

## JUDICIAL PROCESS OF BLOCKCHAIN TECHNOLOGY FOR PEOPLE WITH DUAL DISABILITIES.<sup>1</sup>

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**Abstract:** The present work presents throughout its text the discussion about the legal treatment of people with disabilities and emphasizes the protection of the Law in the face of the double diagnosis. It was observed throughout the project that there are many legislative mechanisms that seek to ensure the human dignity of people with disabilities, however their practical applicability is insufficient and there will still be many mishaps and the material and procedural defense of the person with double disability proves to be just at the beginning. In short, the Statute of Persons with Disabilities is one of the most important normative regulatory instruments of this protection. Relate the tutored difficulty to the reality of technology, especially blockchain, and changes in society and in the population under study. Thus, the methodology used to resolve the issues raised was the use of a bibliographical survey so that, through induction, a logical and true opinion could be reached. In addition, possible alternatives were sought to solve the problem addressed, precisely the lack of protection for people with a dual diagnosis, and its relationship with blockchain technology, with the aim of bringing greater effectiveness to the research in question.

**Keywords:** Blockchain; dual diagnosis; Innovation; Normative gap; New technologies;

## INTRODUCTION

The present work has as the central scope to analyze the effectiveness of protection, in relation to people with dual disabilities and the true application of such measures from the analysis of new technologies, such as Blockchain, and how it impacts this vulnerable population.

The principle of equality goes beyond the Constitutional premise, with a critical eye in order to go beyond the analysis of formal equality, but also encompass the material

analysis of equality, with the challenges faced by people who received the double diagnosis of disability and greater exposure to failures in situations of technological vulnerability.

It promotes the study of thinking about measures that can protect these broader people and evaluate methods that may facilitate their lives through accessibility and inclusion.

Ensuring that your rights are effectively applied, in relation to legal transactions, your effective protection will occur on the Blockchain, proposing solutions so that affirmative action has broad effectiveness in its application.

Researching the referred subject will be bibliographical and documentary research, making the necessary link, with research and bibliographic methodology, with inductive elements in the bibliography and legal system, presenting the barriers and legal reach effectively provided to people with disabilities based on the Statute of the Person with Disabilities, and the General Data Protection Act, and research on the legal framework surrounding the Blockchain.

## BLOCKCHAIN TECHNOLOGY

Blockchain technology is a challenge for society as a whole, it is a renegotiation of the Social Contract in the sense taught by Rosseau, only much more challenging, however it has the possibility of protecting vulnerable populations such as those with double or multiple disabilities, in this sense Pinto (2020, p. 6):

“Blockchain represents the second era of the internet and is inserted in the context of the fourth industrial revolution (...) it is a technology for storing data in a distributed network, and its main characteristics are the transparency and immutability of the data registered, which can provide greater efficient use of that data. (PINTO, 2020, p. 6):

And go on, “blockchain is a distributed network, with emphasis on the reliability and immutability of the contents registered in it”. (Pinto 2020, p. 7), in this very important sense is the concept that “Blockchain is a distributed ledger that represents a consensus of each operation that has already occurred on the network” (TAPSCOTT 2016, p. 37), right there Its legal security lies in the fact that it is registered as a business book, a book for issuing Duplicatas, for example.

Legal security is, for example, in the use of digital currencies, “Although Blockchain is commonly referred to as “the technology behind Bitcoin (...) a network that times transactions by placing them in a continuous chain in the ‘hash’, forming a record that cannot be changed without redo all the work” (CAMPOS 2020, p. 20-21), so the “custom” itself, which is the source of Business or Banking Law, where legal certainty is notoriously highlighted, Blockchain was used as a “means” of this technology.

This way, a window of opportunity opens up, with this technology, in this sense LYRA highlights “blockchain technology allows the creation of decentralized systems, currencies, self-executing digital contracts and assets that can be controlled via the internet (smartasset)” (LYRA 2019, p. 38).

