Act introduces regulation on data reporting agencies, databases and data processing. See the bibliography for more information.

[19] The Consumer Protection Act follows the United Nations Guidelines on Consumer Protection and contains the duties and defense mechanisms it may exercise. See the bibliography for more information.

[20] The Salvadoran Telecommunications Act dates back to 1997, with more than fifteen reforms. See the bibliography for more information.

[21] A Personal Data Protection Bill was introduced in 2015, but it did not pass. See the bibliography for more information.

[22] The Personal Data Protection Act is Law No. 8968 of 7 July 2011. It was the first of its kind in Central America. See the bibliography for more information.

[23] The initiative to raise the protection of personal data to a constitutional level was brought to the public arena at the same time as the Presidential Palace leads investigations into the mishandling of personal data. See the bibliography for more information.

The second country in the region to regulate personal data was Nicaragua. Nicaragua's Political Constitution[24] as well as its various reforms recognize people's right to their private lives and that of their families.

As part of this right, which is recognized at the constitutional level, it also establishes the inviolability of domicile, correspondence and communications of all kinds, and the State's obligation to disclose any information that its authorities have registered about it, together with the right to know why and for what purpose this information is held.

At the regulatory level, they have Law No. 787 on the Protection of Personal Data.[25] This law consists of nine chapters regarding data controllers, data subject rights, violations and applicable penalties, among other aspects.

Law No. 787 aims to protect natural or legal persons from the processing, whether automated or not, of their personal data in public and private data files in order to guarantee the right to personal and family privacy and the right to informational self-determination.

In the case of Panama, the regulation of personal data is a recent occurrence. The Political Constitution of the Republic of Panama[26] guarantees the inviolability of communications, which is in turn the basis for the right to the protection of personal data. Law No. 81, of 26 March 2019 "on the protection of personal data", protects any personal data of natural persons that are processed or stored in Panama.[27] This law stipulates rights, obligations of data controllers, violations and sanctions.

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[24] The Nicaraguan Constitution contains articles on family privacy and private life. See the bibliography for more information.

[25] Nicaragua's Data Protection Law is the second of its kind in the centralAmerican region. See the bibliography for more information.

[26] Article 29 of the Constitution of Panama contains provisions on the inviolability of correspondence and private documents. See the bibliography for more information.

[27] The Panama Data Protection Law is the last personal data law enacted in the Central American isthmus. See the bibliography for more information.

However, in the Panamanian case, the law does not unify the protection of personal data[28] and keeps other data[29] regulated by other laws.[30]

Unfortunately, the lack of education in privacy and personal data protection in the Latin American region is widespread, so it is difficult to find citizens who know these laws, the rights they grant them and the actions they can take to protect themselves.[31]

Privacy fights Technology and the Collective

The region's entire data protection landscape has been challenged by the emergence of the pandemic and the limited preparedness we had for dealing with it. Coupled with this, the use of technology to deal with coronavirus has been promoted and implemented in much of the world, with the danger of breaching personal data this entails.

In the Central American isthmus, the governments of Guatemala, Costa Rica and Panama have developed websites, chatbots, mobile apps, mobility passports and use of drones, among other technologies. Companies like Google and regional bodies have also put forward similar initiatives.[32]

These measures entail high risks for the citizens who use them. Claiming to ensure collective health, they have implemented these technologies that may be harmful to the right to privacy and

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[28] Panama Public Information Access Act. The regulations include the *habeas data* process. See the bibliography for more information.

[29] The Act regulating the information service on consumer or customer credit history protects customer data and stipulates the proper handling of customer data. See the bibliography for more information.

[30] Law No. 51 regulates the storage of telecommunications users' data, for how long they must be kept, the procedures for making requests for metadata and telecommunications content. See the bibliography for more information.

[31] Law No. 3 of the year 2000 regulates the rights of patients with HIV/AIDS and various STIs. See the bibliography for more information.

[32] During the pandemic, Google developed local mobility reports with data registered on its Maps platform. See the bibliography for more information.

personal data protection. Hence the importance of having citizens who are informed about their rights, public bodies that defend and respect personal data and development companies with good privacy practices and with good personal data protection policies.

These technologies have been sold to the population as the magic solution to the virus, yet this is far from the case and additionally creates problems. Each country must analyze how many people have access to their own smartphone and whether these people have good-quality mobile internet, among other aspects. If we look at the effects these applications have had in other countries, we would not consider them the solution to the virus.

"In Germany, it was estimated that 60% of the population needs to install the Bluetooth-based application and that it will ultimately not be implemented. However, a survey showed that only 47% of people were OK with installing it and that 8% did not own a smartphone. In Singapore, a country with a high level of technology knowledge and trust in its government, only one in five people installed the application on their mobile. Meanwhile, in Iceland, despite almost 40% of its population using the national app, they have acknowledged that the real impact has been small compared to manual tracking techniques such as phone calls", a Colombian newspaper said.[33]

If we analyze updated figures, in Spain the COVID Radar app only enters information on 100 out of every 10,000 positives. Figures show that only 4.6 million people in Spain have downloaded the app, 10% of the population, when the ideal is a minimum of 20% of the population in a country of fifty million inhabitants. This shows that the app was not effective in accurately tracking infections.[34]

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[33] The article is an analysis of technology's impact during coronavirus, from a Colombian approach. See the bibliography for more information.

[34] The app is being investigated by the Spanish Data Protection Agency. See the bibliography for more information.

In the case of countries of four million people such as Panama or Uruguay, for the application to be functional it must be downloaded by a minimum of 200,000 citizens and actively used by the vast majority for reliable monitoring. Yet when reviewing the Panama tracking app, we see that it has been downloaded by barely a thousand people, although the Uruguay app has 100,000 downloads.[35]

Our Privacy vs. The Collective

The use of apps for contacting positives means sacrificing our fundamental right to privacy, but until when? For how long will they process our personal data? Will they be able to manipulate our personal data without our consent? Among many other questions. These apps may involve new forms of government espionage or the exclusion from our societies of those without a device or the technology to install the app. One feature that worsens the picture is that these apps have not been audited by the different sectors that make up the region's digital ecosystem.

And this does not change by country; almost all Latin American countries have developed apps, to mention just *Alerta Guate* and *Alerta Honduras*, in Guatemala[36] and Honduras[37] respectively, *Protégete* in Panama[38] and corona app in Colombia,[39] not to mention the use of bots and drones and other technological developments.

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[35] Data from Google Store. See the bibliography for more information.

[36] The use of the app was suspended by the Guatemalan government after being warned by international bodies and organizations of corruption and privacy risks for their users. See the bibliography for more information.

[37] This app was created by a group of Hondurans with the support of companies and the government. See the bibliography for more information.

[38] The wording of the application's privacy notice mentions that it will collect the information for however long is necessary, which opens up the possibility of the State handling the data even years after the pandemic. See the bibliography for more information.

[39] The application is mandatory for entering Colombia. See the bibliography for more information.

The apps have been used for self-diagnosis, for data-driven decision-taking, for tracking contacts and the potentially infected, as mandatory mobility passports and for monitoring the quarantine of those who test positive; however, each of the purposes for which these technologies are used shows that the technology is not 100% reliable in looking after us as if it were a security guard or a doctor in our pocket.

In the case of self-diagnosis, the system and algorithm are based on the information provided by the patient, who is not actually a health expert and can come up with the wrong diagnosis. This can lead to two chaotic situations between them: it either causes a large number of wrongly diagnosed people and gives them medical care recommendations, which can lead to collapsing the already overburdened healthcare systems, with the resulting lack of care for real emergencies and patients who test positive, or it can do just the opposite, that those who are positive are self-diagnosed as negative and do not go to the healthcare systems, infecting more citizens who trust the results of the app. Either situation can be lethal.

If we go to another situation, the confidence that health authorities may have in this data for making decisions and drawing up strategies can be negative. Authorities should consider that not all people will download the app and, of those who do, not all will actively use it. They should also consider, the range of the internet and its quality among their population.

On the other hand, these applications must provide the highest privacy and cybersecurity for their users. Many of them request information on pre-existing health conditions, and we should remember that personal data such as state of health are encased in ultra-protections, as it is sensitive data. If they fall into the wrong hands or they are misused, their owners could face discrimination in their jobs, schools, communities, and not just during the pandemic but perhaps also throughout their lives. Some of the applications

provide data anonymization - analyzing data without knowing the owner's identity - but create other problems.

The vast majority of contact tracking apps use Bluetooth technology, leading to possible fast battery discharge and to users switching off the system to avoid this situation. This same technology is able to detect other Bluetooth signals several meters away, perhaps the cell phone of a neighbor living on your same floor whom you haven't seen in months, giving out false contact information.

The latter option aims to replace care and contact tracking by healthcare experts who, even with the development of these technologies, cannot be replaced by them.

The use of these apps, as with immunity passports so that you can travel to work or to school, can lead to various disastrous situations. More disadvantaged citizens, after months of quarantine, may cause their own infections in the hope of creating immunity and being eligible for a passport so that they can bring in an income for their home.[40] This situation can create and perpetuate poverty rates and worsen the current emergency situation.

