The Democratic Rule of Law in Brazil and the challenges of implementing 5G in a scenario of digital divide and hyperconnection

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Abstract: The implementation of the 5G technology in a scenario of digital divide and hyper connection raises – in spite of having important positive aspects related to economic, social and human developments - several challenges to the democratic rule of law all over the world. In this context, the paper aims to approach the subject in light of the Brazilian reality and legal order, but taking into account the global environment in which regards the digital transformations and the so-called techno-authoritarianism.

A. Introductory notes

Information has been the engine of history, directly linked to the architectures of acquiring, maintaining, and expanding power, especially in contexts of increasing and perpetuating social inequalities[1]. Etymologically, it is worth noting that information evokes the idea of an action, both in the positive and negative meaning of the term, in a process of framing or, in other words, formatting, always aimed at a certain goal to be achieved[2].

Furthermore, for practical purposes, regarding to protecting personal data legislation, for example, the differentiation is no longer relevant. Information (and pieces of information) should not be confused with data, as information operates in communication processes and information architectures, which can be more or less sophisticated, depending on the case, thus presupposing trust and sharing.

1 https://g1.globo.com/economia/censo/noticia/2023/06/28/censo-2022-brasil-tem-203-milhoes-de-habitantes-47-milhoes-a-menos-que-estimativa-do-ibge.ghtml Acesso em: 21.08.2023.

2 https://itsrio.org/pt/artigos/devemos-banir-a-inteligencia-artificial-nas-eleicoes/?utm_campaign=thinktech_52&utm_medium=email&utm_source=RD+Station Acesso em: 24.08.2023.

Nowadays, the boundaries of truth and certainties seem to have eroded, as the pace of new formats and models of advertising, digitalization, and the algorithmization of everyday life have accelerated, especially concerning the apparent dissolution of social and political pacts that, in some way, sought to guarantee a greater degree of fidelity and the maintenance of knowledge validation filters[3].

In view of this, it is important to point out that this study refers mainly to algorithmization as a key term for a better understanding of the current state permeated by the use of algorithms and multiple applications of artificial intelligence[4] (henceforth AI). This terminology, as it is already well known, expresses a radical change in living conditions triggered by its widespread use, in a subtle, pervasive and disruptive way, multiplying into multiple technological solutions applicable to precariousness and problems that are sometimes considered chronic, e.g. hunger, environmental devastation, migration control and the energy crisis. Its use is also notable in health, education, and allocation of sparse public resources, as well as in the form of specific modules for new surveillance systems[5] launched by private companies and government agencies[6].

In this context - the so-called digital transformation - it is important to keep in mind that this is not just another set of technological innovations that have been emerging, but a bundle of profound changes of the most diverse kind, including in the social fabric, also causing cultural ruptures[7].

One of the main phenomena experienced in the present, it can be affirmed, is the trivialization and a kind of standardization of an algorithmic way of life, which is engulfed by socio-technical AI devices aimed at main-

3 BOURDIEU, Pierre. *Sobre o Estado*: Cursos no Collége de France (1989-92). São Paulo: Companhia das Letras, 2012, [s.p.].

4 SCHMIDT, Eric; HUTTENLOCHER, Daniel; KISSINGER, HENRY A. *A era da IA e o nosso futuro como humanos*. Vanessa Schreiner (Trad). Rio de Janeiro: Alta books, 2023, p. 44-45.

5 ZUBOFF, Shoshana. *A era do capitalismo de vigilância*: a luta por um futuro humano na nova fronteira de poder. [livro eletrônico – Kindle]. Trad. George Schlesinger. Rio de Janeiro: Editora Intrínseca. 2021.

6 DI FABIO, Udo. *Grundrechtsgeltung in digitalen Systemen*: Selbstbestimmung und Wettbewerb im Netz. München: C.H. Beck, 2016, p. 44-45. See also BIONI, Bruno; MARTINS, Pedro. *Devido processo informacional*: um salto teórico-dogmático necessário? Available at: https://brunobioni.com.br/wp-content/uploads/2020/08/Ensaio-Devido-ProcessoInformacional 1.pdf. Accessed on 02 Mar 2022.

7 HOFFMANN-RIEM, Wolfgang. *Teoria geral do direito digital*: desafios para o direito. 2. ed. Rio de janeiro: Forense, 2022, p. 98.

taining a single hegemonic technological model, with information production as its central engine, with a view to strengthening control structures and, in particular, the infinite increase in Big Techs astronomical profits[8].

As a result of that, in the digital era, despite the numerous distinctions between the global North and South's impact, human existence is being drawn into ecosystems marked by a certain comfort and the acceleration of life itself in the face of the massive production of information; on the other hand, social and political polarization is intensifying due to an increase in violence, hypersurveilance, economic disparities, the precarization of attention, the vitrification of personality and the compression of individual autonomy in a context characterized by rising levels of techno-authoritarianism[9].

On the other hand, there is a preponderance of other/new "Agoras", replacing the traditional dimensions of the public and private spheres, substantiated, and absorbed in the composition of social networks under the leadership of Big Techs in the area of information and communication technologies[10]. This evolution, however, is taking place in an environment marked by information asymmetry and digital exclusion/division at various levels, which, for a better understanding, requires an approach based on certain elements, namely complexity, speed, volume, scalability and algorithmization.

For a more precise understanding of this picture characterized by complexity, it is possible to mention the increasing (but, at the same time, increasingly subtle) use of techniques to silence individuals and certain sections of the world's population, as access to new technologies of high quality is denied while a series of parallel ecosystems, substantially marked by excessive information production, are produced and maintained, which, in short, leads to deafening noises and affects the process of subjectivation and, consequently, the exercise of citizenship, especially in the digital dimension.

In this regard, beyond the traditional methods widely used in the market, control based on algorithms is increasingly being used as a new form of

8 https://forbes.com.br/forbes-tech/2023/02/o-que-difere-as-big-techs-de-outras-empresas-de-tecnologia/ Accessed on: 28.08.2023.

9 NIDA-RÜMELIN, Julian. *Digitaler Humanismus:* Eine Ethik für das Zeitalter der künstlichen Intelligenz. München: Piper, 2018; BÄCHLE, Thomas Christian. *Digitales Wissen, Daten und Überwachung*: zur Einführung. Hambug: Junius, 2016, p. 158.