But unlike a “physical book”, this technology is not visible to the blockchain

“requires a set of rules for sending and receiving it, a network governance structure, which we call protocol (...) the public key is obtained from the private key, through a mathematical function (...) chain of blocks of transaction records validated by the consensus protocol and incorporated into all ledgers in a network”. (COSTA 2020, p. 57-58)

With regard to the so-called UHDRE public Blockchain, it highlights:

Public blockchain, if enough participants decide to act against the rules, there is no

stopping them. That is, there is always the possibility, albeit theoretical, of a 50%+1 (fifty percent plus one) attack, which means that a group that controls most of the network’s mining energy (or points) could take over control of the entire network. Although this seems extremely unlikely - especially given the energy cost that needs to be spent, in the case of consensus - proof-of-work -, it is clear that the main mining pools currently control more than 50% of all mining power. computing the Bitcoin network, the which makes the threat of a 50%+1 attack even more real. (UHDRE, 2021, 42).

This insecurity does not remain, as the legal nature of the blockchain was incorporated into the Law, as “these growing chains of non-retroactive blocks, of immutable and distributed records, are the blockchain”. (LYRA 2019, p. 27), and continues:

Blockchain also allows the development of new governance systems with participatory decision-making and decentralized and/or autonomous organizations, which can operate through a computer network without any human intervention. (LYRA, 2019, p. 38)

With regard to security, Costa continues:

There is an algorithm capable of solving the Byzantine generals problem, as long as 2/3 (two thirds) of the network participants are loyal (trustworthy). Based on different assumptions, it has already been proven that there are solutions that guarantee that the consensus obtained in the network through a voting process is true if, at most, 1/3 of the network nodes are unreliable (COSTA, 2020, p. 54).

Therefore, there is a problem of misunderstanding the technology, especially the blockchain, but contrario sensu, this technology brings advantages to vulnerable populations, in the case of the object of this study, people with double or multiple disabilities, bringing greater social and legal security.

## **THE CHARACTERIZATION OF DOUBLE DISABILITIES IN THE LEGAL ORDER AND ITS RELEVANCE IN BLOCKCHAIN TECHNOLOGY**

The Federal Constitution is the highest law in Brazil, as it occupies the highest position in the hierarchy of rules and principles of the country's legal system. Therefore, it is interesting to propose a different look at the Citizen's Constitution of 1988, which is considered an achievement that enshrines democracy and, therefore, is full of fundamental rights and guarantees. Paying attention to the fact that the equality and dignity of the human person are one of these fundamental rights, it is important to address the concept of Bulos (2012. p. 522) of these, emphasizing their relevance:

Fundamental rights are the set of norms, principles, prerogatives, duties and institutes, inherent to popular sovereignty, which guarantee peaceful, dignified, free and equal coexistence, regardless of creed, race, origin, color, economic condition or social status. Without fundamental rights, man does not live, does not coexist, and, in some cases, does not survive. (BULOS, 2012 p. 522)

The so-called double disability, according to the Special Education Secretariat of the Ministry of Education, as being the "association, in the same individual, of two or more primary disabilities (mental/visual/hearing/physical) with compromises that lead to delays in global development and adaptive" (BRASIL, 1994), making the study in the field of early childhood education even more important, in the same Ministry, as being "the set of two or more associated deficiencies, of physical, sensorial, mental, emotional or social behavior" (BRAZIL, 2006).

The internet is an important tool for integrating the population with Disabilities, it is thought that with two or more disabilities,

even more important access to technologies, especially computer network technologies, the object of this study will be the relationship between People with Dual Disabilities and Blockchain (UHDRE, 2021)

Decentralization of the network architecture, in order to have several computers connected in a distributed way around the globe. Also, the data record is distributed, so that each of these computers holds the updated accounting of the operations carried out. (It is as if all the computers are called nodes, nodes or ledger) of the network and that each one of them would almost simultaneously update the record of the received information". This decentralized network and ledger structure is what we call Distributed Ledger Technology (DLT) = blockchain. The connection between the blocks is initiated through the so-called hash of the previous block, which makes the connection between it and the previous block, and at the end it will have a unique hash of its own, which will simultaneously initiate the next block (UHDRE, 2021, p. 36).

