ABSTRACT: Information society increasingly shows how individuals are dependent of being part of the virtual world, given how there is a wide dissemination of information and exchange of content, through this virtual ambiance, establishing a real spatial field of knowledge. Social, political, and economic processes are directly influenced by the access to the media, mainly the internet. This paper seeks to analyze this context of digital era, by raising the issue that society may not be prepared for this new age since it still excludes and isolates part of the society from the virtual world. The research was carried out by resorting to theoretical framework and empirical data while utilizing a deductive method approach. It was found that digital democracy exists, when thought in the aspect of allowing exchange and sharing of ideas. However, one cannot say the same when questioning the existence of digital citizenship, through which all individuals in the society have wide and unrestricted access and knowledge of this means of communication. In times of pandemic, the internet is used as an essential instrument for the realization of some public policies, but, on the other hand, vulnerabilities of digitally excluded citizens are accentuated. Thus, this paper concludes that it is necessary to immediately formulate public policies that address issues of digital inequality, providing access to information through the internet without social, ethnic or any other forms of restrictions.


RESUMO: A sociedade da informação estampa cada vez mais a dependência dos indivíduos em fazerem parte do mundo virtual, haja vista que através deste há a ampla divulgação de informações, troca de conteúdo, constituindo um verdadeiro campo espacial do conhecimento. Os processos sociais, políticos e econômicos são diretamente influenciados pelo acesso aos meios de comunicação, especialmente a internet. O presente artigo visa analisar esse contexto de era digital, levantando a questão de que a sociedade pode não estar preparada para esta nova era, a qual ainda exclui e isola parte da sociedade do mundo virtual. Para realização da pesquisa a metodologia de abordagem utilizada foi a dedutiva, sendo que a pesquisa se concretizou através de referencial teórico e dados empíricos. Encontrou-se que a democracia da internet existe, quando se pensa que esta permite livre compartilhamento de ideias. Porém, não se pode dizer o mesmo quando se questiona a existência de uma cidadania digital, em que todos os indivíduos da sociedade realmente tenham amplo e irrestrito acesso e conhecimento deste meio de comunicação. Em tempos de pandemia, a internet é utilizada como instrumento essencial para concretização de algumas políticas públicas, por outro lado, contudo, as vulnerabilidades...
Introduction

Full access to the new (virtual) environment becomes an important step and reveals a new phase of human development, then there are measures, such as the National Broadband Plan, approved by Decree 7.175/2010 and revoked by Decree 9.612/2018, providing for the creation of public telecommunications policies, which demonstrates the distances and vulnerabilities accentuated in this field (BRASIL, 2010; 2018).

In this context, thinking about digital exclusion brings the idea of the impossibility of access, in full conditions of citizenship, to a spatial dimension, in this case, the virtual one (DEMO, 2005). Thus, such exclusion removes the possibility for individuals to fully participate in this new world.

The exclusion is demonstrated in the lack of access to the computer network; in the access to the system, of low quality. Beyond access to the network, exclusion is perhaps more...
evident when one is connected without knowing how to use the access, excluding the user from the education and culture extraordinarily offered by the digital world (CASTELLS, 2005).

In times of pandemic, such inequalities are exacerbated, as for example in the need to access and monitor the receipt of the emergency aid provided by the Government, with the digitally excluded experiencing extreme difficulties in navigating the systems.

In this way, public policies that include digital education, the possibility of using technological equipment, and navigability conditions are extremely important for the inclusion and construction of citizenship, and the biggest challenge consists in creating effective forms of access and participation in the virtual world.

The text begins with an analysis of the cognitive revolution up to the industrial revolution, tracing a historical overview of the evolution of the internet, as well as its development in Brazilian legislation, with the framework of the conceptualization of digital law.

After that, the analysis deals with the issue of digital citizenship, through the rights and duties arising from it, classifying the digital citizen as the one who has full access and education that enables navigation. This is not the reality of society, as there are those who are digitally excluded, those who are on the margins of technology use, not participating in the virtual space and, consequently, in the diverse information it brings.