10 https://www1.folha.uol.com.br/ilustrissima/2023/02/oito-medidas-para-regular-big-techs-garantindo-liberdade-de-expressao.shtml Accessed on 21.08.2023.

governance, e.g., the collection and processing of neural data[11]. It is no coincidence that there is talk of Algorithmic Regulation and/or Algorithmic Governance. The same applies to the public sphere, i.e., digital governance supported by Big Data[12], AI and algorithms, which, in the Brazilian case, can be observed primarily after the Law 14.129/21[13], which established the

11 Cf. Caso emotiv e a Corte Constitucional do Chile em: https://drive.google.com/file/d/1wX2fUrBDTl3B1W_IK_DUOCC7neQS6Hhu/view Accessed on 09.09.2023; https://idealex.press/primera-sentencia-sobre-informacion-cerebral-genera-debate/ Accessed on 10.09.2023. In Brazil, there is a PEC (Proposed Amendment to the Constitution) that seeks to amend Article 5 to include the protection of mental integrity and algorithmic transparency among fundamental rights.

12 Five characteristics are often used to identify Big Data: the five "Vs":1 - The possibilities of accessing huge amounts of digital data ("High Volume"); 2 - Different types and quality of data, as well as different ways of collecting, storing and accessing it ("High Variety"); 3 - The high speed of its processing ("High Velocity"); 4 - The use of artificial intelligence in particular makes possible new and highly efficient ways of processing data, as well as checking its consistency and guaranteeing its quality ("Veracity"): 5 - In addition, Big Data is the object and basis of new business models and possibilities for various value-added activities ("Value").

13 Law no. 14.129, of 29 March 2021. Provides for principles, rules and instruments for Digital Government and for increasing public efficiency and amends Law No. 7.116, of 29 August 1983, Law No. 12.527, of 18 November 2011 (Access to Information Law), Law No. 12.682, of 9 July 2012, and Law No. 13.460, of 26 June 2017. Available at: www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/lei/l14129.htm. Accessed on 22 May 2022. Some provisions of Law 14.129/2021, as well as Decree 10.900, of 17 December 2021, should be considered, albeit briefly. Provides for the Citizen Identification Service and the governance of the identification of natural persons within the scope of the direct, autarchic and foundational federal public administration, and amends Decree No. 8.936, of 19 December 2016, Decree No. 10.543, of 13 November 2020, and Decree No. 9.278, of 5 February 2018. Available at: www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/decreto/d10900.htm. Law no. 14.129, of 29 March 2021. Provides for principles, rules and instruments for Digital Government and for increasing public efficiency and amends Law No. 7.116, of 29 August 1983, Law No. 12.527, of 18 November 2011 (Access to Information Law), Law No. 12.682, of 9 July 2012, and Law No. 13.460, of 26 June 2017. Available at: www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/lei/l14129.htm. Accessed on 22 May 2022. Some provisions of Law 14.129/2021, as well as Decree 10.900, of 17 December 2021, should be considered, albeit briefly. Provides for the Citizen Identification Service and the governance of the identification of natural persons within the scope of the direct, autarchic and foundational federal public administration, and amends Decree No. 8.936, of 19 December 2016, Decree No. 10.543, of 13 November 2020, and Decree No. 9.278, of 5 February 2018. Available at: www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/decreto/d10900.htm. Accessed on 27 Aug 2023.

pillars of a digital government, foreseeing the use of AI as a central instrument for governance[14].

Taking the Brazilian case into account, it is necessary to warn of Brazil's strategic position on the world stage of so-called data colonialism[15] and, therefore, a manifestation of techno-authoritarianism. This is due to several factors, especially the hyperconnectivity of the Brazilian population, the leniency of public authorities in the face of abuses perpetrated by Big Techs, legislative gaps in the area of technology, as well as the ample potential offered by Brazil in terms of profits and opportunities for exploitation and growth that are emerging with the implementation of 5G, which, in turn, leads to the necessary confrontation of the digital divide issue in the domestic environment[16].

Thus, based on the premise that algorithmic governance[17] implies transparency and public scrutiny, this text aims to identify and explore - with a focus on the case and the Brazilian legal system, with regard to the protection of Human and Fundamental Rights (especially the protection of personal data) in face of the challenges of implementing the fifth generation of the internet (5G) in a scenario of hyperconnection and digital divide.

14 HOFFMANN-RIEM, Wolfgang. Inteligência artificial como oportunidade para a regulação jurídica. *Direito Público*, Porto Alegre; Brasília, n. 90, nov./dez. 2019; CELLA, José Renato Gaziero; COPETTI, Rafael. Compartilhamento de dados pessoais e a administração pública brasileira. *Revista de Direito, Governança e Novas tecnologias*. Maranhão, v.3, p. 39-58, jul/dez, 2017; DONEDA, Danilo. Panorama Histórico da Proteção de Dados Pessoais. In: MENDES, Laura; DONEDA, Danilo; SARLET, Ingo Wolfgang; RODRIGUEZ JR., Otavio Luiz (Orgs.). Tratado de proteção de dados pessoais. Rio de Janeiro: Forense, 2021, p. 39.

15 BRAH, Avtar. *Diferença, diversidade, diferenciação*. Caderno Pagu (26), Campinas-SP, Núcleo de Estudos de Gênero-Pagu/Unicamp, 2006, pp. 329-376; BOSKER, B. (2013). *Google's Online Ad Results Guilty Of Racial Profiling, According To New Study***.** The Huffington Post. Recuperado de https://www.huffpostbrasil.com/2013/02/05/online-racialprofiling_n_2622556.html?ec_carp=4291654031226775441. Accessed on: 28.07.2023; MENDES, L.S., MATTIUZZO, M. (2019) *Discriminação algorítmica: conceito, fundamento legal e tipologia*. Revista de Direito Público, v.16 (90), pp. 39-64.

16 Brazil tends to invest more and more in technology applied to health. Cf.: https://br.cointelegraph.com/news/government-releases-brl-616-million-for-research-and-innovation-projects-that-include-blockchain-ai-and-web3-in-health Accessed on: 10.09.2023.

17 https://drive.google.com/file/d/1WFJppEqmmR9OuSaBH_qlOlzOQeXHGK_-/view Accessed on: 20.08.2023.

The aim is to contribute to a reflection on the current technocratic hegemony and its impact on the democratic rule of law in Brazil[18].

B. The Brazilian context - implementing 5G in a scenario of digital division and hyperconnection

Among the many unusual situations that have emerged with the turn produced by the recent pandemic, due to the transformations driven by information and communication technologies (ICT), the digital divide that plagues the world, particularly the countries that make up the global South, has come to the forefront of public debate, revealing the inequality and social injustice that prevail, especially on the global periphery.

Despite a lack of precise definition about its origin, the concept of the digital divide has been used primarily to identify that participating adequately in the information society serves to expand markets, maintain psychophysical well-being, and the exchange of knowledge, preventing the concentration of wealth and the deepening of inequalities among individuals, regions, and countries.