In April, the World Health Organization issued a scientific summary, explaining the process of creating an individual's immunity and the need for caution in implementing these measures without the necessary clinical considerations. The report mentions that many countries are conducting immunity tests among their populations without establishing which of the different coronavirus strains has recently spread among the public, confounding previous infections and making people feel confident when they are not really immune or have antibodies. It also mentions that these tests do not

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[40] The article not only analyzes the scientific challenges involved in using these apps as passports but also the legal challenges that they can cause. See bibliography for more information.

measure immunity to secondary ailments caused by the coronavirus and its aftereffects.[41]

For example, someone who has never been infected with coronavirus has been in contact with some family members who have tested positive and has been quarantined, confirming their negative status. In some countries, employers have laid off staff for similar situations despite their not having tested positive, infringing their right to employment. In other cases, whole families have been discriminated against by their communities and have been barred from freely travelling or been forced to move away because they have a family member with the virus; even medical staff have been discriminated against by transport services and have failed to find a way to return home after long days of fighting the virus; or they have been the victims of beatings that have often ended in their death.[42]

Now, imagine that you test positive for coronavirus and enter your personal information in a government app. You trust the health authorities to store your information; however, because they have poor cybersecurity safeguards, your personal data, including physical address and chronic diseases, end up on social media due to a security breach. No one can imagine the consequences the data owner or their family members will suffer.

Without going that far, a local newspaper in Mexico deliberately published the quite precise addresses of certain people who had tested positive and had been confirmed by the health authorities. This was a serious breach of the Ministry of Health's cybersecurity systems and the privacy of those people.[43]

A similar situation occurred in Spain with the use of a government contact tracing app. Amazon had access to the list of people

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[41] Governments have suggested that detecting antibodies against SARS-CoV-2 could serve as the basis for an "immunity passport" that would allow people to travel or return to work, assuming they are protected. See bibliography for more information.

[42] These situations have occurred around the world; however, these specific examples have happened in Mexico. See the bibliography for more information.

[43] To date, the Mexican health authorities have not commented on the leaks. See the bibliography for more information.

who used the information, including those who had tested positive.[44] Worse, the breach was not immediately fixed; several weeks passed before this was done.

Since the start of the pandemic, regional bodies and international human rights coalitions have expressed concern about the proliferation of apps that in principle seek to stop coronavirus, yet these same apps can become a state weapon against citizens. In this regard, the World Health Organization (WHO), together with academics and members of civil society from around the world, published guidance on ethical considerations that should be evaluated when using tracking technology. This document provides a roadmap that considers the effectiveness of these tools versus tracking physical contacts. The document mentions that for these tools to be truly effective they must be installed by at least 60% of the population. Their implementation must not be mandatory for citizens and their use may be affected by the lack of connectivity and poor stability in the use of the internet among Latin American populations. Finally, the document suggests certain principles containing privacy laws and regulations, identifying some others that are necessary during this pandemic. When downloading an app, we should consider them.

- The length of time these apps will be used so as not to extend the surveillance powers they grant the state.

- The proportionality of data collection to the strictly right and necessary processing.

- The restriction of the use of these data for purposes other than health, in compliance with the principle of purpose.

- High levels of security, preferably encrypted, to ensure data privacy.

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[44] This mistake has recently been rectified by the government, but it exemplifies what can happen in our countries. See the bibliography for more information.

Much of the information can be found in the privacy policy when downloading the app or directly in the online store before downloading. While it may sometimes be difficult to find the above information, following these steps will help us choose between our privacy and the collective. When choosing, it may also be of interest to approach the data protection regulator in the country for their advice as well as to check what the specialized civil society has to say on the matter.

Another interesting option is to check whether these applications use Blockchain technology; it provides a platform based on distributed ledger technology (DLT) to share immutable data and safeguard their integrity regarding COVID19. It also offers traceable supply chains capable of managing information and food flows.

Latin America has such initiatives in Uruguay, Argentina and Costa Rica,[45] while the Inter-American Development Bank launched a hub for developing digital solutions against COVID19, which includes Blockchain.

After downloading and using these applications, it is interesting to send notes requesting our data through our right of access, or to set up *habeas data* to be able to access and certify what information they hold on us so that we can make use of other rights such as rectification or oblivion, depending on our local regulations.

Similarly, it is highly advisable, in light of the laws, to analyze each country's data protection and privacy policy and for the user to ensure that the applications and their administrators do not store the information for purposes unrelated to the pandemic or store it for an exorbitant and excessive length of time.

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[45] Fundación da Vinci and the Innovation and Entrepreneurship Center of ORT University (CIE) are the organizations in charge of this project. See the bibliography for more information.

If provisions contrary to those contained in the laws are found, citizens have the right to protect their personal data from overreach and to lodge complaints before the corresponding competent authority. If there is no regulation or authority in charge, it should always be remembered that personal data are ours, because we are the owners and we decide the correct use for which it is intended.

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08.
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*Luis Salazar
(Costa Rica)*

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INNOVATION, TECHNOLOGY AND MSMES IN THE TIME OF COVID19

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Luis Salazar (Costa Rica)

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The Storm was approaching

By late 2019 the world was experiencing events that were foretelling that 2020 would be a year with a complicated outlook for Latin America as well as challenges in the political, economic and social spheres, with a reserved level of expectations and major tasks pending for the wellbeing of citizens and businesses. The largest economies in Latin America, such as Mexico and Brazil, were not progressing at the desired speed, but the forecast was for positive growth. Similarly, the Human Development Index of the UNDP (United Nations Development Programme) pointed out changes in inequality, their evolution, the importance of substantive issues such as education, environment, technology and their involvement in generating new opportunities (UNDP, 2019).

The omen was for challenges ahead, but short from what actually happened once the world began to learn about the situation in China, with the emergence of a virus that was to spread across the world and turn into a pandemic whose tentacles would strike and permanently change the course of the first quarter of the twenty-first century.

It only took a few months for the planet to descend into chaos, causing countries to close their borders, generating

variations in business models, business failures, fiscal problems for many governments, the growth of virtuality in human coexistence and the need to stand united, yet physically distanced as human beings.

As a reference, one need only observe information issued by ECLAC (Economic Commission for Latin America and the Caribbean) announcing, for July, that the outlook for the region would show a drop in Gross Domestic Product for this year, with decreases of -9.4% in South America, -8.4% in Central America and Mexico, and -7.9% in the Caribbean (ECLAC, 2020). As early as August, a new report indicated that Latin America's international trade would fall sharply this year, with a 23% contraction in the value of regional exports and 25% in imports (ECLAC, 2020).

The scenarios had been transmuted: the dominant goal now was to flatten the contagion curve, prevent healthcare systems from collapsing and keeping the mortality rates caused by the virus as low as possible. The planet was still in disarray and it was increasingly complicated to achieve a balance in terms of healthcare versus economic survival, with many governments, individuals and businesses suffering the onslaught of a new normal called uncertainty.

Worldwide Shutdown

Slowly the exponential growth of the new coronavirus, later known as COVID19 and scientifically denominated Sars-Cov-2, forced countries to start closing borders and stop people from leaving their homes as a preventive measure, with the immediate consequence of a decline in production and consumption that quickly had a direct effect on employment and a variety of economic activities, spanning the manufacturing industries, air transport, construction, tourism and recreation services, among many others.

Under these circumstances, the impact on, and limited responsiveness of, micro, small and medium-sized enterprises (MSMEs), which in turn represent a high percentage of the business community in Latin America and generate employment for thousands of people in the region, was evident.

Considering international estimates, in line with the 2019 assessment, the following was put forward: "The development of SMEs is a clear priority for public policy authorities in Latin America and the Caribbean... This is not surprising, since the vast majority (99.5%) of companies in the region are SMEs and almost nine out of 10 companies are classified as micro-enterprises. SMEs are important job generators regionally (60% of formal productive employment)".[1]

This global context had an appalling impact on Latin America; according to the International Labour Organization (ILO), problematic symptoms had become evident in previous years. It is mentioned that despite the "weak increase in the employment rate in 2019 (of only 2 percentage points compared to 2018) it was not enough to reduce the region's average unemployment rate, which remained at 8% of the economically active population".[2]

In June this year, due to the adverse effect of COVID19, it was estimated that the average unemployment rate would increase by around 4 percentage points compared to 2019, from 8% to 12.3% (ILO, 2020), a figure that could increase as a result of the economic slowdown, with a worsening series of variables such as tax collection, tax risks, lack of liquidity and people's potential withdrawal into the informal economy.

On the other hand, in countering the pandemic we cannot ignore all the causes that already generate complex situations

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[1] https://www.oecd.org/latin-america/Indice-Politicas-PYME-LAC-Mensajes-Principales.pdf

[2] https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/documents/publication/wcms_749659.pdf

mentioned by the World Economic Forum in the Global Risks Report (WEF, 2020) such as climate change, cyberattacks and political instability in some countries that, together, caused a perfect storm that has required the best efforts both individually and collectively to move forward under unprecedented conditions.