In the third part, we analyze how the digital divide has been accentuated in times of pandemic, a situation in which several public policies, and even information, related to the period, depend on the possibility of access to the virtual world. We establish a critical analysis about society's preparation for the digital age.

Finally, this paper aims to study the digital age, analyzing whether society is prepared for it in times of pandemic or even before it. To this end, a deductive approach methodology was used, and the research was carried out through theoretical references and empirical data.
The digital age: from the cognitive revolution to the technological revolution

Historical Traces

*Homo sapiens*, inhabitant of East Africa, the cradle of humanity (FALK, 2019), began migrations to dominate planet Earth only 70,000 years ago. In this period, despite presenting physical similarities with humans today, they were indistinguishable from other human species existing at that time. Everything began to change with the Cognitive Revolution, when *sapiens* acquired language skills capable of "consuming, storing, and communicating an extraordinary amount of information about the world around us" (HARARI, 2019, p. 41, our translation).

In 1963, the American Joseph Carl Robnett Licklider, in his Pentagon office, typed a message addressed to "Members and Affiliates of the Intergalactic Computer Network". It sounded like a joke, but the argument behind that mockery was a strong justification about the need to build a universal computer network.

Licklider, an employee of the U.S. Department of Defense's Advanced Research Projects Agency (ARPA), believed that the symbiosis of man and machine would amplify its potential if "the minds of all mankind" were connected via computers (WU, 2012, p. 207, our translation).

In the same way, Costa (1980), in his study "Need satisfaction: a factorial study", in which he made use of Maslow's motivation theory (1954) from the hierarchy of human needs, using a criterion of urgency of satisfaction, was able to demonstrate the establishment of the state of human motivation:

The dynamic cycle - deprivation, domination, gratification, activation continues, so that all the basic needs (physiological, security, affiliation and esteem) are satisfied and the emergence of the highest need in Maslow's hierarchy occurs: the need for self-actualization. The deprivation of the higher needs (esteem and self-actualization) does not produce an emergency reaction or despair, as can happen with the deprivation of the needs lower in the hierarchy (COSTA, 1980, p. 60, our translation).

In Maslow's theory (1954), needs are divided into: physiological, safety, relationships, esteem, and self-fulfillment. Hierarchized in the form of a pyramid, they take place step by step, with the satisfaction of the first need, the others should follow completing each other. At the base of the pyramid, among the most important needs are the physiological needs, such as food, water, sex and rest. Next are security, which encompasses freedom, protection from violence, job stability, health, family, and property. Maslow grouped the physiological and safety needs as primary and the others as secondary.
At this point, although those original needs hierarchized by Maslow's theory of motivation remain inherent to the human being, Carvalho (2020) points out the importance of a re-reading of them, starting from the perspective of the dominance of the Internet in human life through social media and applications. He notes that new categories of needs have emerged, aligned to the previous ones, however, pressing satisfaction in the Information Society and Digital Citizenship.

For Carvalho (2020), the wi-fi internet signal has been established as a physiological need. Considering that physiological needs are physical conditions necessary for human survival and the proper functioning of the human body, it is possible to deduce the importance of access to information and communication technologies to maintain the balance of human life.

In the same sense, Siqueira and Simão Filho (2019, p. 251, our translation) state that the diffusion of services offered through Information and Communication Technology (ICT) has allowed "[...] connectivity to become a necessity in everyday life, substantially changing the way of life of human beings [...]".

The right to information was elevated to a human right by the Universal Declaration of Human Rights in its Article 19, which is why Rapporteur Frank La Rue (2011) understood that it extends to the Internet:

By explicitly providing that everyone has the right to express themselves through any media, the Special Rapporteur points out that article 19 of the Universal Declaration of Human Rights and the Covenant was drafted with provision to include and accommodate future technological developments through which individuals exercise their right to freedom of expression. Therefore, in the international human rights framework, the law remains relevant today and equally applicable to new communication technologies, such as the Internet.