On the other hand, appropriate access to the means and digital information resources that constitute knowledge and wealth production theoretically enables the strengthening of democracies through the development and empowerment of individuals and groups, lifting them from a subalternity and vulnerability condition, as the proper appropriation of technology and information flows has become a neuralgic dimension in world geopolitics[19].

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18 *Dados do Censo*: BRASIL. Censo. IBGE: Brasília, 2022-3. Available at: https://cidades.ibge.gov.br/. Accessed on: 22 ago.2023. Dados do Anuário Brasileiro de Segurança Pública 2023: FORUM BRASILEIRO DE SEGURANÇA PÚBLICA. Anuário Brasileiro de Segurança Pública 2023. Disponível em: https://forumseguranca.org.br/wp-content/uploads/2023/07/anuario-2023.pdf. Accessed on: 22 ago. 2023; NIC.BR; CGI.BR; CETIC.BR. Annual Report Cetic.br. 2022. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cetic.br/media/docs/publicacoes/9/20230530114022/Annual_Report_Cetic2022.pdf. Accessed on: 25 jul. 2023; NIC. BR.CGI.BR; CETIC.BR. Available at: *Pesquisa TIC Kids Online BRASIL 2021*. Resumo Executivo. Disponível em: https://cetic.br/media/docs/publicacoes/2/20221121120628/resumo_executivo_tic_kids_online_2021.pdf. Accessed on: 29.03. 2023.

19 https://exame.com/inteligencia-artificial/ia-ameaca-ampliar-divisao-digital-na-america-latina/ Accessed on: 21.08.2023; https://www.rollingstone.com/politics/politics-features/china-facebook-instagram-propaganda-campaign-1234813762/ Acesso em:01.09.2023.

The United Nations (UN) estimates that more than 2.7 million people, especially in developing and least developed countries, are still on the margins of a safe, responsive, resilient, and human-centered digital future, to the detriment of achieving the 17 Sustainable Development Goals (SDGs) [20]. Illustratively, the implications for digital marginalization are diverse in nature, including jeopardizing global initiatives to combat hunger, new pandemics, and environmental and climate issues.

In addition, digital exclusion leads to isolation, loss of growth and development opportunities, both at a personal and collective level, hindering access to science, the job market, healthcare services and knowledge in general, accentuating power asymmetries, discrimination and violence against historically vulnerable individuals and groups by exposing them to disinformation campaigns and hate speech.

It is worth noting that there are three ways to distinguish and categorize digital exclusion: exclusion from access, exclusion from use (having access to the Internet and digital technologies, but lacking the skills to use them properly) and exclusion related to the quality of use, which, in short, refers to making the most of the connection conditions and the internet itself, especially in terms of access to quality information[21]. It should also be noted that digital exclusion, in all three mentioned levels, affects some groups more than others, with black and brown women and girls[22] in poor countries being the most affected, reinforcing the erosion of their autonomy, discrimination and gender-based violence[23].

Especially regarding SDG 9, the UN anticipates that a number of strategies must be prioritized to tackle the digital divide, including digital literacy, holding major technology platforms accountable for designing safer and more inclusive platforms, and forming a global alliance[24] to address the issue.

Considering the domestic context, Brazil has a population of 203,062,512 people, according to the 2022 Demographic Census, with 5% of Brazilian

20 https://www.un.org/en/desa/27-billion-people-still-left-offline Accessed on: 21.08.2023.

21 https://www.iberdrola.com/compromisso-social/o-que-e-exclusao-digital Accessed on: 23.08.2023.

22 So as not to give rise to any misunderstandings, it should be noted that the terminology brown and black people is the one legally in force in Brazil, both referring to the majority Afro-descendant population group in the country.

23 https://news.un.org/pt/story/2023/03/1811282 Accessed on: 19.08.2023.

24 https://a4ai.org/ Accessed on: 31.08.2023.

cities concentrating 56% of the country's population. In total, 115.6 million people live in 319 cities[25]. With the urbanization rapidly expanding worldwide, Brazil has followed the path of population densification in urban centers, as evidenced by the current state of the southeastern states, notably São Paulo and Rio de Janeiro.

The internet, in both its oracular and mirror-like expression, reveals the gravity of inequality and social marginalization in the Brazilian case, along with a system of privileges that confines the population to a kind of caste system[26], which there is no real chance of social mobility.

In order to illustrate what is at stake, particularly with regard to digital division/exclusion and techno-authoritarianism, the focus is placed on the example of the implementation of the fifth generation of the internet, the so-called 5G, which has currently been the main target of public attention, particularly at national level. 5G technology - also in Brazil - promises to massify and diversify the Internet of Things (IoT) in sectors such as public security, telemedicine, distance education, smart cities, industrial and agricultural automation, all with the aim to increase the accuracy and efficiency of the various sectors of the economy, benefiting society[27]. This is because 5G is characterized by low latency, real-time connection capacity and, in these terms, high-speed data sharing, guaranteeing unprecedented quality in communication flows and information architectures[28].

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25 https://g1.globo.com/economia/censo/noticia/2023/06/28/censo-2022-brasil-tem-203-milhoes-de-habitantes-47-milhoes-a-menos-que-estimativa-do-ibge.ghtml Acesso em: 21.08.2023.

26 BARRETO, Luis Fernando Britto Pereira de Mello. *Uma análise da divisão digital no Brasil através da aplicação da aprendizagem de redes bayesianas*. 2012. Dissertação (Mestrado em Administração) - Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, 2012. doi:10.11606/D.12.2012.tde-18022013-175034. Accessed on: 2023-09-02.

27 https://www.gov.br/anatel/pt-br/assuntos/5G/tecnologia-5g Accessed on: 26.08.2023.

28 https://www.gov.br/anatel/pt-br/regulado/radiofrequencia/plano-de-uso-do-espectro-de-radiofrequencias Accessed on: 26.08.2023; "South Korea and Puerto Rico lead the world in 5G availability, with scores of 42.9 per cent and 48.4 per cent respectively. Impressively, given the geographical size of the market, the US is in fourth place, with 31.1 per cent 5G availability - almost a third. In the other developed markets, the scores vary widely. In Europe, Finland and Bulgaria have the joint highest 5G availability score (24.2 per cent - 24.7 per cent), but the five largest markets are lower, with France scoring 20.6 per cent, Germany 13.3 per cent, Italy 17.9 per cent, Spain 15.2 per cent and the UK a relatively low 10.1 per cent. Belgium has the lowest 5G availability in Europe, with a connected time of 4 per cent. In Asia, South Korea is chased by Singapore and Taiwan (both with 30 per cent). Singapore's

5G is the fifth generation of the mobile internet network, consisting of a structure of antennas, receivers and radio frequency bands that enables more faster, secure, and stable connections for mobile phones, tablets, and other smart devices. It demands the use of its own antennas and receivers, requiring a larger infrastructure made up of a network of antennas close together[29].