Trade in the pandemic

Rapidly and after the start of the pandemic, trade has experienced a sharp decline, with the drop in demand for goods and services from businesses representing a major economic challenge, Roberto Azevêdo, Director-General of the WTO (World Trade Organization), said that "According to our projections, in 2020 trade will decrease between 13% and 32% in all regions of the world and in all sectors of the economy."[3]

Of particular concern is the commercial deterioration of companies that have been unable to respond and adapt to high demand for goods and services via digital platforms. The outlook for helping sectors outside the world of the internet has been a complex one; in Costa Rica, a country with a high level of income from tourism, the Costa Rican Tourism Institute reported that "127,201 international arrivals by air were recorded in the third month of the year, which compared to 276,036 international arrivals in 2019, represents a -54% decline due to the global health emergency".[4]

Let's remember that at the start of this century—just twenty years ago—e-commerce used to be a little-used tool for business, there was not enough access to digital technologies and hardly any interest by investors and entrepreneurs to explore this new world. In fact, companies such as Facebook®, Twitter® and WhatsApp® did not even exist yet, and Google® was barely two years old.

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[3] https://www.wto.org/spanish/news_s/spra_s/spra303_s.htm

[4] https://www.ict.go.cr/es/noticias-destacadas-2/1693-cifras-de-visitacion-de-marzo-ratifican-ruinoso-impacto-del-covid-19-en-el-turismo.html

Clearly, by 2020 everything has changed drastically: technology plays a leading role in world trade and disruptive technologies such as the Internet of Things, artificial intelligence and big data are the backbone of millions of global operations and transactions.

The need to continue consuming from our homes has catapulted online commerce, providing basic support for MSMEs, with social media being a particularly fertile field for seeking consumers in the digital economy. Pinterest recorded the largest increase in users, with 9.55% in the first quarter of the year. Twitter reached approximately 14 million users in that same time, accounting for 9.21%, while Snapchat, Facebook and LinkedIn saw growth of between 5% and 2.2%[5] (Moreno, 2020).

Paola Vargas, a journalist with the *La República* newspaper of Colombia, states that "In the midst of the world's economic crisis, e-commerce is experiencing its best period in Latin America, with growth of more than 300%. According to a regional study by Kantar, in the first week of lockdown, e-commerce penetration registered a 100% increase, while in the fourth week the increase was 387%."[6]

Specifically important is the use of e-money as a payment and wire transfer platform, using cellular devices and computers such as SINPE in Costa Rica and YAPPY in Panama respectively, online banking systems or global specialty applications such as PAYPAL® that enable cash-free consumption from online platforms to a more informal sector of micro-subsistence.

Connectivity and Pandemic

In this almost dystopian scenario, with limitations in people's mobility, complexity in the logistics of goods, the strong impact on value chains and other restrictions caused by the spread of the

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[5] https://www.trecebits.com/2020/05/06/las-redes-sociales-que-mas-han-crecido-en-el-primer-trimestre-de-2020/

[6] https://www.larepublica.co/globoeconomia4

virus, businesses and governments have found operational support in the massive and accelerated exploitation of information and communication technologies, by which means many sectors have managed to rejoin productive activities. Data collected by the ITU (International Telecommunications Union) indicate that, by the end of 2019, 53.6% of the world's population, i.e. more than 4 billion people, are using the Internet (ITU, 2019).

This reach, in times of pandemic, has made telecommunications essential in complementing health authority efforts in crisis care, providing alternatives to maintaining social distancing and preventing productive gridlock. In the first few weeks of the pandemic Latin America, like the rest of the world, experienced an increase in internet traffic—especially in fixed networks— that grew between 20% and 45%, requiring the strengthening of local network infrastructures of internet providers, the purchase of international capabilities and the strengthening of traffic exchange centers, all in a public-private coordination that enabled networks to cope.

This digital, telecommunications-based environment has driven significant keys to success, such as:

- Teleworking
- Increase in e-commerce
- Speeding up of businesses' digitization process
- Use of digital money

Unfortunately, there was also an obvious presence of technological gaps that had to be combated to facilitate the adaptability of businesses and individuals in the digital economy. Some of these gaps are found in areas such as:

- Digital literacy
- Weakness in digital transformation in MSMEs
- Connectivity and access to electronic devices

- Systematization of company processes
- Scant digitization of government procedures
- Cybersecurity vulnerabilities

Innovation, MSMEs and Technology: a Path to Survival

The growth of the internet, e-commerce, the impact of MSMEs on the economy and innovation are strategic areas that became an integral part of alternatives for coping with the pandemic. Technical assistance, risk capital, the innovation ecosystem and public policies are particularly important in this pandemic, especially the still challenging opportunity to improve the spaces for productive differentiation and competitiveness.

Latin America still has room to improve. According to this year's Global Innovation Index of the World Intellectual Property Organization (WIPO, 2020) of sixteen countries assessed in the region, Chile records a score of 33.9, followed by Mexico with 33.6 and Costa Rica with 33.5. However, the first one appears only in 54th place in the world, reaffirming the need to support MSMEs, where the injection of capital can lead to successful scalability.

ECLAC defines that "SMEs represent key players in increasing potential growth in Latin America. These companies are characterized by great heterogeneity in their access to markets, technologies and human capital as well as by their connection with other companies, factors which affect their productivity, export capacity and growth potential."[7]

This definition shows the enormous responsibility to present immediate solutions and action plans that will strengthen the foundations for this large productive sector which, as mentioned, encompasses the largest business community in Latin America,

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[7] https://www.cepal.org/es/notas/ a

one that has been particularly affected during the months of the pandemic by shortcomings in areas such as:

- Investment for Research and Development (R&D)
- Access to credit
- Decrease in liquidity
- Decrease in demand
- Lack of inputs and raw materials
- Digitalization levels
- Lack of support for innovation
- Loss of human resources

In this complex framework, and in the midst of the health crisis, individual talent and the enablement of creative spaces are assets for the construction of opportunities as part of the diversification of goods and services required in the digital economy and new markets. There is an urgent need for comprehensive, real and concrete efforts to strengthen MSMEs and startups as well as intermediate collaborative economy models to provide complementary services such as transport, production and sales.

Essentially, it lies in the convergence of efforts aimed at establishing lines of action in the following areas:

- Financing
  - » Access to credit
  - » Support plans
- Digital transformation.
  - » Connectivity
  - » Cybersecurity
  - » E-commerce
- Public policies for an innovation ecosystem

- » Regulatory framework (procedures, social contributions and making working days more flexible)

- » Nonrefundable funds

- Support in the different entrepreneurial stages

    - » Incubation

    - » Acceleration

    - » Internationalization

- Productive diversification

- Talent training

Bank Financing

Bank financing must be analyzed from two perspectives: the ability to adjust current debt conditions and keeping future credit lines active.

Companies have seen a decline in revenue due to lower consumption, logistical problems that tighten costs and even lost sales due to a lack of raw materials for production; therefore, in order to mitigate delinquencies, many banks have taken steps to offer debt term adjustments, interest rate cuts and installment freezes, all with the aim of enabling companies to meet their obligations and allow them to continue operating.

Secondly, actions for opening credit lines with flexible conditions, which favor the injection of capital to solve the liquidity constraints and lack of solvency they face.

Digital Transformation

The sense of urgency in the digital transformation process is the turning point to keep production active and boost MSMEs. Countries that already have a strategy need to speed up its

execution, and those that are lagging behind should use bilateral cooperation and multilateral bodies to outline actions. Otherwise, the effects will be devastating.

Digitization favors organizational structures, the business climate, production and commercial processes, while reducing operating costs. In the digital transformation, the work of the central government is essential in seeking to advance the digitization of procedures, the interoperability of information systems, regulatory frameworks for digital activities that require it, support for the deployment of telecommunications infrastructure, the development of digital literacy skills and the activation of plans to reduce the digital gap and universalize access.

It should not be forgotten that the expansion of e-commerce and online transactions have heightened the risk of cybercrime progression as one of the most negative factors in the process of bringing small businesses into cyberspace, calling on authorities' attention to ensure that there are protocols in place for handing incidents, preventing attacks and training talent, incentivizing electronic spaces as markets with appropriate technical and legal security.

Public Policies for Innovation

Governments have an inalienable role in creating conditions for the consolidation of innovation ecosystems that consequently favor a climate for developing MSMEs. The effective integration of private enterprise, the public sector and academia must be sought, as they are actors with productive synergies focused on economic recovery plans. This is achieved by taking the decision to prioritize innovation, promote intellectual property protection, facilitate the formalization of companies and inject investment in research and development.

Latin America still has challenges in establishing the right conditions for innovation. This year, for example, improvement options can be observed for the formalization of companies. The World Bank's *Doing Business 2020* study identified worldwide that 115 economies introduced substantial regulatory reforms that facilitate business activity in all measured areas (WorldBank, 2020).

With regard to the State as the promoter of resources for innovation, significant amounts must be assigned to the provision of non-refundable funds and joint securities so that the weaker business sector has the possibility of maintaining operations while also conducting research and development to diversify the supply of goods and services. Several governments have now rightly opened up funds for talent training or research and development and innovation projects associated with the fight against COVID19.