Thus, it follows that every human being has the right to freedom of opinion and expression, and this right includes freedom to hold opinions without interference and to seek, receive, and impart information and ideas through any media and regardless of frontiers, nowadays exercised through the Internet.

**Legal aspects under the perspective of digital evolution**

To which Castilho (2018, p. 245, our translation) teaches: "the term fundamental, here, applies precisely because they are rights - despite being spatially and temporally delimited - elected, by each State of Law, as the basic and founding elements of its legal system".
As for the "human rights", these are found in international law, through treaties and declarations regardless of affiliation to the constitutional order in force in the States, however, they aim to obtain their "universal validity" in an intergenerational way for all peoples (SARLET, 2009, p. 29, our translation).

Thus, it is important to mention the creation and use of the term "digital law". In short, this expression indicates a legal advance that encompasses some fundamental principles and institutes of the legal environment, presenting influences in all areas of law (PECK, 2019, p. 15, our translation).

Digital law, so to speak, represents the manifestation of law, but exercised in new environments. Not being a recently created subject, otherwise "it would not be a new area of studies, but all the other areas of law, already existing, that for reasons of technological possibilities start to integrate with modern technologies" (CUNHA GUIMARÃES; STAGI GUIMARÃES, 2017, p. 73).

Freedom of expression is the structural foundation of the Marco Civil, but it does not forget the human rights, the development of personality, and the exercise of citizenship in digital media, enshrined in Article 2, item II, all fundamental elements of human dignity.

By reading Law 12,965/14 it is possible to deduce that the legislator intended to grant a promotional character of the right of access to the internet for all in several provisions scattered throughout the Marco Civil, among them article 4, item I and II, respectively, "of the right of access to the internet for all" and the "of access to information, knowledge, and participation in cultural life and in the conduct of public affairs" (BRAZIL, 2014).

In this sense, article 7 decrees that access to the Internet is essential to the exercise of citizenship, as well as assures in item XII the "accessibility, considering the user's physical motor, perceptual, sensory, intellectual and mental characteristics, in the terms of the law".

Despite the national and transnational legal framework to which Brazil is affiliated, it has not yet achieved the concretion of digital inclusion in its various aspects, which is not limited to the distribution of electronic devices such as computers and also the use of information and communication technologies for the concretion of "all fundamental rights arising from the freedoms of expression, communication, information, access to education, culture, new forms of political participation" (GONÇALVES, 2011, p. 108-109, our translation).

Gonçalves (2011) points out that there is a consensus on the pressing universality of digital inclusion, propounded in the speeches and studies of international organizations such as
the Organization for Economic Cooperation and Development (OECD, 2011) and the United Nations (UN, 2019), but first of all it is necessary to empower digitally underserved citizens.

Brazil has pursued these goals with the edition of the National Broadband Plan, approved by Decree 7.175/2010, starting with the promotion and diffusion of the use and supply of goods and services of information and communication technologies, as well as the massification of broadband internet access, accelerating economic development and digital inclusion. It also aimed to reduce social and regional inequalities, promoting job and income generation, expanding e-Government services, facilitating the use of government services, and promoting the training of the population for the use of information technologies (BRASIL, 2010). Ten years after the beginning of the PNBL, these purposes have not yet been achieved, as noted on page 17 of Anatel's Strategic Plan (2015-2024):

> Regarding the expansion of access and use of services, there has undoubtedly been important progress in the last decade. The challenge for the coming years is to serve, with affordable prices and satisfactory quality, a significant portion of society still on the margins of the sector, represented mainly by people with lower purchasing power, living in areas where supply is inadequate, such as unserved urban, rural, or remote areas (BRASIL, 2020, our translation).

The plan recognizes the regional and social asymmetries in ICT access and use in the country, where despite there has been a 67% growth in 2018, there is still a large discrepancy: if we compare the households in the class clipping, the C and D (40%) with less than half the percentage of A and B households (99% and 94%); in relation to households in urban area, it practically repeats itself in households in the urban area (70%) and rural area (44%) (ANATEL, 2019, p. 18, our translation).

