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Impact of the fourth industrial revolution on access to justice in Brazil

Wpływ czwartej rewolucji przemysłowej na dostęp do wymiaru sprawiedliwości w Brazylii

Abstract

The purpose of this article is to analyze the relationship between the innovations introduced into Brazilian law with Process 4.0 and Artificial Intelligence and access to timely and satisfactory judicial protection. The authors indicate how Artificial Intelligence is regulated and applied by Brazilian courts and the National Council of Justice, and what impact it has on labor courts and workers' rights. A deductive, qualitative method based on bibliographic research was used to develop the article.

Keywords

Access to Justice. Artificial Intelligence, Process 4.0, labor court.

JEL: K31

Streszczenie

Celem artykułu jest analiza relacji pomiędzy innowacjami wprowadzonymi do prawa brazylijskiego wraz z Procesem 4.0 i Sztuczną Inteligencją a dostępem do terminowej i satysfakcjonującej ochrony sądowej. Autorzy wskazują, w jaki sposób sztuczna inteligencja jest uregulowana i stosowana przez brazylijskie sądy i Krajową Radę Sprawiedliwości oraz jaki wpływ wywiera na sądy pracy i prawa pracowników. Do opracowania artykułu wykorzystano metodę dedukcyjną, w ujęciu jakościowym, opartą na badaniach bibliograficznych.

Słowa kluczowe

dostęp do wymiaru sprawiedliwości, sztuczna inteligencja, czwarta rewolucja przemysłowa, sąd pracy.

Introduction

Currently, Brazil and the Brazilian Judiciary are at a crossroads. Brazilian society faces serious problems in the search for effective and satisfactory judicial protection. Due to the great volume of lawsuits, arising both from the demand for pacification of conflicts and

from the broad access to justice, in all its spheres of action, is overloaded.

From the lower courts to the Supreme Court itself, there is today a huge backlog of cases to be judged, making the delivery of judicial protection in a timely manner an impossible mission. The lack of timely access to justice prevents the Brazilian Judiciary from fulfilling

its very important task of social justice, prolonging conflicts in time, which favors non-compliance with laws and contracts, causing even more litigiousness in the search for reparation of damages caused by delay. At the moment, thanks to changes in the law, the Brazilian judiciary is in the vanguard of adopting new technologies and seems to be open to embracing the novelties brought by the Fourth Industrial Revolution.

The article will begin with a critique of access to justice in Brazil, demonstrating the urgent need to implement innovative solutions to overcome obstacles to timely and satisfactory judicial protection. The capabilities of artificial intelligence, the regulations put in place and their use by the courts and the National Council of Justice will be discussed. Opportunities and limitations will also be pointed out, with the aim of avoiding possible difficulties in implementation and use in the judicial process.

Access to justice

Access to justice is a fundamental part of any system of conflict resolution, for without a means of enforcing basic principles such as the fundamental guarantees. Cappelletti makes clear its importance in the modern rule of law: "Access to justice can therefore be seen as the fundamental requirement – the most basic of human rights – of a modern, egalitarian legal system that intends to guarantee and not merely proclaim the rights of all (Cappelletti & Garth, 1988, p. 11–12). The authors of the 1988 Federal Constitution, aware of the grave inequalities in Brazilian society and its sad tendency to create unwritten divisions between those who deserve rights and the alienated "others," whether low-income people, racial or gender minorities, members of underprivileged groups such as quilombolas (descendants of fugitive slaves), residents of poor communities, indigenous peoples, etc., included in Art. 5, XXXV the right to the widest possible guarantee of access to justice, establishing that "the law shall not exclude from the jurisdiction of justice any prejudice or threat to the right."¹ Citizens of disadvantaged groups tend not to understand their rights, and, therefore, have more difficulty in recognizing a problem as a situation for legal action, either because of ignorance of the rights in question or because they are unaware of the possibility of judicial redress (Santos, 1986, p. 21).

However, the promise of state action alone is not enough, if this judicial protection is not provided in a timely manner. The problem of procedural delays directly attacks the very idea of justice and the Judiciary as an institution that resolves conflicts: by perpetuating a conflict in time thanks to inefficiency and procrastination, it also attacks the very constitutional protection of the dignity of the human person, as Mendes defines it well: "Positively, thus, in constitutional law, an orientation that has long been profiled in international conventions on human rights and that some authors already considered implicit in the

idea of effective judicial protection, in the postulate of the dignity of the human person and in the very idea of the rule of law. The indefinite or unlimited duration of the judicial process not only directly affects the idea of effective judicial protection, but also decisively compromises the protection of human dignity (Gonet & Mendes, 2021, p. 810).