Activities such as sending and playing multimedia files, using applications, taking part in video calls, playing online games, broadcasting live streams, and performing various downloads and uploads will be faster and of twenty times better quality on average[30]. This means that, in general, people will benefit from being more and better connected[31].

In fact, 5G aims to solve the problem of signal loss by overcoming network overloads. Among the many sectors that will benefit from 5G, especially due to its speed and stability, industry and telehealth stand out[32], especially in terms of autonomous cars and remote robotic surgeries[33].

In other words, it can be said that, since 5G was first implemented in South Korea in 2019, there has been a general increase in the economy's performance and potential for income generation and benefits for the population, including a more favorable geopolitical position for countries in terms of digital sovereignty. Nevertheless, it is worth stating that the forecast for the implementation of 5G in Brazil began in Brasília in 2022

close neighbour, Malaysia, scored 20.5%, despite the relatively recent launch of 5G." In: https://www.opensignal.com/2023/06/30/benchmarking-the-global-5g-experience-june-2023 Accessed on: 26.08.2023; Para entender o panorama na América latina: https://www.gsma.com/latinamerica/wp-content/uploads/2023/06/290623-5G-in-Latam-ENG.pdf Accessed on :26.08.2023.

29 https://gl.globo.com/tecnologia/noticia/2023/07/06/5g-no-brasil-mapa-mostra-todas-as-antenas-nas-315-cidades-com-a-tecnologia-confira.ghtml Acesso em: 23.08.2023.

30 https://www.portaldaindustria.com.br/industria-de-a-z/5g-no-brasil/ Accessed on: 23.08.2023.

31 https://news.un.org/pt/story/2020/09/1726652 Accessed on: 30.08.2023.

32 STRATI. Conheça um panorama sobre o mercado da saúde para 2023! *Site Strati*, [*S.l.*], 3 nov. 2022. Disponível em: https://strati.in/mercado-da-saude/. Accessed on: 01 jun. 2023; PASSOS, Juliana. A telessaúde deve estar a serviço do SUS. Entrevista com Angélica Baptista Silva. *Site EPSJV/Fiocruz*, 05 de abril de 2023. Available at: https://www.epsjv.fiocruz.br/noticias/entrevista/a-telessaude-deve-estar-a-servico-do-sus#:~:text=Porque%20se%20voc%C3%AA%20tem%20que,um%20melhor%20acompanhamento%20do%20paciente. Accessed on: 04.05.2023.

33 https://digital.futurecom.com.br/transformacao-digital/o-5g-ja-esta-impactando-saude-no-brasil Accessed on: 13.09.2023.

and is expected to be finalized in 2029, when developed countries are likely to be installing 6G[34].

In the case of health, for example, it is important to highlight that, due to the speed of data traffic and low latency, significant investments in technology are being made to the extent of the value of biometric and psychological data in the world ranking. Among the application possibilities of 5G, one can list the potential use of techniques such as digital twins[35] and new information management formats focused on resource allocation and data security. Therefore, in this context, the medical record will increasingly become an information hub[36].

In short, digital health theoretically connects people and populations through ICTs to manage health and well-being, complemented by providers teams working in flexible, integrated, interoperable and digitally enabled care environments that must strategically manage digital tools, technologies and services to transform, integrate and democratize the provision of care and therapies in a safe, robust and reliable manner. Thus, in line with the implementation of 5G health, it has been recently enacted the Law 14.510/2022 to regulate the practice of telehealth[37], which, through a multidisciplinary scope, assigns rights and duties, and is a driver for some ongoing reflections on central points such as responsibility, cybersecurity, and equity.

However, in the Brazilian environment, as mentioned, the discrepancies regarding the 5G experience in the state capitals are still intense. Many Brazilian smartphone users have limited access to 5G networks or 5G devices, facing much slower overall mobile download speeds. Incidentally, 20.7% of Brazilian users have overall average download speeds below 10 Mbps, which makes the internet browsing on their devices much more dif-

34 https://www.uol.com.br/tilt/noticias/redacao/2023/03/07/o-que-e-6g-quando-chega-qual-velocidade-nova-rede-no-brasil-melhor-que-5g.htm Accessed on: 24.08.2023.

35 M. Alazab *et al*., "Digital Twins for Healthcare 4.0 - Recent Advances, Architecture, and Open Challenges," in *IEEE Consumer Electronics Magazine*, 2022; Thelen, A., Zhang, X., Fink, O. *et al*. Uma revisão abrangente do gêmeo digital - parte 2: funções de quantificação e otimização de incertezas, um gêmeo digital de bateria e perspectivas. *Struct Multidisc Optim* **66** , 1 (2023). https://doi.org/10.1007/s00158-022-03410-x Accessed on: 25.05.2023.

36 https://www.saudebusiness.com/colunas/cara-ou-coroa-os-dois-lados-da-inteligencia-artificial-na-saude Accessed on: 13.09.2023.

37 http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2022/lei/L14510.htm#:~:text=LEI%20N%C2%BA%2014.510%2C%20DE%2027,15%20de%20abril%20de%202020. Accessed on: 12.09.2023.

ficult and challenging. Despite the slow and gradual implementation of 5G, only 0.6% of smartphone users in Brazil enjoy overall average download speeds of more than 100 Mbps[38].

Regarding smartphone users, the main access mean of the mobile internet in Brazil, it is important to look at the issue of speed. In this regard, it is noted that "*20% of the population (one in five users) receives, on average, less than 10 Mb/s download speed on their mobile connection. Equally complicated is the fact that the states with the highest percentage of users with internet speeds below 10 Mb/s are Amazonas (26 per cent), Minas Gerais (27.2 per cent) and Roraima (29 per cent)*". Finally, the report provided by Opensignal also clarifies that Acre, Mato Grosso, Mato Grosso do Sul, Rondônia, Roraima and Piauí have more than 15% of the population without a signal for 10% or more of their mobile internet usage time[39].