Decree 9,612/2018, which revoked the PNBL, now addresses telecommunications public policies, determining objectives and guidelines, among them the promotion of digital inclusion, in Article 2, so that "digital inclusion, to guarantee the population access to telecommunications networks, systems and services based on information and communication technologies - ICT, observing social and regional inequalities" (BRASIL, 2018, our translation).

In addition, the Multi-Year Plan (PPA 2020-2023) approved in 2019, by Law 13,971, brings in its core the budget planning in accordance with Article 165 of the Federal Constitution of 1988, aiming to organize and enable the public performance so that the State and society are guided based on the fulfillment of the foundations and objectives of the Republic. The government's public policies to be developed in the next four years aiming to achieve guidelines, objectives, and goals, as well as the possibility of greater control by society over the actions to be performed by the ruler are contained in this document (BRASIL, 2019).
Thus, the government intends to implement the "Conecta Brasil" program, with the goal of promoting universal access and expanding the quality of the country's communications services, with the expansion of broadband access to 91% of Brazilian households, in addition to regional goals, among them the expansion of 83% in the Northeast region and 87% in the North region (ANATEL, 2019).

Citizenship and digital democracy as a link of rights and duties

At the time, the American government realized that the private sphere, by using the Internet, exponentially reduced expenses, which is why the government decided to invest in the Internet, offering services at low cost, generating savings for the State (ARAÚJO; CARDOSO, 2006).

Thus, socioeconomic benefits lead to the emergence of electronic government, which adds to the conceptualization of democracy, as well as citizenship, and there becomes a dynamic way of governing, involving plural processes of community integration (LEVY, 2011).

The historical context of the globalized world expands the concept of citizenship in the State, because new technologies have created the opportunity for people to stay informed of what happens in the Public Administration and use Internet tools to "settle their questions and to protest, without the need for physical displacement", expanding people's participation and their "involvement in projects of collective interest" (SILVA; KURTZ, 2011, p. 6, our translation).

According to Zanferdini and Oliveira (2015, p. 78, our translation):

in the word online, there are no geographical or political boundaries. People are now connected globally through the Internet. Now people from all over the world are together every day.

The authors Gomes and Maia (2008) demonstrate that political participation through the Internet, besides reducing costs, is less bureaucratic and allows the involvement of more people who are not reached by the traditional means of communication.

In this way, the development of digital democracy allows, at least in theory, greater citizen participation in the state through the Internet.

It is in this context of digital democracy, therefore, that the concept of digital citizenship arises, since citizens now have "the right to access public services, to educate themselves, to communicate through ICTs" (FERREIRA, 2011, p. 22, our translation).
Authors such as Bellamy (2008), Garcia and Lukes (2011), and Gorczewski and Martin (2011) point in the direction that digital citizenship assumes the categories of belonging, exercising rights, and participating in politics.

Regarding the category of belonging, the great network has allowed people to transcend their communication spaces to the point where "the borders of the nation-state no longer exist, to exchange information and share common interests in virtual forums on a global scale" (MAIA, 2008, p. 283, our translation).

Thus, in the same way that in the "conventional" citizenship there were differentiations by color, income, and gender of who is or is not a citizen; it also emerges in the digital citizenship forms of segregations that exclude people. In this way, "fundamental principles such as social justice, equal opportunities, and democracy itself become influenced by access to these technologies" (ASSUMPÇÃO; MORI, 2007, p. 431, our translation).

It is necessary that everyone is included, especially those most affected by the various forms of exclusion (MAIA, 2008).

The OECD (2011, p. 11) brings that by creating new and broader communication channels,

mobile technologies provide access in areas where the infrastructure required for Internet or landline phone service is not a viable option. The development of mobile communication technologies has not only created a way for governments to reach far more people than ever before, but has also brought citizens previously unimagined opportunities to communicate with each other conveniently, and to access both public and private information and services with decreasing time and space constraints.

Nevertheless, one cannot forget that mobile communication technologies, despite providing citizens with the means to communicate and inform themselves with low limitations on the time and space in which they are inserted, do not generate access for everyone.