Some cases have been assertive, such as in Brazil. The start-up Magnamed,[8] a company supported by BID Lab[9] and Fapesp,[10] worked on producing 6500 ventilators for the country's Ministry of Health. Also noteworthy are the programs implemented by the Uruguayan National Research and Innovation Agency (ANII) and the Production Promotion Corporation (CORFO) in Chile, with the Colaboratech platform.

These examples are not only geared towards public-private relations but are also aimed at helping small businesses, and their current focus is on producing solutions in the field of healthcare (IDB, 2020).

Finally, some employment-related government decisions help shield the innovation ecosystem and favor businesses in these times of crisis, such as the easing of social contributions and working hours.

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[8] https://www.inovacoesmagnamed.com.br/copia-conheca-1

[9] https://bidlab.org/en

[10] https://fapesp.br

Support in Innovation Stages

With the limited resources available, the design of business programs must be carried out by establishing profiles in accordance with their needs. There are numerous assessment criteria to determine the type of businesses and the support they require; however, size, production capacity, adaptability of the offering, scalability and technological sophistication may be appropriate in directing support in the incubation, acceleration and internationalization stages.

The role of accelerators and groundbreaking companies is substantial, since many MSMEs encounter restrictions to simultaneously dealing with operational, commercial, innovation and market-extension tasks, among others. This is why clusters and production chains allow the creation of models where those with more stability drive those with the greatest problems, creating virtuous circles of business progress. The opportunity to respond with knowledge production provides an option for resisting the economic reality of the pandemic while assimilating the disruptive changes already brought about by the fourth industrial revolution.

Productive Diversification

We have seen how science has become a light of hope in tackling the pandemic, being fronts of international support to increase the production of medical devices and materials, drugs to treat the virus and, finally, the long-awaited COVID19 vaccine.

In record time, different research centers and companies have come together to work—often under the principles of open science—to find common solutions. Hence the great lesson of enhancing the value of producing new goods and services, especially by the MSME sector, that meet market demands, using the skills of creating, adapting and innovating.

Boosting startups is essential, as they have the ideal characteristics for economic reactivation with the application of talent, plus:

- They have innovative business models within the digital economy.
- They generate high revenues.
- They have teleworking models.
- They have an efficient cost structure.
- Their goal is rapid scalability.
- They are favored by venture capitalists who take a chance on them.

In these circumstances, there is a relatively new area that is being worked in a public-private partnership called *govtech*, defined as "(...) the ecosystem where governments collaborate with startups, scale-ups and MSMEs, which use data intelligence, digital technologies and innovative methodologies to provide products and services that resolve public issues".[11] This economic driver proposes an area of action between new companies and the improvement of government processes, using digital technologies, promoting innovation and favoring the truly interesting entrepreneurial undertakings that need boosting.

Talent Development

The nature of the work with the Fourth Industrial Revolution had already been changing significantly, causing profound variations in skill development and training processes. It has become increasingly necessary to develop new retraining and continuous learning capabilities given the mainstreaming of knowledge, modifying the learning paradigm we currently use.

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[11] Santiso, C., & Ortiz de Artiñano, I. (2020). *Govtech and the future government*. Caracas: CAF and PublicTechLab of IE University of Spain. Retrieved from http://scioteca.caf. com/handle/123456789/1645

At this time of abrupt transformations, it is absolutely necessary for companies of all sizes to work on promoting talent in topics associated with the co-creation models of the digital ecosystem such as data management, digital marketing and e-commerce, since increased creativity, innovation and associative possibility with other companies depend on them.

The Next Step

At the time of completing this article, the world has already recorded more than one million people who have lost their lives to COVID19; millions of people who are sick, thousands of jobs no longer exist, and the economic losses for governments and private companies are incalculable. But digitization, innovation, and knowledge must give us hope for moving forward and taking post-pandemic steps.

Prosperity lies in the capacity for resilience, solidarity, and adaptation to changing environments and the intensity with which collaborative ecosystems will effectively work, with the participation of all sectors using the time to make decisions and propose solutions.

This pandemic has changed the world forever, bringing with it the obligation to transform our living conditions into a world that extracts from humans and businesses alike the ability to use knowledge to pursue collective wellbeing.

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09.
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Cláudio Lucena
(Brazil)

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CYBERSECURITY, DIGITAL TRANSFORMATION AND COVID19: A GLOBAL PERSPECTIVE AND THE OUTLOOK FOR LATIN AMERICA

Cláudio Lucena (Brazil)

New Context, New Horizons, New Challenges

Psychological support sessions, health and medical care options, access to basic income programs and emergency financial assistance, entertainment, culture, communication and information alternatives, new jobs and collaboration, and the broadest ever offering of technical, professional, academic, human development and personal education and training opportunities. This is a brief snapshot of what the internet was able to provide us with as a space for coexistence during the generational challenge we experienced in all parts of the world under the COVID19 pandemic in 2020. Together, all these initiatives share the characteristic of being available either for free or at least at a cost that had never before been feasible to such an extent and with such diversity, and with the beneficiaries of these opportunities having access to a network connection. The benefits initially observable are already evident,

the prospects even more encouraging, and the potential that these experiences and initiatives bring with them for improvement and for becoming systematic resources and universal policies to promote wellbeing, inclusion, reduction of inequalities and to generate a long-lived positive global impact are undeniable.

But this is evidently not such a simple equation.

Substantial Access

For a start, the fact that these opportunities are available for free or at low cost does not mean they are widely accessible if only offered online. Internet access restrictions remain circumstances that limit opportunities around the world, and in Latin America the pandemic fully exposed this inequality. Revisiting or redesigning important aspects of life was revealed to be far less difficult for individuals who have good access to technology, in general, and sufficient internet bandwidth, in particular. It is important to emphasize that surveys, reports and studies on internet access conducted prior to this period often took into account an online resource used with significantly different intensity and requirements than those imposed by the COVID19 context. Even so, in many cases basic access previously considered satisfactory is no longer sufficient for the new normal, which calls for a kind of qualified access that meets the new standards of use or, as the World Wide Web Foundation proposes, a substantial kind of access.[12] These challenges call for political, economic, technical and infrastructure-related interventions.

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[12] In a post entitled *Covid-19 shows we need more than basic internet access - we need meaningful connectivity* published on 27 May 2020, the blog of the World Wide Web Foundation, founded by Sir Tim Berners-Lee, highlights that the organization takes into account four fundamental dimensions for what it considers significant or substantial use of the internet, which are: actual regular use, with a minimum daily usage limit; an appropriate device, the basic one being a smartphone; sufficient bandwidth for the standard to have an unlimited broadband connection at home, or at the place of work or study; and a fast connection, which should ideally be 4G connectivity. See: https://webfoundation.org/2020/05/covid-19-shows-we-need-more-than-basic-internet-access-we-need-meaningful-connectivity/ (Accessed 12 October 2020).

Quality Information and Digital Culture

The digital culture gap should also be noted. Although the infrastructure and access problems mentioned above have been overcome—and the Latin American region provides us with statistical indicators that there is a gradual trend towards improving the universalization of internet access—[13] we need to disseminate, socialize information, prepare and raise public awareness to be able to make positive uses of available resources and technologies. Education plays the most important role here. Its absence, as well as the absence of the necessary skills for the individual to exercise his or her free and autonomous critical analysis of the context in which he or she lives, are conditions that contribute decisively to the chronic problem of disinformation that is afflicting the entire world.

Security and trust in the digital environment

Finally, an equally important aspect in order for digital transformation to fulfil its promise as an instrument of sustainable human development is related to the need for the digital environment to be one in which people, companies and public institutions can interact with security and trust. Every type of human activity on the internet is subject to risks and threats, and as more and more digital interactions are incorporated into the everyday, the impacts of these risks and threats in digital security incidents become more complex and potentially damaging.

With the advent of the pandemic, and thus the social distancing imperative that it imposed, digital platforms became, in

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[13] It consists of the *COVID Special Report*, No. 7, ECLAC, of 26 August 2020, called *Universalizing access to digital technologies to face the effects of COVID19*, which states that, in 2019, 66.7% of the region's inhabitants had an internet connection. The remainder have limited or no access to digital technologies due to their economic and social status, in particular their age and location. See: https://repositorio.cepal.org/bitstream/handle/11362/45938/4/S2000550_es.pdf

the blink of an eye, the only hope of existence for the vast majority of economic activities. Without time to prepare, to take precautions, to get to know, disseminate or employ good practices, to become familiar with the measures and take a minimum of care to avoid scams, swindles and other security incidents, individuals, companies and institutions opened themselves up to ever more extended opportunities for cyberattacks exponentially. This is an unprecedented environment of human, technical, managerial and behavioral vulnerability that cybercrime has been striving to exploit over the past few months.

Which are the key threats and risk scenarios that have been diagnosed so far? How do they behave in different areas of human activity? What are the response options to address these threats and risks in Latin America? And how can we prepare a future of greater stability and control, harnessing the positive potential of the digital transformation phenomenon accelerated by the reality of 2020 while managing its negative consequences and the dangers resulting from an ever-expanding exposure and digital existence for people and institutions?

These are precisely the issues on which this text proposes the following reflections.