It is also important to remember that the internet reaches 60 million homes in the country, corresponding to 80% of the total. Of these homes, 82% have a stable connection in urban areas and 68% in rural areas. In class A, 100% of homes are connected. In the other classes, the situation is completely different: class B (97%); class C (87%); D and E (60%). However, in Brazil, 36 million people do not connect to the internet, usually because of the high prices of the devices and lack of interest. Approximately 29 million live in urban areas and have studied up to primary school. Of these, 21 million are black and brown; 19 million are in classes D and E; and 18 million are aged 60 or over[40].

In the midst of the digital vacuum in some regions, situation that has a decisive impact on some very specific population groups, especially public-school students in isolated areas in the interior of Brazil, the Federal Senate approved a constitutional amendment proposal, PEC 47/2021, which aims to introduce a right to digital inclusion[41] in the fundamental rights catalogue of the Article 5 of the Federal Constitution of 1988 (henceforth

38 https://www.opensignal.com/2023/05/16/users-in-brazils-state-capitals-enjoy-5g-download-speed-exceeding-250mbps Accessed on: 12.08.2023.

39 https://www.opensignal.com/2023/08/24/brazilian-smartphone-users-observe-major-disparities-in-mobile-network-experience Accessed on: 01.09.2023.

40 CGI.br/NIC.br, Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação (Cetic.br), Pesquisa sobre o uso das tecnologias de informação e comunicação nos domicílios brasileiros - TIC Domicílios 2022. IN: https://cetic.br/media/docs/publicacoes/2/20230825143720/tic_domicilios_2022_livro_eletronico.pdf Accessed on:24.08.2023.

41 https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2326575;

CF/88). This proposal, however, is still awaiting deliberation and approval in the Chamber of Deputies of the National Congress.

In this regard, the federal executive branch launched the "Brasil Conectado" (Connected Brazil) program, which, in short, aimed to bring the internet to the most deprived regions in terms of digital inclusion, in order to promote the expansion of strategic areas such as health and education. However, for these objectives to be realized, it is essential to guarantee, on an equal basis, appropriate infrastructure, access to compatible devices and high-quality broadband internet, as well as data security through effective policies on cybersecurity, sovereignty, and digital education.

However, according to the Education Watch observatory, what has happened so far has been the thoughtless authorization of Starlink's entry[42], especially into the Brazilian Amazon region, favoring illegal mining and deforestation, as well as the increasing dominance of platform capitalism in Brazilian education[43], with Google taking the dominant position in student and teacher data storage in this opaque ecosystem, where apps are even installed without users' consent[44].

On the other hand, somewhat contradictory, Brazil can undoubtedly be described as a hyperconnected country, since 142 million of the 149 million Internet users in the country connect every day, or almost every day - with a prevalence in social classes A and B and to a lesser extent in C, D and E. Thus, Brazilians spent nine hours and thirty-two minutes per day, on average, surfing the Internet in 2022. It is important to note that the majority of Brazilian Internet users (62%) access the web exclusively via their mobile phones, which is the case for more than 92 million people[45]. In this regard, Internet use exclusively via mobile phone predominates among

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https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra?codteor=2183047&filename=PEC%2047/2021%20(Fase%201%20-%20CD) Accessed on:20.08.2023.

42 https://veja.abril.com.br/economia/acordo-fechado-a-chegada-da-starlink-de-elon-musk-ao-brasil?utm_source=google&utm_medium=cpc&utm_campaign=eda_veja_audiencia_institucional&gad=1&gclid=CjwKCAjw3dCnBhBCEiwAVvLcu1JyAqjDcnyonTXxx3Z2VCCGXWsn3kvVIGIZJBmMbIqEoHxykuzcKhoC59UQAvD_BwE Accessed on: 01.07.2023.

43 https://nucleo.jor.br/reportagem/2023-08-24-como-as-big-techs-cravaram-os-dentes-na-educacao-brasileira/ Accessed on: 27.08.2023; https://gitlab.com/ccsl-ufpa/get-mx-universities/?ref=nucleo.jor.br Accessed on: 01.09.2023.

44 https://educacaovigiada.org.br/pt/mapeamento/brasil/?ref=nucleo.jor.br Acesso em: 01.09.2023.

45 https://www.opensignal.com/2023/08/24/brazilian-smartphone-users-observe-major-disparities-in-mobile-network-experience Accessed on: 01.09.2023.

women (64%), among blacks (63%) and browns (67%), and among those belonging to the D and E classes (84%)[46].

As a result, Brazil surpasses developed countries such as UK, where the average time spent on the internet is 5 hours and 47 minutes. It is noteworthy that, as a result, Brazilian population remains more connected than the global average. It is important to remember that mobile phones continue to be the most used device and messaging services, including WhatsApp, are the favorites. In the case of WhatsApp, Brazilians spend a monthly average of 28 hours connected[47].

As mentioned earlier, it cannot be ignored that data packages, as well as the quality and speed of the internet available to most of the population, along with disinformation campaigns and the exponential volume of leaks and scams on and through the network, have been serious impediments to Brazil's transition from a digital hinterland to a leading group of countries in global technology geopolitics.

C. Challenges to the Democratic Rule of Law - A look at the global environment and the Brazilian scenario regarding digital transformations and techno-authoritarianism

In the broader context of what has been termed digital constitutionalism[48], the phenomenon of techno-authoritarianism[49] has been particularly challenging, as it poses a growing and increasingly serious threat to human and fundamental rights and also, consequently, to the democratic rule of law and its institutions[50].

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46 https://cetic.br/media/docs/publicacoes/2/20230825143348/resumo_executivo_tic_domicilios_2022.pdf Accessed on: 02.09.2023.

47 https://cetic.br/media/docs/publicacoes/2/20230825143348/resumo_executivo_tic_domicilios_2022.pdf Accessed on: 02.09.2023.

48 https://verfassungsblog.de/a-constitution-without-constitutionalism/ Accessed on: 14.07.2023.

49 ZANATTA, Rafael Augusto Ferreira. *A proteção coletiva dos dados pessoais no Brasil*: a defesa de direitos entre autoritarismo e democracia. p. 94-95-96.

50 *"We call the form of domination in which information and its processing by algorithms and artificial intelligence decisively determine social, economic and political processes an information regime"*. In: HAN, Byung-chul. Infocracia: *Digitalização e a crise da democracia*. Editora Vozes, 2022. p. 6; https://www.migalhas.com.br/depeso/388195/racismo-algoritmico-nas-relacoes-de-consumo Accessed on: 23.07.2023.

Techno-authoritarianism[51], a term that has been increasingly used in recent years, generally consists of the use of increasingly sophisticated technological resources, especially in the context of digitalization strategies and the exponential use of information and communication technologies (ICTs), in order to increase both in quantitative and qualitative terms the control exercised by the state and, in another more current twist, by a hegemonic group of technology companies, primarily through the mystical appanage[52] of the Bigtechs[53].