Unfortunately, this is the scenario that Brazilian Law finds itself in. According to the count available by the National Council of Justice, the Brazilian Judiciary ended the year 2019 with 78.7 million cases in progress. In view of this litigation explosion, it becomes necessary to develop solutions to handle such volume, in order to ensure the timely performance of the Law for the parties, and protect the citizen from abuse and exploitation.

Therefore, Constitutional Amendment no. 45 of 2004 sought to guarantee the reasonable duration of the process, adding to the Constitution the following wording to Article 5, LXXVIII: "everyone, in the judicial and administrative sphere, is assured a reasonable duration of the process and the means that guarantee the speed of its proceedings." With the recognition of the subjective right to a reasonable length of process, the government in general and the judiciary in particular must adopt measures to achieve this goal. Armed with this duty, present in Article 5, LXXVIII of the Constitution, especially by ensuring "the means that guarantee the expeditiousness of its proceedings", the Government thus begins to explore solutions to the problem, seeking advances in efficiency and productivity in the Fourth Industrial Revolution. Law 11.419 of 2006, which instituted the electronic process, was a major step forward in the use of modern solutions to the problem of judicial slowness and inefficiency. In addition to introducing a revolution in procedural processing, the legislature defined in Article 18 of this law the autonomy of the Judiciary in the pace of implementation and standardization of this technology², and the successful experience served as an example for the incorporation of future upgrades and regulations.

This same prestige for judicial autonomy was present in the new Civil Procedure Code of 2015, which established the competence of the National Council of Justice and the courts to regulate the incorporation of new technologies, and publish acts necessary for such in its art. 196, transcribed below: "It is up to the National Council of Justice and, suppletively, to the courts, to regulate the practice and official communication of procedural acts by electronic means and to ensure the compatibility of the systems, disciplining the progressive incorporation of new technological advances and editing, for this purpose, the acts that are necessary, respecting the fundamental rules of this Code."³ Thus, it is clear that the Judiciary bodies have the autonomy to incorporate new advances, which was essential for the adoption and use of Artificial Intelligence.

Currently, a Brazilian judge decides an average of 2100 cases per year, a much larger volume when

compared to an American judge, who is said to be overloaded when acting in 500 to 600 cases per year⁴, or a Portuguese judge, who acts in 120 to 144 cases per year⁵; This efficiency is the result of the constitutional search for a reasonable duration of the process and the use of technological advances by the Judiciary. However, as the present gigantic collection of cases in the Brazilian Judiciary makes evident, there is still an abyss for a timely and satisfactory judicial protection, and it is exactly this logistical vacuum that Artificial Intelligence seeks to fill, and its nature, use and regulation should be evaluated with due care, which will be done in the next chapter.

Artificial intelligence, Big Data and the 4.0 Process

Innovations such as the Internet, Big Data and Cloud Computing allow the emergence of a revolutionary new technology, as Schwab well defines it: "I believe that today we are at the beginning of a fourth industrial revolution. It began at the turn of the century and is based on the digital revolution. It is characterized by a more ubiquitous and mobile Internet, by smaller and more powerful sensors that have become cheaper, and by artificial intelligence and machine learning" (Schwab, 2016, p. 19).

Artificial Intelligence (AI) is thus a collection of complex algorithms that seek to mimic the decision-making capabilities of humans, combining currently available processing capabilities with the intrinsic decisiveness of a rational being. Thanks to artificial intelligence, many entities are making a profit, because without automated decision-making, human intervention would still be necessary and, due to the trillions of commands that are indispensable every minute, would make it impossible for individuals and companies to capture, interpret and take action in time to be useful. Speed of decision-making is central to the Big Data phenomenon. The Wicked Witch of the West, Big Data is precisely the intersection of the gigantic amount of data generated, captured and transmitted over the internet and the ability to store, analyse and make decisions based on this information made available by artificial intelligence. Big Data is essential to understanding both the phenomenon of the fourth industrial revolution, but also to reviewing it from a labour rights perspective. With all these resources at our fingertips, we can see how much information can be captured, processed and sold, privacy and thus the commercialisation of users. The first of the Wizard of Oz's lies has been exposed: the 'free' services of companies such as Google or Facebook conceal the monetisation of users' personal data, in order to better sell their own products or to sell this information to third parties. Unfortunately, it is not only the famous Silicon Valley titans who should be concerned, as they too have found ways to monetise their giant infrastructures by providing them as a service, in several