Cybersecurity Incidents and Pandemic

Ever since the need for social distancing started to become a reality as the pandemic spread around the world, researchers and public and private institutions from all sides have been attempting to diagnose and identify the major issues caused by COVID19 in the most diverse domains. This is also true of security issues in the digital environment, since it was clear from very early on that a strong economic, labor, educational, social, human and cultural migration movement was beginning and would become inevitable. The preliminary results of these cybersecurity stud-

ies and reports present us with the main points of interest over recent months, and trends to follow in the effort to understand the situation with COVID19.

In August, for example, an Interpol analysis already identified a significant trend towards change in attacks that once targeted individuals and are now more commonly targeting governments, including successful attacks in Latin America[14], as well as critical infrastructure, primarily health care.[15] Interpol notes that from January to April 2020, its private sector partners reported 737 incidents involving malware and identified 48,000 malicious URLs. All of this activity has to do with the pandemic, with criminals using the term COVID19 to attract their new victims' attention to their malicious domains, to spread disinformation, in scam and phishing techniques, and with various species of malware, including ransomware.

Europol's seventh annual *Internet Organized Crime Threat Assessment* (IOCTA), released in October, confirms this growing trend in ransomware. The study mentions that this type of attack was already plaguing the health industry before the pandemic but is now more sophisticated, even demonstrating a high level of specificity and victim awareness, and increasing the pressure for ransom to be paid, adding the threat of taking unavailable data to auction.[16] Europol stressed criminal opportunism in the wake of the COVID19 pandemic, highlighting a trend in SIM swapping, a scam which by

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[14] Núñez, María Paz (2020). "They reported that hackers stole the unique codes of all Chileans through digital governance," in *ADN Chile*, October 14. The General Secretariat of the Chilean Presidency has acknowledged that on October 8, 2020, an attack affected the database of the unique codes of all Chileans, which were stolen by hackers. https://www.adnradio.cl/nacional/2020/10/14/denunciaron-que-hackers-stole-the-unique-keys-of-all-Chileans-from-gobierno-digital.html

[15] Interpol (August 2020). *Cybercrime: COVID19 Impact.* https://www.interpol.int/en/ News-and-Events/News/2020/ INTERPOL-report-shows-alarming-rate-of-cyberattacks-during-COVID19

[16] *Europol Internet Organized Crime Threat Assessment (IOCTA).* 5 October 2020 https://www.europol.europa.eu/newsroom/news/covid-19-sparks-upward-trend-in-cybercrime

allowing the SIM card to be duplicated, enables the phone number to be hijacked, opening up a space for identity theft and for the theft of money in a bank account or cryptocurrency wallet potentially linked to this number. Threats extend to the industrial environment, where damages can range from loss of production quality or sensitive data to fatal accidents if cybercriminals are allowed to manipulate or shut down security systems.[17]

In Latin America, a joint report by the Inter-American Development Bank and the Organization of American States indicated concerns that in late August, already amidst the pandemic, when the study was published, "the region did not seem to realize the magnitude of the problem", while the increase in digital activity contributes to lay bare the region's vulnerabilities, with the consequent increase in cyberattacks, at this time mainly aimed at financial institutions.[18] The preference for corporate victims is a confirmed trend in the 2020 edition of Kaspersky's *Threat Landscape*, which notes that two out of every three cyberattacks in Latin America are targeting enterprises while just one targets end users.[19] The IDB/OAS report points out that the millions who get connected for the first time every year in Latin America and the Caribbean, individuals with less experience in using technology, put this environment at an even greater risk. The aforementioned ECLAC report[20] also identifies that the issue of data use is a significant challenge for cybersecurity in the region, with countries in a declared health emergency giving authorities access to citizens'

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[17] Kaspersky Industrial CyberSecurity (2020). *The State of Industrial Cybersecurity in the Era of Digitalization.* See: https://ics.kaspersky.com/the-state-of-industrial-cybersecurity-2020/ (Accessed October 16, 2020).

[18] Report from the Organization of American States (2020). *Cybersecurity risks, advances and the way forward in Latin America and the Caribbean.* Washington, D.C.: OAS, p. 16. https://publications.iadb.org/publications/spanish/document/Reporte-Ciberseguridad-2020-riesgos-avances-y-el-camino-a-seguir-en-America-Latina-y-el-Caribe.pdf

[19] Kaspersky Industrial CyberSecurity (2020). "Threat Landscape" (presented by Dmitry Bestuzhev on September 29). View: https://prezi.com/view/bEFMzi8MdxxxxPyeiEqH/

[20] COVID Special Report, #7, ECLAC, August 26, 2020. *Universalize access to digital technologies to address the effects of COVID19.*

personal data without their consent. Lastly, still according to ECLAC, the silence of cybersecurity standards regarding the protection of critical infrastructure, where threats can compromise the supply of essential public services, is a further cause of tension added to the discussion. For its part, the LexisNexis[21] risk assessment and cybercrime report notes that the spikes in attacks based on identity abuse in Latin America during the COVID19 period are the highest in the world. LexisNexis experts attribute this particular regional vulnerability to the low level of digital education of the Latin American population.[22] Forced by the pandemic to change different aspects of their lives towards ICT-mediated operations, with no time to develop basic knowledge of digital security, people are not ready to protect themselves from attacks by fraudsters who exploit these opportunities.

Beyond these broad perspectives, different sectors also recorded their particularities in terms of vulnerabilities and challenges to be faced given this sudden and unexpected change requiring lifestyle habits with low levels of contact.[23]

Education

The educational environment is among those sectors affected by the pandemic that have suffered the harshest impacts. In-person school and academic activities were among the first to be suspended, and though they have already been restored in some cases, they are often still under restrictions and there is no expectation of when the situation will return to full normality. UNESCO's estimate in March was that more than 1.3 billion students worldwide

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[21] *The Changing Face of Cybercrime. LexisNexis® Risk Solutions Cybercrime Report* (January-June 2020). See: https://risk.lexisnexis.com.br/en/insights-resources/research/cybercrime-report

[22] Webinar Digital Bank Latam (2020). *The New Face of Cybercrime* (September 29). View: https://youtu.be/zwvVtyoXxOM

[23] Arreola, Javier (2020). "Under Contact: Key to the Economy Ahead," at *Forbes*, May 5. See: https://www.forbes.com.mx/bajo-contacto-clave-para-la-economia-que-viene/

were out of schools and educational institutions.[24] Where connectivity and access were not obstacles, efforts to reduce the harm were possible, and these efforts required rapid, almost immediate adaptation. There was no time for planning that could adequately prepare the most vulnerable individuals in the community. In particular teachers, families and students, as well as most institutions, were not ready for a sudden migration and were exposed to the security risks they faced in this platform transposition for the digital environment.

The first cyber risk to materialize as an attack in this context was zoom bombing,[25] the invasion of conference rooms not password-protected, with codes revealed due to being improperly exposed or to which the invaders gained undue access. The practice involves disrupting the meeting, usually including disseminating pornography, inciting violence, displaying racism or other type of discrimination or offense, or simply engaging in disrespectful acts. In older audiences this is certainly an unacceptable practice, but in rooms with children present, which became common during this period, the results can be particularly traumatic. The terminology confirms the popularity of Zoom, which has seen impressive growth in its user base during this period, reaching 300 million participants in virtual calls per day in April. Other video conferencing apps have also suffered such attacks, and since May

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[24] *UNESCO (2020). 1.37 billion students now home as COVID19 school closures expand, ministers scale up multimedia approaches to ensure learning continuity (published on 24 March).* https://en.unesco.org/news/137-billion-students-now-home-covid-19-school-closures-expand-ministers-scale-multimedia

[25] On March 30, 2020 the FBI was already alerting the community of users, who at the time were intensifying their disposition to change their learning habits for the video conferencing environment, that online classrooms and classes were often being hijacked or invaded to spread pornographic content, hate speech or offensive language. The FBI was even then stressing the need for care measures such as not disclosing meeting links on social media posts or to the community at large, and that access passwords, updating app versions, restricting screen sharing options and reinforcing moderation of interaction were required. https://www.fbi.gov/contact-us/field-offices/boston/news/press-releases/fbi-warns-of-teleconferencing-and-online-classroom-hijacking-during-covid-19-pandemic

various platforms have announced initiatives, fixes and options to increase security in their products and services.

Moreover, from January to June 2020, the number of users who have found threats disguised as legitimate files on online learning platforms or video conferencing apps has risen by an impressive 20,000% as compared to the same period in 2019.[26] Almost all of these threats (99%) take the form of riskware and adware, with this category referring to unsolicited commercials and various file types with different purposes that can perform tasks without the user's consent and with unknown risk potential. Just 1% of identified attempted attacks involved malicious code with more severe consequences such as password and data theft or interference with computer performance.

In any event, the use of many digital resources has already changed the educational environment for good, and these tools will likely continue to be incorporated as complementary day-to-day industry alternatives after the pandemic. This is reason enough to keep up attention, care and prevention regarding cybersecurity measures in the educational environment and to increasingly and better equip individuals and institutions with the appropriate level of knowledge and information to make good use of such resources and tools.