In view of this, it should be pointed out that society, as a system of communication and meaning, is necessarily guided by a set of principles and rules that determine people's social belonging (both individually and collectively), but also organize the behavior, feelings and thoughts of its members. In this context, it is possible to say that what is happening in this fold of human history is something unprecedented, comparable only to the power of the East India Company (EIC)[54] in the 17th century, as a handful of companies establish a new, but subtle, form of exercising authoritarian power, which, especially since the last decade of the 20th century, has subjugated - or at least constrained, to a greater or lesser extent - all other institutions (public and private) that exercise power, whether legitimate or not.

These are large technology companies that develop innovative and disruptive services, growing rapidly and superlatively and hegemonically and predatorily dominating the market and, in doing so, the democratic regime. These corporations have become part of the daily lives of billions of people around the world, particularly after the pandemic, offering technological products and solutions, many of them supposedly free of charge, while also radiating virtually unprecedented domination based on the processing of personal and non-personal data. This has had an impact on individuals

51 https://www1.folha.uol.com.br/ilustrissima/2023/02/oito-medidas-para-regular-big-techs-garantindo-liberdade-de-expressao.shtml Accessed on: 09.08.2023.

52 RODRIGUES, Jose Carlos. Ensaios em antropologia do poder. Rio de janeiro: Terra Nova, 1992. P. 22-23.

53 Auxier, B.; Anderson, M.; Perrin, A.; Turner, E. Children's Engagement with Digital Devices, Screen Time. Pew Research Cente. 2020. Disponível em: https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screentime/. Acesso em 20 mar. 2023; https://nucleo.jor.br/reportagem/2023-08-24-como-as-big-techs-cravaram-os-dentes-na-educacao-brasileira/ Accessed on:29.08.2023.

54 https://neofeed.com.br/blog/home/o-poder-das-big-tech-mudanca-comportamental-ou-nova-classe-de-ativos/ Accessed on: 29.08.2023.

and social groups by changing their understanding and experience of the privacy-identity binomial[55], altering their fears, dreams, conceptions of the world and perception of time and space[56], as well as the limits and contours of the public and private spheres.

As a result, the capacity of individuals and social groups to exercise autonomy[57] and, consequently, to resist that domination has been increasingly emptied. In this context, human and fundamental rights[58] of all dimensions such as freedoms, personality rights, equality rights, but also political, social, economic, cultural and environmental rights, are being jeopardized and even flagrantly violated[59]. Therefore, citizenship, when invested with the digital condition, has become increasingly precarious, as maneuvers like those described in the Cambridge Analytica scandal[60] are becoming increasingly frequent. The spread of such practices revealed some risks that were still hidden from the vast majority of the world's population, despite what had already been established in the Snowden case[61].

It must be emphasized that techno-authoritarianism has become a global phenomenon, meaning that it can occur in a state that is already defined and recognized to be authoritarian or even dictatorial, which only exacerbates the situation, since dictatorship is expanded and intensified through the use of technological resources[62], but it has also had an impact, to a greater or lesser extent, on many states that are or can still be considered

55 GREENFIELD, Susan. *Transformações mentais*: como as tecnologias digitais estão deixando marcas em nosso cérebro. Rafael Surgek (Trad). Rio de Janeiro: Alta Books. 2021. P. 44.

56 MAUÉS, Antonio Moreira. *O desenho constitucional da desigualdade*. São Paulo: Tirant Lo Blanch, 2023, p. 30.

57 MALONE, Hugo; NUNES, Dierle. A implementação de nudges em plataformas digitais de resolução de conflitos. *Revista de Processo*, v. 340, p. 385-405, 2023.

58 https://agenciabrasil.ebc.com.br/geral/noticia/2023-06/justica-determina-bloqueio-de-redes-sociais-de-acusadas-de-racismo?amp Acesso em: 23.08.2023; https://www.conjur.com.br/2023-mai-02/direito-digital-moderacao-conteudo-regulacao-desregulacao-ou-autorregulacao-redes Accessed on: 21.08.2023.

59 MENDES, L.S., MATTIUZZO, M. (2019) Discriminação algorítmica: conceito, fundamento legal e tipologia. *Revista de Direito Público*, v.16 (90), pp. 39-64.

60 https://brasil.elpais.com/brasil/2018/05/02/internacional/1525285885_691249.html. Accessed on: 23.08.2023.

61 https://www.cartacapital.com.br/mundo/ha-10-anos-edward-snowden-revelou-um-mundo-sitiado-pela-espionagem-americana/ Accessed on: 21.08.2023.

62 ZANATTA, Rafael Augusto Ferreira. *A proteção coletiva dos dados pessoais no Brasil*: a defesa de direitos entre autoritarismo e democracia. São Paulo: 2022, p. 44.

democratic, eroding their institutions[63], especially - to name examples that are absolutely current and known to all - through the vertiginous increase in the promotion of disinformation campaigns and hate speech. As Kakutani reminds us, "when it comes to spreading fake news and undermining belief in objectivity, technology has proven to be a highly flammable fuel".

Regarding Brazil, especially given the current state of social and political polarization[64], which is exacerbated by the strong stratification of society, Maués assertion that "increasing inequality tends to weaken democracy itself"[65] becomes relevant. In other words, the democratic regime is not sustainable in markedly unequal societies, which are becoming increasingly inflammable and inflamed, especially in the face of the growing digitalization of everyday life and its implications.

Another aspect to emphasize is that, although it can be said that the use of technology to maintain authoritarian regimes is primarily a phenomenon traditionally driven by the state[66], there is a kind of turning point, that is, a totally unprecedented techno-authoritarianism led by major technology companies, acting in a subtle, pervasive and perverse way[67], which makes the situation even worse, as can be seen from the analysis of the documents of the scandals involving Google, Facebook[68] and YouTube[69].

Moreover, beyond just the actions of big companies – despite their decisive participation –, to better illustrate the picture outlined, we only

63 Cf. BRAZIL. Law no. 14.129, of 29 March 2021. Provides for principles, rules and instruments for Digital Government and for increasing public efficiency and amends Law no. 7.166, of 29 August 1983, Law no. 12.527, of 18 November 2011 (Access to Information Law), Law no. 12.682, of 9 July 2012, and Law no. 13.460, of 26 June 2017. Brasília: Presidency of the Republic. Available at: https://www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/lei/l14129.htm. Accessed on: 18 August 2023.

64 https://doi.org/10.1590/1807-0191202228162 Accessed on: 25.08.2023.