variants, depending on the needs of their customers, such as Infrastructure as a Service (IaaS); Platform as a Service (PaaS); and Software as a Service (SaaS), among which only the latter is aimed at their end users, such as Google Drive or Hotmail. IaaS or Infrastructure as a Service is aimed at other companies or application developers, making the infrastructure of giant data centres and physical servers available to third parties, with prices available and variable depending on the needs of each application. Uber is a well-known user of this service, with Amazon Web Service (AWS) actually providing the capacity needed to provide the service, especially using this flexible infrastructure during periods of high demand, such as holidays and weekends. PaaS or Platform as a Service, on the other hand, provides standardized tools and platforms for simple application development. Tools such as Amazon or Facebook SDK – SDK stands for "Software Development Kit." – facilitate the development of applications in exchange for a commission, and even share the private data of their end users, often without their knowledge. This is not only the dark side of AI development but also, very important areas to regulate and discuss ethical aspects of its development (Fierens, Rossello, Wauters, 2021, pp. 49–72).

Big Data and Artificial Intelligence are formed by a multitude of algorithms, of varied complexity, in order to imitate human cognition, but in a much more immediate way and on a much larger scale than any human being that has ever existed. This makes the phenomenon of Big Data and Artificial Intelligence widely accessible, whether a company, institution – including a judiciary body – or even individuals, even with little budget or limited technical knowledge. Thus, today we see the widespread and rapid creation of projects for the use of Artificial Intelligence by most Brazilian courts, with the National Council of Justice counting 41 projects for the use of AI in Brazilian courts⁶, including in the capixabas courts⁷. The AI tools are used in several ways by the Judiciary, such as verification of the hypotheses of preliminary dismissal of the claim as enumerated in the items of article 332 of the Code of Civil Procedure; suggestion of draft; grouping by similarity; realization of the judgment of admissibility of appeals; classification of cases by subject matter; treatment of mass claims; on-line attachment; extraction of data from judgments; facial recognition; chatbot; calculation of probability of reversal of decisions; classification of petitions; indication of statute of limitations; standardization of documents; transcription of hearings; automated distribution; and classification of sentences.⁸

Brazil is one of the pioneer countries in the use of artificial intelligence in the world, and vertical courts such as the Federal Supreme Court (STF, the highest body of the Brazilian judiciary, guardian of the Constitution), the Supreme Court of Justice (STJ, the highest body of the ordinary judiciary – civil and criminal) and the Supreme Labor Court (TST, the

highest labor body) are currently using it. They are pioneers, and it is worth noting that, using the tools of artificial intelligence, they significantly help in access to justice, judicial protection, speed of proceedings, precedent setting and standardization of jurisprudence. However, it should be emphasized that artificial intelligence does not make judgments or decisions, acting only on the basis of research and procedural progress filters

The Labor Justice System also has projects to use AI, such as the BEM-TE-VI system, in operation at the Superior Labor Court since February 2020, where it "facilitates the management of cases (procedural class, entry in the offices, evaluation of the dates of interposition of appeals) in the offices".⁹, and the system of the Regional Labor Court of the 1st Region, which seeks: "use deep learning (an advanced subtype of artificial intelligence) to create computational models capable of performing three types of predictive analysis: a) probability of success in conciliation hearings; b) probability of reversal or modification of the sentences handed down by the labor courts; c) probability of reversal or modification of the judgments handed down by the TRT/RJ panels. The predictive model will be implemented through an application programming interface (API), which can be easily incorporated into the PJe system or any other of the Court's interest."¹⁰ With the adoption of the binding precedent system and the legislative determination of the cases that form precedents in Brazil with the Civil Procedural Code of 2015, there is a scenario of greater ease in the identification of cases and, consequently, in the possibility of an AI recognizing and using precedents, such as the Victor system in the Federal Supreme Court, which from the classification performed on the issues of general repercussion, can identify the similar cases and indicate which precedent is best applied in that particular situation (Bonat, Peixoto, 2020, p. 141).