Work environment

Another dimension of daily life that has been deeply affected by the consequences of the pandemic are work relations, to the point of implying changes in the real estate market, both for corporate models and for organizational models and habitation trends.[27] If

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[26] Kaspersky Industrial CyberSecurity (2020). *Digital Education: The cyber risks of the online classroom.* (visited September 4). https://media.kasperskycontenthub.com/wp-content/uploads/sites/43/2020/09/03172621/education_report_04092020.pdf

[27] Deloitte (2020). *Covid-19 impact on the real estate market.* https://www2.deloitte.com/content/dam/Deloitte/ec/Documents/strategy/Impacto-COVID19-mercado-inmobiliario.pdf

one takes the situation in Chile, for example, for a perspective approach to the region, a study by the Latin American Center for Economic and Social Policies of the Pontifical Catholic University of Chile (Clapes UC) found that, between the months of December 2019 and February 2020, no more than 0.6% of Chilean wage earners was working remotely. With the advent of COVID19 between February and April 2020, this contingent was already as high as 5.8% of the country's salaried employees working from home.[28] Updated figures between April and June of this year were already revealing approximately one million teleworkers active in the country, accounting for 18% of the Chilean workforce.[29] The ECLAC report already mentioned in this article confirms this trend for other countries in the region but estimates that this percentage confirmed for Chile is already close to the maximum regional average of workers who are able to carry out their professional activities remotely, and that the increase in this capability depends mainly on "labor market structures, productive structures, informality levels and the quality of digital infrastructure".

The work environment has also experienced the sudden imperative of having to migrate to the digital environment as a way of keeping jobs, guaranteeing salaries and maintaining a degree of continuity in business and institutional activities. Also in the work environment, when access and connectivity issues are not an insurmountable hindrance, this switch from in-person to remote

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[28] Bravo, Juan (2020). "*Who is being relatively more affected by the COVID19 job collapse?", in Clapes UC* (9 June). https://clapesuc.cl/investigaciones/quienes-estan-siendo-relativa-mente-mas-afectados-por-el-desplome-laboral-por-covid-19/

[29] Armaza, Christian (2020). "Effects of the pandemic: One million Chileans with teleworking: the hard road to adaptation", in *Diario El Día* (11 August). http://www.diarioeldia.cl/economia/millon-chilenos-con-teletrabajo-duro-camino-hacia-adaptacion

working has revealed certain advantages[30] that will probably continue to be explored in hybrid models as normality returns, until each institution can find its own personalized balance between its particular features and its operating conditions and the new personal life prospects that have emerged at this time. Also in this domain, this migration imposed by absolute lack of choice took employees and companies by surprise, often without time to establish and perfect the care needed for this new way of working—including cybersecurity care.

It cannot be said that there was already a solid cybersecurity culture consistently spread across companies, and particularly in Latin America. But digital asset protection measures, cybersecurity policies, risk analysis, monitoring of online work activity, secure connections and other preventative measures in companies were no longer a rare exception. The setting was not yet properly adapted to remote working. The resources and tools used in the employee's home do not automatically enjoy the same degree of protection as on a company's physical premises, and this, coupled with the fact that an exponentially larger population of employees now works online, has resulted in a workplace shift that has instantly enlarged the attack surface[31] for cybercriminals— namely the windows of opportunity for exploiting weaknesses in controls and vulnerabilities. Personal devices and home networks are not under the

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[30] The study entitled *Platform economy and employment. What is it like to work for an app in Argentina?* points out that attributes such as flexibility, independence and the possibility of a higher income, while admitting that this income is more volatile, were already considered in 2019 as motivating factors for working on digital platforms https://www.cippec.org/wp-content/uploads/2019/05/Como-es-trabajar-en-una-app-en-Argentina-CIPPEC-BID-LAB-OIT.PDF A new study by BID, from September 2020, points out the possibility of adapting working hours, personal and professional balance, and productivity as factors that can represent advantages in this nova mode of work. *The future of work in Latin America and the Caribbean: How can technology facilitate job recovery after COVID19?* https://publications.iadb.org/es/el-futuro-del-trabajo-en-america-latina-y-el-caribe-como-puede-la-tecnologia-facilitar-la

[31] WEF Insight Report in partnership with Marsh & McLennan and Zurich Insurance Group. *COVID19 Risks Outlook: A Preliminary Mapping and its Implications.* May 2020. See: http://www3.weforum.org/docs/WEF_COVID_19_Risks_Outlook_Special_Edition_Pages.pdf

same level of control, software and application updates are not secured, access permits are broader, and a great deal of awareness and technical and organizational preparation is required to prevent data breaches and other security incidents.

Health

The health sector was not only affected by the health crisis or by the actual diseases caused directly by coronavirus. The aforementioned Interpol report emphasizes that the situation has created conditions for criminals to seize opportunities and advance their social engineering tactics by using the COVID19 theme in messages, file descriptions or domain names to attract interest and attention, thereby pushing victims to unwanted behaviors and optimizing the successes of their attacks. Approximately two-thirds of member countries and partner organizations that responded to the Interpol survey, of which 12% is in the Americas, confirmed significant use of COVID19 as a resource in monitored and detected attacks.[32] Several member countries have also reported ransomware attacks targeting critical healthcare infrastructure, which is already overwhelmed by the crisis, in order to extract sensitive information, temporarily or permanently cutting off access to data or systems and heightening the severity of the situation by demanding carefully individualized payments from the targeted organization, revealing their victim awareness, attack preparedness and planning. In September, a woman died because a hospital in Dusseldorf, Germany, where she was due to be treated, was prevented from admitting her. The hospital was responding to a ransomware attack that hit its network and more than thirty internal servers and the woman had to be taken to the city of Wuppertal, but because the patient needed urgent care, she did not survive. German police intend to treat the case as murder,

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[32] Interpol (2020). *Cybercrime: COVID19 Impact* (August). https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-report-shows-alarming-rate-of-cyberattacks-during-COVID-19

the first one to be reported as resulting, albeit indirectly, from a ransomware attack.[33]

Financial Sector

The financial sector has been fighting a battle against cyber threats since they began to exist. It is attractive to cybercrime because of the potential for direct financial returns from successful attacks as well as the potential to access and extract highly relevant data and information for new criminal attacks. For exactly this reason, the sector has long been well aware of many of the frauds and scams with which it lives and has implemented significant security, awareness and protection initiatives and technical, operational and management measures to counter harmful activity in its operations in the digital environment.

This does not mean, however, that it is or has become immune to such attacks carried out during the pandemic. Europol's assessment found that email fraud remains a concern and that it has refined and perfected its targeting abilities, with criminals accurately identifying the best time, language or type of conversation for the attack. As new trends, SIM swapping and smishing confirmed their growth and severity. The former, as mentioned earlier, involves the fraudulent replacement of the legitimate user's SIM card with another one held by the criminal, who uses it to intercept the one-time password (OTP), cheat authentication and take accounts from sensitive digital platforms, including bank accounts. The latter, similar one involves sending fraudulent text messages as if they are being sent by a trusted user. While fraudulent email messages are already recognized by many users, the same level of reticence is not yet being observed for text messages, which are deemed to be more personal. This type of scam has been especially

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[33] Climpanu, Catalin (2020). "First death reported following a ransomware attack on a German hospital", in *ZDNet* (September 17). https://www.zdnet.com/article/first-death-reported-following-a-ransomware-attack-on-a-german-hospital/

used against financial institutions and their customers over the past twelve months.

In Latin America, the ECLAC report indicates that the increase in the region's levels of banking activity was only 7%, which is not as significant as, for example, the 324% increase in teleworking activity, 157% in e-commerce or 62% in education. However, the machinery of online scamming, data hijacking and email phishing has proliferated in the region during the pandemic. In the first week of April, in Costa Rica, authorities reported scams relating to unemployment subsidies and tax payments by electronic means. Before the country's lockdown, authorities in Colombia recorded 160 instances of cyber fraud. Email phishing with promises of government subsidies was a frequently detected problem in Puerto Rico, Guatemala and Mexico.[34] In Brazil, the IBM X-Force Incident Response and Intelligence Services (IRIS) identified the creation this year of at least 693 malicious COVID19-related websites, many of which attempted to defraud victims by leveraging the government's financial assistance program provided through the national banking system for individuals prevented from working due to the pandemic.[35] The Brazilian program keeps its records and payment operations mostly on digital mediums, and cybercriminals have used fake email, text and WhatsApp messages as a channel for phishing and spreading malware in order to directly misrepresent the program or access data and commit identity theft in other scams. Analysis shows that the advance of attacks coincides with the advance of the pandemic in the country.