65 MAUES, Antonio Moreira. *O desenho constitucional da desigualdade*. São Paulo: Tirant lo Blanch, 2023. p. 30-31.

66 https://www.ipea.gov.br/participacao/images/pdfs/participacao/outras_pesquisas/a%20constituio%20cidad%20e%20a%20institucionalizao%20dos%20espaos%20de%20participao%20social.pdf Acesso em: 23.08.2023; https://www2.camara.leg.br/legin/fed/lei/1960-1969/lei-4862-29-novembro-1965-369015-norma-pl.html Accessed on: 23.08.2023.

67 MOROZOV, Evgeny. *Big Tech*: a ascensão dos dados e a morte da política. Claudio Marcondes (Trad). São Paulo:Ubu, 2018, p. 43-44.

68 https://www.cnnbrasil.com.br/economia/facebook-papers-veja-o-que-os-documentos-vazados-revelam-ate-agora/ Accessed on: 23.08.2023.

69 https://mittechreview.com.br/odiou-esse-video-o-algoritmo-do-youtube-pode-empurrar-voce-para-outro-igual/ Acesso em: 23.08.2023.

have to look at the phenomenon of hate speech in individual and collective terms, the exponential increase in disinformation, as well as attacks in general on democratic institutions[70], which occur on a global scale (in the case of Brazil, there are also demonstrations for military intervention) that, for the most part, arise and are expressed within the population, although often directly or indirectly emulated by an information design based on algorithms[71].

For a better understanding, the concept of disinformation (especially what has come to be called fake news) refers to the deliberate dissemination of false, deceptive or inaccurate information, with the aim of misleading and manipulating opinions and elections[72], creating confusion and even stigmatizing and harming population groups, given that minority rights become more fragile on social media[73].

As for hate speech, it can be generally defined as verbal violence expressions that convey and express hatred, contempt or intolerance towards individuals or certain groups, especially historically vulnerable ones[74]. Regarding the linguistic vulnerability inherent in expressions of hatred, Butler explains that words hurt, potentially causing similar effects to physical pain, reason why it can be identified a metaphorical connection between physical and linguistic vulnerability[75]. Furthermore, at this point it is noticeable that there is no clear boundary between the on and offline worlds[76].

Considering all of this, it is important to emphasize that this is not just a matter of design, as social media platforms, due to their impact on

70 https://www.bbc.com/portuguese/articles/cye7egj6y1no Accessed on 24.08.2023.

71 NOBLE, Safiya Umoja. *Algoritmos da opressão*: como o Google fomenta e lucra com o racismo. Felipe Damorim (trad). Santo André: Rua do sabão. 2021, p. 159; FISCHER, Max. *A máquina do caos*: como as redes sociais reprogramaram nossa mente e nosso mundo. Erico Assis(trad). São Paulo: Todavia, 2023, p. 242.

72 https://itsrio.org/pt/artigos/devemos-banir-a-inteligencia-artificial-nas-eleicoes/?utm_campaign=thinktech_52&utm_medium=email&utm_source=RD+Station Accessed on: 24.08.2023.

73 FISCHER, Max. *A máquina do caos*: como as redes sociais reprogramaram nossa mente e nosso mundo. Erico Assis(trad). São Paulo: Todavia, 2023, p. 117.

74 Towards a conceptualisation of hypervulnerability: https://normas.mercosur.int/simfiles/normativas/85763_RES_011-2021_PT_Protecao%20Consumidor%20Hipervulneravel.pdf Accessed on: 23.08.2023.

75 BUTLER, Judith. Discurso de ódio: uma politica do performativo. Roberta Fabbri Viscardi (Trad). São Paulo: Unesp. 2021, p. 16-17.

76 HUMMEL, Patrik; BRAUN, Matthias; TRETTER, Max et al. Data sovereignty: A review. *Big Data & Society*. V. 9, n. 1, p. 1-17, 2021. https://doi.org/10.1177/2053951720982012. Accessed on: 30.11.2023.

reality through the use of algorithms and the high speed of information sharing, focusing exclusively on engagement and maintaining attention in the digital age, has exorbitantly amplified the reach of disinformation and hate speech, increasingly contributing to hindering or preventing the average citizen discernment of the information conveyed[77] and, therefore, generating instability, insecurity, polarization, compulsion, and violence[78].

Turning our eyes briefly to what is happening internationally, we cannot fail to mention that the Supreme Court of the United States has not shied away from discussing the civil liability of digital platforms either. On May 18, 2023, two decisions were published (*Reynaldo Gonzalez et al. v. Google LLC and Twitter, Inc. v. Taamneh et al.*), which, based on the facts alleged by the plaintiffs, determined the impossibility of holding digital platform providers responsible for the use of algorithms to distribute content to users, on the ground that this measure belongs to the business model proposed by such providers. In these cases, however, the issue was not whether the providers were responsible for the actions of their users, but rather for their own actions[79].

At European level, the Digital Services Act[80] is taking its first steps. On April 25, 2023 it was established which are the Very Large Online Platforms (Vlops) and the Very Large Online Search Engines (Vloses), further defining the scope of its application[81]. Still in the European context, just to illustrate the point, the Irish Data Protection Authority recently fined Meta (owner of Facebook, Instagram, and WhatsApp), on the basis of the European General Data Protection Regulation (GDPR), 1.2 billion euros (around R$6.4 billion at the current price) for sharing European users' data with the United States.

77 https://www.forbes.com/sites/daviatemin/2023/05/26/the-nobel-prize-takes-aim-against-disinformation-lies-and-fakes/?sh=635eefb822d4 Accessed on: 13.08.2023.

78 https://www.peacetechlab.org/hate-speech Accessed on: 21.07.2023; https://www.terra.com.br/noticias/brasil/plataformas-digitais-fazem-campanha-contra-pl-das-fake-news,806cb4993c243f19be4a27fda6801121d3ombqto.html Accessed on: 23.08.2023.

79 To list a few emblematic cases: the US presidential election case (2016); the Cambridge Analytica case (2018); the case of the lynching of innocent people in India (2018); the Brazilian presidential election case (2018); the COVID-19 pandemic/INFODEMIA case (2020-present).

80 https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_pt Accessed on: 02.05.2023.

81 https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2413 Accessed on: 12.07.2023.