The Bem-te-vi system contributes to speed of proceedings, stability, consistency and legal security. Thanks to data from the system, it is known how many cases related to the topic the court is reviewing are pending, as well as the length of the trial, its stages and how long it takes to wait for a verdict. Artificial intelligence is currently being used in Brazil's Supreme Labor Court (TST). The TST is the final third instance of the Brazilian Labor Court, created by ministers, with jurisdiction throughout the country, responsible for standardizing labor jurisprudence and setting labor precedents. As of 2018. The Supreme Labor Court uses Bem-te-vi, while in the second instance (Regional Labor Courts, of which there are 24 in total) and first instance (Labor Courts, of which there are 1,587 in total), artificial intelligence is not yet used.

However, even with all the perceived opportunities and real potential to change access to justice in Brazil, artificial intelligence today also presents limitations, especially the issue of possible algorithmic biases and the so-called algorithmic black box. This is worth

mentioning, to avoid creating and using systems that reinforce the weaknesses of the justice system instead of strengthening its potential. First, the possibility of the emergence of algorithmic biases is exactly the nature in which algorithms and, subsequently, Artificial Intelligence simplify reality in order to be able to make decisions. With all the infinite possibilities and variables that exist in any possible situation, Artificial Intelligence currently does not have the ability to deal with reality without filters, which are exactly what algorithms are. Like any simplification of reality, the models and algorithms used by programmers and created by Artificial Intelligences themselves (in unsupervised machine learning) select the information to be provided in order to find patterns and predict solutions. However, this leads to the existence of blind spots in the algorithms, reflecting the objectives, priorities and conceptions of the creators, which can permeate the Artificial Intelligences themselves, imbuing them with prejudices and biases present in the databases and in the developers themselves, whether consciously or unconsciously (Nunes, Marques, 2018, pp. 425–426).

To assume an impartiality in algorithms or in the decisions of an Artificial Intelligence, only by the lack of apparent human intervention leaves any system that uses them vulnerable to subjectivity, because it ignores both the possibility of conscious and unconscious biases of programmers as well as the discrimination and exclusion resent in society itself, thus perpetuating historical inequalities. One should also be wary of the problem of the so-called algorithmic black box, defined as the lack of transparency of an artificial intelligence decision, violating the principles of openness, reasoned decision and due process of law. A decision made with the help of this tool, but unable to understand or know the reasoning or logic used by the artificial intelligence, is not a reasoned decision and violates due process of law, as it is an unassailable decision. It may be that instead of supporting timely and satisfactory due process, artificial intelligence will end up limiting it. Access to justice without due process of law is ineffective and empty, as well defined by Dinamarco: This guarantee is not an end in itself. The gradual reduction of the list of extrajudicial conflicts and people deprived of access to justice would be a thing without much social and political significance if there were no guarantee of due legal process, which for one of its possible aspects is a particularized expression of the constitutional principle of legality (Dinamarco, 2009, pp. 360).

The National Council of Justice is not oblivious to these possible problems in the implementation of Artificial Intelligence projects in the Brazilian Judiciary. Using its autonomy to regulate and implement new technologies, it edited in 2020 the resolution No. 332 and the ordinance No. 271, which define the non-discrimination and bias algorithms, transparency and governance in the production and use of Artificial Intelligence in the Judiciary¹¹, in addition to establishing concepts, principles, and the need to

respect fundamental rights. The fact that this resolution was inspired by the European Charter of Ethics on the Use of Artificial Intelligence in Judicial Systems and its environments¹², of December 2018, also demonstrates the international nature of this discussion, being a topic that deserves a holistic and multidisciplinary view, always paying attention to technological advances and experiences abroad.

Conclusion

The Brazilian judicial system today is undergoing a transformation in access to justice. Aware of the serious problems in the search for effective and satisfactory judicial protection in view of the high volume of cases, the Brazilian legislature has given autonomy to the National Council of Justice and the courts to regulate and apply new technologies in the process. The Fourth Industrial Revolution, with its myriad of new technologies in various areas, such as the Internet, Cloud Computing, Big Data, and Artificial Intelligence, is the great promise for tackling the slow pace of proceedings. Today there are major projects for the use of Artificial Intelligence by both the courts and the National Council of Justice, using its capabilities to assist in the exercise of its jurisdictional functions, and

its careful supervision, transparency and regulation ensure that this tool is used correctly. Care must also be taken and the fundamental guarantees present in the Magna Carta must be respected, in addition to avoiding risks inherent to its operation, such as algorithmic biases and the Black box algorithm. The National Council of Justice and the courts must always be aware of the capabilities and limitations of Artificial Intelligence in its application and regulation, because, like any medicine, if administered incorrectly, Artificial Intelligence can turn into a lethal poison for the administration of justice. The goal should be to use AI tools as quickly and widely as possible to perform repetitive work, collect data, analyze it, create reports, justifications. It is also necessary to extend the operation of AI to courts of first and second instance, which should definitely facilitate the work and speed up the judicial process.