In any case, the category of digital citizenship belonging is closely linked to citizen inclusion, not only guaranteeing access to technology, but also ensuring that rights and duties are respected, mitigating exclusion with the creation of public policies "in the perspective of insertion in contemporary society, seeking preferentially the populations that have worse economic conditions, i.e., fewer chances of appropriation of the benefits brought by ICTs" (COSTA, 2011, p. 110, our translation).

Another aspect of traditional citizenship are the issues of rights and duties within society. In digital citizenship, technology is used as a mechanism to help the exercise of these rights and duties.
To this end, individuals use ICTs to access or learn about public services in a fully digital way. It is worth mentioning that "this approach makes it easier for people to interact with public administration and to obtain adequate and holistic answers to their questions and needs" (UN, 2016, p. 2).

In this sense, both the State and the citizen’s benefit. The latter with the possibility of literally having, in the palm of their hands, access to services; while the latter with the possibility of receiving information, complaints, or even extract data for service improvement.

Finally, in the political participation aspect, digital citizenship will be the instrument by which the population, using networks, can participate in decision making, as well as in the improvement of services and public policies; observe, for example, the polls conducted by the Legislative Branch.

From this possibility is built the concept of digital participation or e-participation, which is:

the process of engaging citizens through ICTs in policy and decision making in order to make public administration participatory, inclusive, collaborative, and deliberative for intrinsic and instrumental purposes (UN, 2014, p. 61).

Digital participation is not a substitute for citizen participation, but an enhancement of it. The UN (2014) points out three levels of digital citizen participation: e-information, that is, provision of information that allows the citizen to participate; e-consultation, where the citizen contributes to deliberation on public services and policies; and e-decision, where the citizen collaboratively formulates public services and policies.

This issue, however, like the ones previously mentioned, goes beyond access to technology, but depends on political management and, above all, digital democracy. Let's see:

There is little evidence that wider access to technologies will, by itself and without more, expand interest in political issues simply because a larger portion of the public is likely to participate. Instead, recent studies have shown that the main obstacles to the realization of deliberative politics, which presupposes a discursive resolution of problems affecting the common interest, generally stem from a form of political apathy rather than from impediments to freedom of expression or communication (MAIA, 2008, p. 284, our translation).

Therefore, the realization of digital citizenship, as well as of digital democracy, goes beyond quantitative issues of technological access, covering, above all, the qualitative issue, which aims at the active participation of citizens who are aware of their rights and duties in the micro and macrosocial sphere.
Digital exclusion during the pandemic of COVID-19

As outlined in previous lines, digital inclusion, with access by the citizen to pertinent information for a correct understanding of society, as well as their rights and duties, is of utmost importance. This need becomes even more urgent when we take into consideration the present moment.

The urgency of access to ICT has become vital for the low-income population, given the measures created by the government to face the state of public calamity that has been decreed.

Among the emergency measures taken by the government is the concession of emergency aid in the amount of R$ 600.00 (six hundred reais) for people in vulnerable situations, such as, for example, informal workers, individual microentrepreneurs (MEI), the self-employed, and the unemployed.

The beneficiaries of these measures are part of a class of workers made precarious by the lack or inefficiency of public policies for professional training, reinsertion into the job market, or even of those who are plagued by unemployment.

The government estimates that up to 70 million Brazilians will benefit from the emergency aid (AMADO, 2020), demonstrating the condition of economic vulnerability of more than 30% of the country's population (BRASIL, 2019).

Furthermore, given the vulnerable condition of the class that receives the benefit, they are also part of the digitally excluded, which often prevents them from attaining the right granted to them.

The need for access to the emergency measure implemented by the government for the maintenance of isolation and mitigation of financial problems, according to research by the Fortaleza Legislative Chamber, resulted in the increase of the vulnerability condition of the population that needs it. The main complaints reported failures in the applications and lack of updates and information about receiving the emergency aid from the Federal Government in the amount of R$ 600 reais (REGADAS, 2020).

Besides these problems, the research registered the situation of the elderly Roberto Maia, unemployed, who revealed to have lived a real "saga" to get the aid, since he didn't know how to use the application, having to get help from his son.