Returning to Brazil, without neglecting references to other experiences, it is essential to mention that, having failed to approving in time to be applied in the 2022 electoral process, the debate on the so-called Fake News Bill, which is currently before the National Congress, reignited after the brutal attacks on democratic institutions in Brasilia, DF, on 8 January, as well as the tragic wave of violence in schools across Brazil in April 2023[82], especially given the inertia of platform providers in removing content posted by users that aimed to promote or encourage acts of violence. It is worth noting that, with the issuance of Ordinance No. 351 of April 12, 2023 by the Ministry of Justice and Public Security, measures were already taken to prevent the online dissemination of blatantly illegal content, aiming to combat content posted on social media platforms that is intended to promote or incite violence in schools.

Also in this context, it should be noted that, as the Brazilian Bill on Internet Freedom, Responsibility and Transparency (PL 2630 - Fake News Bill) progressed, various versions of it have been discussed, and in late March 2023, the federal government sent its own version to the Chamber of Deputies, which began to be unofficially circulated in mid-April. Since then, other versions of the bill have been drafted by Congressman Orlando Silva (PCdoB), the bill's rapporteur in the Chamber of Deputies, focusing on the creation of a supervisory body to enforce the law, which has been the target of intense campaign of resistance, opposition, and sabotage by the tech giants. [83]

Another aspect to consider is that PL 2630, currently under consideration in the Brazilian parliament, among other things, defines that application providers have an obligation to take care of published content and must act diligently to prevent or reduce criminal practices on their services, combating publications that incite offences such as hate crimes, suicide,

82 It's worth pointing out that "*the first known attack on schools in Brazil took place 21 years ago and since then there have been another 24 similar cases. In total, there have been 137 victims and 45 people have died. The data was compiled by the Sou da Paz Institute. In relation to the period of the attacks, what the institute shows is an increase in occurrences from 2019 onwards. Between 2002 and 2019, seven attacks were recorded and in the last four years, from 2019 to this year, the number has more than doubled to 17. In the first four months of 2023 alone, there were six cases, the same number recorded in the whole of last year.*" https://soudapaz.org/noticias/agencia-brasil-brasil-teve-24-ataques-a-escolas-mais-da-metade-nos-ultimos-4-anos/ Accessed on: 21.08.2023.

83 https://www1.folha.uol.com.br/poder/2023/05/big-techs-fazem-acao-suja-contra-pl-das-fake-news-diz-relator.shtml Accessed on: 31.07.2023.

crimes against children and adolescents and coups attempting. They must also provide mechanisms that make it easier for users to report illegal content and follow transparency rules, submitting to external audits and preventing and mitigating the risks of its algorithms being used to disseminate illegal content that violates freedom of expression, information and the press and media pluralism, or that undermines the Brazilian electoral process. PL 2630 also deals with the possibilities of liability for damage caused by advertising on platforms or for failure to fulfil obligations to combat such content. Finally, it provides for punishments and fines of up to R$1 million per hour if they fail to comply with court decisions to immediately remove illegal content, which can be tripled if this content has been spread through platform advertising[84].

In this regard, it is more than reasonable to recognize the exacerbated concentration of informational[85], economic and technological power and political influence in the hands of giant technology corporations. It is known that these corporations concentrate, process, and sell personal and non-personal data, monitoring and manipulating everything and everyone, all the time. What is worse - and that's why appropriate regulatory schemes are so important - is that these corporations are largely immune to control, whether by the state or by organized civil society.

D. Final remarks

It is precisely in view of this framework, which has only been sketched out here, that good algorithmic governance takes on a central role at the moment, so much so that it needs to be realized through public policies, regulatory frameworks, ethical guidelines, audit negotiations, supervision and collaboration between the different stakeholders, as well as through the

84 https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra?codteor=1909983 Accessed on: 24.07.2023.

85 BRAZIL. Decree No. 11,574, of 20 June 2023. Amends Decree No. 10,046, of 9 October 2019, which provides for governance in data sharing within the federal public administration and establishes the Citizen Base Register and the Central Data Governance Committee. Brasília: Presidency of the Republic, 2023. Available at: http://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/decreto/D11574.htm . Accessed on: 19 ago. 2023.

direct involvement of civil society. In doing so, algorithmic governance[86] seeks to ensure that algorithms are monitored and used in a safe, robust, inclusive, ethical, transparent, fair, and responsible manner[87].

Considering the above and what the future holds, it should not be forgotten that Artificial Intelligence applications, including generative ones, despite all the positive advances, pose real risks and challenges for governance, such as, among other factors, lack of transparency, improper data collection, biases, invasion of privacy, impacts on copyright and patent protection, concentration of information power, and serious repercussions on the job market.

For these reasons, it must be ensured that algorithms are understandable and that the decisions they make are explainable, establishing forms of control and accountability for the actors involved in the development, implementation and use of AI[88] applications, in order to prevent and combat issues of algorithmic discrimination (especially those that are not easily identifiable), as well as ensuring, at least to a satisfactory level, people's privacy and data protection.

Furthermore, among many other points that could be mentioned, it is crucially important to prevent algorithms from contributing to perpetuating or widening existing inequalities, especially given the digital exclusion/division issue. To make it promote equal opportunities, just to mention one recognized crucial tool, regular analyses and evaluations must be instituted to monitor the performance and effects of algorithms use, allowing for adjustments and corrections as necessary[89]. In this regard, the use of impact reports in the field of data protection and, more generally, in relation to algorithmic impacts, stands out.

An explosive confluence for the maintenance of the democratic regime is undoubtedly the constellation that unites digital illiteracy and lack of literacy, the digital divide, as well as the lack of effective measures to ensure informational separation, digital sovereignty and cyber security equivalent

86 https://drive.google.com/file/d/1WFJppEqmmR9OuSaBH_qlOlzOQeXHGK_-/view Accessed on: 18.08.2023; https://www.oxfordinsights.com/government-ai-readiness-index-2022 Accessed on: 12.08.2023.

87 https://ethics.org.au/wp-content/uploads/2018/05/The-Ethics-Centre_PRINCIPLES-FOR-GOOD-TECHNOLOGY-29JAN.pdf Accessed on: 18.06.2023.

88 TEIXEIRA, João de Fernandes. *Inteligência artificial*. Coleção como ler filosofia. São Paulo: Paulus, 2014, p. 59-64.

89 O'NEIL, Cathy. *Algoritmos de destruição em massa*: como o big data aumenta a desigualdade e ameaça a democracia. Rafael Abraham(Trad.). Santo André: Rua do sabão, 2020,p. 327-331.

to the constitutional duties assumed by the Brazilian state in its digital version in the face of the disorganized implementation of 5G. In the Brazilian case, considering the above, it does not seem enough to exclusively bet on the implementation of 5G and neglect the structural complexity inherent in the domestic ecosystem, which is now deeply densified due to the algorithmic design of the Big Tech companies.