Artificial Intelligence is a powerful tool in the fight against procedural delay and inefficiency, and its adoption by the Brazilian Judiciary leaves Brazil with the honor and trepidation inherent to a vanguard position. The advances and achievements with the adoption of new technologies such as the electronic process are undeniable, and Artificial Intelligence promises another great leap in this process.

Przypisy/Notes

¹ Constituição da República Federativa do Brasil. Promulgada em 5 de outubro de 1988.

² BRASIL. Lei 11.419. Promulgada em 19 de dezembro de 2006.

³ BRASIL. Código de Processo Civil..

⁴ J. Bendery, Federal Judges Are Burned Out, Overworked And Wondering Where Congress Is. Huffington Post. Disponível em: <https://www.huffpost.com/entry/judge-federal-courts-vacancies_n_55d77721e4b0a40aa3aaf14b>. Acesso em 28 dezembro 2021.

⁵ J. Lusa. Diário de Notícias. <<https://www.dn.pt/poder/entrevista-juizes-da-relacao-do-porto-sobrecarregados-com-10-a-12-processos-por-mes---presidente-10135859.html>> Access 28.12.2021.

⁶ CONSELHO NACIONAL DE JUSTIÇA. Projetos com Inteligência Artificial no Poder Judiciário. Brasília: CNJ, 2021. <<https://www.cnj.jus.br/justica-4-0-chega-ao-espirito-santo/>>. Access 20.12.2022.

⁷ CONSELHO NACIONAL DE JUSTIÇA. Justiça 4.0 chega ao Espírito Santo. Brasília: CNJ, 2021. <<https://www.cnj.jus.br/justica-4-0-chega-ao-espirito-santo/>>. Access 20.12.2022.

⁸ L.F. SALOMÃO, Inteligência Artificial: Tecnologia aplicada a gestão dos conflitos no âmbito do Poder Judiciário Brasileiro. p. 69. <https://ciapj.fgv.br/sites/ciapj.fgv.br/files/estudos_e_pesquisas_ia_1afase.pdf>. Access 22.12. 2022.

⁹ Ibidem, p. 30.

¹⁰ Ibidem, p. 59.

¹¹ CONSELHO NACIONAL DE JUSTIÇA. Resolução n. 332 de 21 de agosto de 2020: dispõe sobre a ética, a transparência e a governança na produção e no uso de Inteligência Artificial no Poder Judiciário e dá outras providências. Disponível em: <<https://atos.cnj.jus.br/atos/detalhar/3429>>. Access 23.12.2021.

¹² COMISSÃO EUROPEIA PARA A EFICIENCIA DA JUSTIÇA. Carta Europeia de Ética sobre o Uso da Inteligência Artificial em Sistemas Judiciais e seu ambiente. <<https://rm.coe.int/carta-etica-traduzida-para-portugues-revista/168093b7e0>>. Access 20.12.2021.

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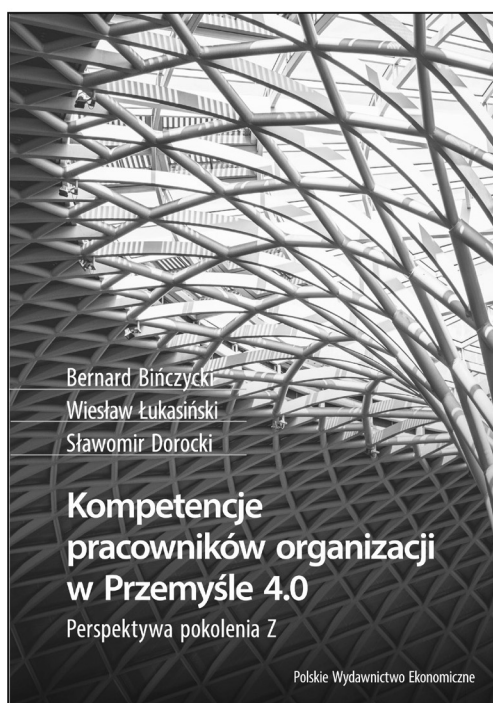
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