The difficulty is repeated on the Caixa website on the home page "https://auxilio.caixa.gov.br/#/inicio", where there is information on how to obtain the emergency aid. The Movimento Web Para Todos (MWPT), which aims to contribute to the construction of a web accessible to all, mobilizing organizations, professionals, and people with
disabilities through workshops, debates, studies, and other actions in favor of digital accessibility, analyzed the referred page as follows (DAMACENO, 2020):

**Figure 1 – Home**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard Navigation</td>
<td>YES</td>
</tr>
<tr>
<td>Shortcut Links</td>
<td>NO</td>
</tr>
<tr>
<td>Image Description</td>
<td>NO</td>
</tr>
<tr>
<td>Color Contrast</td>
<td>NO</td>
</tr>
<tr>
<td>Page Language</td>
<td>YES</td>
</tr>
<tr>
<td>Libras</td>
<td>NO</td>
</tr>
<tr>
<td>Accessibility Page</td>
<td>NO</td>
</tr>
</tbody>
</table>

Source: Author's collection

Regarding the "destination" page, when the "make your request" option is chosen, at "https://auxilio.caixa.gov.br/#/destinacao", (DAMACENO, 2020):

**Figure 2 – Request**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard Navigation</td>
<td>YES</td>
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<td>Shortcut Links</td>
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<td>Page Language</td>
<td>YES</td>
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<td>Libras</td>
<td>NO</td>
</tr>
<tr>
<td>Accessibility Page</td>
<td>NO</td>
</tr>
</tbody>
</table>

Source: Author's collection

It is noted that the page is not suitable for people with special needs, which limits access in a broad and independent way, requiring adjustments to comply with article 63 of the Brazilian
Inclusion Law (LBI 13.146/2015). Not to mention the difficulty for the elderly and lay people: once again, it is reiterated, victims of digital exclusion.

A functional and more user-friendly web would bring benefits to all, including making it possible to reduce the social and digital inequality that plagues the country. In its Manifesto, the Web For All Movement (MWPT) states that:

millions of people with disabilities have difficulty using the web [...] What's more, when the web is not accessible, the definitions of inclusion, equality, and autonomy are directly impacted by the access barriers they encounter. Accessible websites make the web more functional and easier, and bring benefits to all people. And the main beneficiaries are people with disabilities and reduced mobility, as well as people who are not computer literate, the elderly, and people with low literacy skills.

In another study, MWPT (2020) indicates that of government websites, only 3.29% are not faulty, which cannot be admitted. Thus, it is evident that the COVID-19 pandemic not only exposed the abysmal asymmetries in which the population, vulnerable by the absence of the state and its affirmative or redistributive public policies, remains inserted, but also demonstrated the lack of care and capacity on the part of the agencies responsible for the inclusion and assistance of these people, since the site destined to help them does not meet the required and indispensable parameters.

Thus, in order to achieve an inclusive digital world, it is necessary to actually inaugurate a constant process of mobilization and education of society, organizations, and website developers, without prejudice, of course, to public policies capable of meeting the existing demands.

**Final considerations**

As exposed throughout this paper, in Brazil there are several initiatives for digital inclusion. These are laws and public policies involving citizens' rights, granting them the right to information, and guaranteeing them freedom of expression.

However, while citizens are granted rights, they are not granted the means to achieve these rights. In the digital age in which we live, information, most of the time, is no longer in physical media, but in digital media, which prevents those who do not have access to the internet to reach them.

Despite the advancement and improvements over recent times, there is a mismatch between digital inclusion and the training of underserved citizens to receive this technology.
As is the case in this moment of chaos experienced due to the COVID-19 pandemic, thousands of Brazilians are unable to access a benefit that was granted to them to guarantee, even if only minimally, their subsistence.

There is no denying, and neither does the present work intend to deny, that technological advances are of utmost importance, as well as that investments should be made in a constant and careful way, but, the alert that is made now is turned to the (not small) portion of the population that is deprived of any technological benefit.

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