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[34] Austin, Anastasia (2020). "Cybercrime Threatens Latin America in Coronavirus Quarantine," in *Insight Crime* (April 8). https://es.insightcrime.org/noticias/analisis/cibercrimen-amenaza-a-latinoamerica-en-cuarentena-por-coronavirus/

[35] Macedo, Jefferson, and Camille Singleton (2020). "COVID19 Cybercrime Capitalizing on Brazil's Government Assistance Program," under *Security Intelligence* (July 7). https://securityintelligence.com/posts/covid-19-cybercrime-capitalizing-on-brazils-government-assistance-program/

Best Practices, Prevention and Response

Some of the technical measures to address this increase in attacks in digital environments have already been discussed throughout this text. In addition, for certain specific topics such as health, the Brazilian government, for example, published its principles and practices guide so that the medical devices available in the country meet cybersecurity standards,[36] while the Mexican Government's Secretariat for Communications and Transport published its *Cybersecurity Guide for the Use of Telecommunications Networks and Devices in Support of Education* for the education sector,[37] describing what it considers to be the main risks and most common cybersecurity threats in this school environment and proposing recommendations for secure use and prevention aimed at children, parents, teachers and staff of educational institutions, seeking to ensure that these activities are carried out securely.

In general, now taking into account the particular post-COVID19 situation, the most up-to-date reports and information consulted for this work, produced by national and international security agencies, global and non-governmental organizations, try to recommend the following, beyond the most obvious and common precautions relating to care taken with passwords and connections, backups, software updates, files sent by strangers, access limits and permissions and care with devices:

- adopt the *double authentication factor* to improve control of credential-based attacks;

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[36] *Brazil's national health surveillance agency (ANVISA) published its Principles and Practices of Cyber Safety in Medical Devices, in September 2020.* https://www.gov.br/anvisa/pt-br/assuntos/noticias-anvisa/2020/saiba-mais-so bre-ciberseguranca-em-dispositivos-medicos/guia-38.pdf

[37] Government of Mexico, Ministry of Communications and Transport (2020). *Cybersecurity Guide to the use of telecommunications networks and devices in support of Education* (11 August). https://www.gob.mx/sct/prensa/la-sct-presenta-una-guia-de-ciberseguri-dad-en-apoyo-a-la-educacion?idiom=es

» evaluate risks and strategies through *cybersecurity maturity models*;
» incorporate *anomaly detection protocols,* including using automation and *adaptive cybersecurity* techniques to monitor unusual database behavior, information flows and network connections;
» identify vulnerabilities in *internet traffic routing* and implement infrastructure protocols that minimize the possibility of malicious activity;
» deploy *perimeter security equipment (UTM)* to protect the flow of communication and information between the user and his/her office through an encrypted channel;
» establish and strengthen *incident management* policies in accordance with the risks specific to each operation, observing the continuous need for adjustment;

Development and Implementation of Legal Frameworks

Another cross-cutting recommendation in almost all the recent reports consulted is the importance of regulatory and legal frameworks that allow a better degree of certainty and transparency and finally a common basis for national and international institutional dialogue to combat threats in the digital environment. Whether or not in terms of legally binding national strategies, laws, regulations, treaties or internal corporate and institutional policies, the existence of guiding legal instruments is an essential element in the construction and consolidation of a cybersecurity culture.

In Latin America, although at the corporate or institutional level many organizations have implemented or readjusted their internal standards to accommodate for the pandemic situation, the region remains a concern in terms of longer-range initiatives.

According to the aforementioned OAS report, only twelve countries in the region have a developed cybersecurity strategy and just six are currently working on developing such a strategy. At an event at the EAE Business School in Colombia,[38] where IT security concerns were discussed from a regional perspective in a context of corporate culture on this topic, and where twenty-two high-impact cybersecurity incidents were presented that had occurred in large companies in Latin America, a proposal emerged for a Latin American regulation requiring the announcement of ransomware attacks of a certain amount and extent so that it is possible to share lessons learned at the regional level and help to create collective awareness, at least in situations of significant impact.

Multi-Stakeholder Collaboration

Apart from the technical measures mentioned here, there is a question of governance, an approach that seems crucial in order to make progress in terms of positive outcomes for cybersecurity precautions, which has to do with the discussion and the very solution-building model in this subject—a model that traditionally incorporates and reflects no more than the vision of the State and of some of the most important economic players in the industry.

An October World Economic Forum report[39] reminds us that in less than a decade cybersecurity has moved from a primarily technical topic to a global issue of strategic relevance for society's digital resilience. For this reason, it argues that in light of this growing importance, isolated cybersecurity actions by a single stakeholder segment have little impact, and that efforts must be made to share information and intelligence and to integrate forces in a consistent

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[38] EAE Business School (2020). "Computer security challenges to prevent fraud" (Madrid, Colombia headquarters). *Online session*, 25 September. https://youtu.be/WvsasWBjMIg

[39] WEF (2020). "Cyber Information Sharing: Building Collective Security" in *Insight Report* (October). See: https://www.weforum.org/reports/cyber-information-sharing-building-collective-security

manner so that it is possible to move from the current situation of searching for individual resilience to an ideal of sustainable collective resilience. The study argues that this is one of the most important shared challenges in this domain, and that this should be a defining feature of the international cybersecurity community from now on.

The multi-stakeholder governance model effectively provides possibilities that seem to be aligned with global digital asset management needs such as domain names, artificial intelligence[40] and, more generally, the internet. The idea is to incorporate more voices that are more diverse and have interests that are not aligned with the processes of discussion, decision-taking and a general form of participation. This type of adjustment suggests that it is possible to arrive at decisions that, using a path of more inclusion, openness, collective construction with emphasis on consensus and interactivity, are also more representative and more legitimate. Proposals from a Latin American perspective indicate that these are governance adjustments that have a positive effect on digital environments and are notably open to youth participation through, for example, the Internet Society's Youth Observatory, the Youth Coalition for Internet Governance (YCIG) and the NextGen training, inclusion and exhibition program of the *Internet Corporation for Assigned Names and Numbers* (ICANN), a particularly important inclusion aspect in the region.[41] Latin America's cybersecurity agenda and particular perspectives have their place in all these discussion spaces.

These are not the only concrete efforts in this direction. The *Cyber Defence Alliance* (CDA) is a non-profit public-private partnership that works collectively and collaboratively across the

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[40] Lucena, Cláudio, and Martín Silva (2019). "The multi-stakeholder governance model for critical autonomous systems applications", in Brossi, Lionel, Tomás Dodds, and Ezequiel Passeron (eds.). *Artificial Intelligence and Youth Welfare in Latin America.* Santiago de Chile: LOM Editions (pp. 209-218), 276 pp. View: https://drive.google.com/file/d/1OenZSNPgHUUd39ltaUIZw83BoLtoGF6K/view

[41] *Ibid.*, 211-213.

financial sector and security authorities to share information and intelligence in the fight against cybercrime and in countering cybersecurity threats.

We can already highlight some successful experiences in this regard, such as multi-sector collaboration initiatives on the cybersecurity theme in Brazil and the impetus of the country's mega-events cycle to develop a cooperation alternative for the cybersecurity model focused on the role of the State.[42] The growing number of cybersecurity threats and incidents is further increased with the imminence and staging of major global events such as those that were held in Brazil in the past few years. The challenges and security attacks in the digital environment faced by the Rio+20 World Summit on Sustainable Development (2012), which was followed by the World Youth Day (2013), the Confederations Cup (2013), the Football World Cup (2014) and the Olympic and Paralympic Games (2016), show that, though the role of the State is natural, evident and legitimate in this matter, ensuring a country's stability and resilience in terms of cybersecurity is a much more complex exercise that depends on a network of actors, transcending the mere public security authority and extending to private institutions, academia, civil society, individuals and technical groups such as CERTs/CSIRTs (Computer Emergency Response Teams and Computer Security Incident Response Teams). The creation of *Rio 2016 CSITR* to address security and to cooperate in identifying cyberattacks during the Olympic Games is a good example of this interaction between law enforcement and other sectors. Although coexisting with the tensions typical of this shift in traditional roles, defining competences, developing capabilities and establishing trust are all indispensable actions on this path that are not possible outside an environment of coordination between these actors. And if this coordination is

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[42] Hurel, Louise Marie (2018). *Securitização e Governança da Segurança Cibernética no Brasil.* https://www.researchgate.net/publication/329973134_Securitizacao_e_Governanca_da_Seguranca_Cibernetica_no_Brasil

important in a scenario with the impact of major national events, it is surely also justified, implemented and demanded at a time of even stronger impact, a pandemic that generates a global public health emergency in which the whole life dynamic of the entire population changes significantly.

In August, *Global Partners Digital* (GPD) released a tool-kit[43] that aims to support the development and implementation of value-based inclusive cybersecurity policies and processes, consisting of a guide, a repository of best practices and an interactive map that to date includes cybersecurity training tools from 54 Commonwealth countries. The organization believes that better, more transparent, more democratic and more inclusive policies emerge when more relevant actors are involved in the discussion and decision-taking processes.

Finally, in October, at the height of the global health crisis caused by the pandemic, the *Internet Society* Cybersecurity Special Interest Group promoted Cyber Security Awareness Month and held its Global Cyber Forum, with ten webinars that generally provided information and training on the topic. One of the sessions focused particularly on the situation in Latin America and was devoted to the theme of *Inclusive Cyber Policy Development Process*. All participating regional experts highlighted the important role of the idea and practice of multi-sectoral in the collaborative construction of cybersecurity regulatory frameworks that are adapted to reality, that consider the visions of different stakeholders within the context and that therefore are in a better position to generate the expected positive effects of trust and protection.[44]

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[43] Global Partners Digital (2020). *Toolkit for Inclusive and Value-Based Cybersecurity Policymaking.* (August 26). See: https://www.gp-digital.org/publication/toolkit-for-inclusive-and-value-based-cybersecurity-policymaking/

[44] Internet Society Cybersecurity SIG (2020). *Inclusive cyber policy development process* (13 October). https://cybersecsig.org/forms/formulacion-de-politicas-inclusivas-en-materia-de-ciberseguridad/

Final thoughts

The digital transformation phenomenon that was already manifesting itself around the world has been driven at an entirely unexpected speed in recent months in the context of social distancing imposed by the COVID19 pandemic. The increase in digital activity generated by this situation worldwide and in Latin America has allowed us to learn about and experience new social, cultural and labor-related interaction dynamics, new personal relationship choices and alternatives for maintaining economic and even political activity. The change in the main environment of human coexistence, the migration of a large population to an exponentially more intense and regular use of digital platforms, has come with the potential to promote positive transformations but also to bring about harmful consequences and exposure to new dangers and threats, among them pronounced cybersecurity risks.

The threats are spread across different areas of human activity and, as we set out in this article, in some areas such as education, health, work relations and the financial sector these risks are already being identified and scaled up, with businesses, governments and international organizations integrating mitigation and control strategies. The COVID19 issue has been particularly exploited by cybercriminals to attract victims' attention and carry out scams and swindles that include well-known techniques such as phishing, ransomware, adware and other emerging trends such as zoom bombing, SIM swapping, smishing and more.

Strategies to combat and counter these risks and threats include, as well as already-known recommendations, adopting multi-factor authentication, using cybersecurity maturity models, incorporating anomaly detection protocols based on adaptive cybersecurity, identifying vulnerabilities in internet traffic routing, deploying perimeter security units and establishing incident management policies. It remains essential, particularly in

Latin America, to promote awareness, technical and operational prevention and digital asset protection measures.

Finally, developing and implementing legal frameworks that strengthen the fight against threats in the digital environment and adhering to new models of security, data and information governance built with greater participation by relevant stakeholders in a collaborative manner are also crucial movements in achieving the objective of establishing the collective digital resilience culture that is so greatly needed if we want to overcome the challenges of the new times and to allow the internet to become the space for sustainable human fulfilment and safe coexistence that we expect, making use of its benefits with freedom and protection and improving risk control with confidence and transparency.

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ABOUT THE AUTHORS

Pablo Martín Legorburu

Holder of a Civil Engineering degree from the University of Buenos Aires and with postgraduate studies in Economics and Business Administration at the Higher School of Economics and Business Administration. He was Public Employment Secretary in the Ministry for the Nation's Modernization during the presidency of Mauricio Macri in Argentina (2015-2019), with responsibility for the design and implementation of human resources development policies and digital training and transformation management. From 2010 to 2015 he served as Undersecretary for Human Resources Management at the Modernization Department of the Autonomous City of Buenos Aires. He has over thirty years' experience in leading private-sector companies in the areas of engineering, oil and services.

Elaine Ford

She has studied in Peru, England, Chile and the United States. She is the Director and Founder of *Democracia & Desarrollo Internacional (D&D Internacional)* based in Lima, Peru. She is the director and creator of the Digital Democracy Program promoted by D & D Internacional. She is president of the Peru Chapter of the Internet Society (ISOC) and a member of the Steering Committee of the ISOC Chapters Advisory Council. A member of the Committee of Women Leaders of the Americas. She won the International Female Leader and Entrepreneur Award (Peru, 2019), the Ibero-American Female Leader Award (Peru, 2018), the Young Leader Award of the International Young Leaders' Foundation (Argentina, 2010) and was designated a Distinguished Guest by the Urban Morgan Institute for Human Rights of the University of Cincinnati

(USA). Author of the book *The Challenge of Digital Democracy. Towards an Interconnected Citizenship* (2019).

Álvaro V. Ramírez-Alujas

The founder and principal researcher of the Research Group for Government, Public Administration and Public Policies (GIGAPP), he is a professor at the University of Chile, director of GovTech Hub and current president of the Fundación Multitudes in Chile. He has served as an international consultant in management and public policy for various international governments, agencies and bodies such as the UN, OAS, IDB, ECLAC, UNDP, OECD and OGP, among others. He was editor and speaker of the Ibero-American Open Government Charter (CLAD, 2016).

Carlos Vera Quintana

Electronic engineer and holder of a Magister Degree in International Relations (Universidad San Francisco in Quito), with 35 years' experience. He has been Minister and Undersecretary of State for Telecommunications, Public Involvement and Higher Education. In the private sector, he was a manager of engineering companies and a board member of professional and business guilds as well as chairman of the Electrical and Electronic Engineers' Association and of the ICT sector of the Chamber of Small Industry. He was founder and chairman of the Ecuadorian E-Commerce Corporation and the Ecuadorian Chapter of the Internet Society. He is a citizen activist and international consultant on technology applications and involvement in social, educational and economic issues.

Germán Escorcia Saldarriaga

He has been project director at COLCIENCIAS, Colombia. He won the IDRC-Canada Pearson Fellowship Award. Manager of the CLI-IBM Latin American Center for Education Research.

Vice President of the Global Governance Council of the UNESCO General Information Programme. Consultant in innovation, technology and learning. He currently advises governments in America and bodies such as IDB, OAS, Unicef, Microsoft and Intel. He is director of innovation at VirtualEduca, affiliated to MIT, México Exponencial, Knoware and Megahabilidades. He is the founder of GlobalMente. Thematic explorer in emerging economies and talent hubs, with a technological perspective. He conducts research into algorithmic intangible companies and the Imagination Society.

Osvaldo I. Larancuent

Systems Engineer at INTEC (RD), with a Master's Degree in Innovation from York St. John University (UK). He has also completed postgraduate studies in Diplomacy and Economics. He coordinates the Cybersecurity Engineering degree program of the Santo Domingo Institute of Technology (INTEC), Engineering Area, teaching the subjects of Emerging Information Technologies, Internet Governance and Cybersecurity Management. He also imparts an Information Technologies Seminar. He is a researcher in innovation, cybersecurity and digital diplomacy. He actively participates in different technical communities in the Dominican Republic. He is chairman of the Dominican Republic Internet Society Chapter (ISOCDO) and a director of the ISOC Cybersecurity Task Force.

Lia Patricia Hernández Pérez

A registered lawyer in Panama and at the Madrid Bar Association (Spain). She completed a Master's degree in New Technologies Law at the University of Bologna (Italy). In 2008 she won an AECID scholarship to study a Master's degree in Telecommunications and ICT Law at Carlos III University in Madrid, where she was also a lecturer. Co-founder of Ipandetec, a Central American digital rights organization. Co-Chair for Panama of the International

Association for Privacy Professional (IAPP) for Panama and a member of the Ibero-American Observatory for Data Protection, with which she won the research award from the Basque Data Protection Agency.

Luis Adrián Salazar Solis

Former Minister for Science, Technology and Telecommunications of Costa Rica. He has more than 25 years' experience in the public and private sphere. A leader in digital transformation development processes and generation of public policies and projects based on innovation, digitalization and telecommunications. Rector of the telecommunications market in competition, promoter of the innovation system based on talent generation, promoter of the knowledge-based system of private-public alliances, head of digital government, expert in establishing cooperation between governments and international bodies and in bilateral relations. Chairman of national science, technology and accreditation bodies. Expert on the Fourth Industrial Revolution.

Cláudio Lucena

Professor and former dean of the Faculty of Law, coordinator of International Relations and councilor of INOVATEC, Universidade Estadual da Paraíba (UEPB). Researcher of the Fundação para a Ciência e a Tecnología of the Portuguese government, affiliated to the Research Center for the Future of Law of the Universidade Católica Portuguesa. Associated Scholar in the Projeto CyberBRICS of the Law Faculty of the Fundação Getúlio Vargas, Rio de Janeiro. A lawyer qualified for practicing in Brazil and Portugal.

The purpose of this volume is to show how the internet has served humanity in various areas in the times of COVID-19, placing a special emphasis on Latin America and the Caribbean, based on a regional perspective which also considers global experiences. In the same way, this set of essays analyses the new challenges and risks arising from the pandemic and seeks to demonstrate how these can be addressed, in a coordinated manner, by multiple actors committed to reducing the social, political and economic impact generated by society.

The topics vary: internet access and human rights online, populism and disinformation, big data and open data, telework, tele-education, digital cooperation, privacy, digital transformation of companies and cybersecurity. Each one approached by leading specialists from nine countries of the continent.

DIGITAL DEMOCRACY PROGRAM

The Digital Democracy Program was officially created in 2014 by the Democracia & Desarrollo Internacional (D & D Internacional) organization to promote the responsible use of the internet and new technologies in Peru. Since then, different lines of action have been created nationally, using different methodologies according to audience in order to train, raise awareness and encourage the creation of technological solutions at the service of citizens and to contribute to society and strengthen democracy.

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