Disability is often not a limitation to technological access, one of the objectives of this work will be to map which disability is an obstacle or eventually even a stimulus, Bitcoin stands out as it is a legal business (in addition to business, banking), usually represented by a contract of online membership that has the blockchain as an environment

In continuing this development, not having access to the blockchain (and the other products and services it contains), can mean social segregation similar to disability or double disability.

It must also be clarified that, depending on the programming of the Bitcoin protocol, only 21 million units of bitcoins will be created (an issue that is expected to end in 2040). After that, the validators will only be remunerated with transactional fees, which obviously tend to be more expensive (UHDRE, 2021, p. 41).

Finally, as an additional incentive that confirms the importance of the project, it was observed that it is a pioneer in addressing the barriers faced by people with double disabilities, as well as questioning the protection of the law towards these people. It was also verified that the existing legislations are not enough to protect and guarantee the equality preached by the Magna Carta., leaving these subjects on the margins of society and doubly helpless. In short, the aim is to find solutions to end the problems raised in order to promote a fairer society based on equity.

For this study, use will be made of the Federal Constitution of 1988, the Statute of Persons with Disabilities, the Inter-American Convention for the Elimination of All Forms of Discrimination against Persons with Disabilities (1999), the Organic Law of Assistance Social number 8.742/1993 articles and editorials, and Federal, State and Municipal Norms, in addition to doctrines and works such as: Inclusion of people with disabilities and/or specific needs: advances and challenges, by Margareth Diniz; Reparatory Measures in the Inter-American Court of Human Rights, by Adriana Souza de Siqueira; Social Rights: Legal Theory of Social Rights as Fundamental Rights, by Jorge Reis Novais; Disabled citizens: their place in the Constitution of the Republic, by António de Araujo; Legal Guide for the Handicapped, by Fernandes da Eira; Rights of the Human Person, organized by José M. Alexandrino; Right to difference and Latin American Constitutionalism, organized by Antonio Carlos Wolkmer, Frederico Antonio Lima de Oliveira and Jeferson Antonio Fernandes Barcelar.

In order to question the effectiveness of the inclusion of the person with a disability, the main basis of this work is the Statute of the Person with Disability, together with the

Federal Constitution of 1988 and the General Data Protection Law, in addition to the legislation applicable to New Technologies such as the Blockchain, taking into account the aforementioned works. In addition, articles and research related to and close to the topic in question will be used for a better view and conclusion.

## **PEOPLE WITH DOUBLE DISABILITIES AND BLOCKCHAIN TECHNOLOGY**

The present work intended to show, mainly, the difficulties faced by people with dual disabilities, since they present double vulnerability, that is, they are doubly helpless in terms of their protections and protection of their rights.

To demonstrate the relevance of the Study, it is highlighted that the Republic of Georgia, in Eastern Europe, it promoted the extinction of real estate registration in that Nation.

Blockchain-based land titling system in the Republic of Georgia, a pilot project developed in collaboration with BitfuryGroup, the National Public Registry Agency (NAPR) and Blockchain Trust Accelerator. By using Blockchain technology, the Georgia government intends to be a leader in governance and security and restore public trust in government institutions and agencies. In addition, NAPR created NAPReg, a digitized database that included cadastral information such as land titles and satellite photos. Thanks to this database, details of land ownership information such as name, address and cadastral code can be easily found. In fact, the World Bank has recognized the Republic of Georgia for the quality of its property registration service. According to the World Bank report, "Doing Business 2016", the Republic of Georgia ranked third out of 189 countries for ease of registering property. The report showed that it took just one day to register a property in Georgia and the cost of



registration represented just 0.1 percent of the total property value. The Republic of Georgia's land registration efficiency far exceeds that of developed countries such as the United States and Germany, where it took an average of 15.2 and 39 days, respectively, to register property.(SHANG; PRICE, 2018, p. 1-7).

Still in Comparative Law, it must be noted that the North American State (Member) of Vermont, already deals with the validity, effectiveness and effectiveness of the data inserted in Blockchain, and the legal application has already started

[...] with regard to judicial procedures, recognizes The blockchain qualification in relation to authentication, admissibility and presumptions, expressing that a digital record, electronically inscribed in a block chain, is automatically authenticated if it is accompanied by a written declaration of a qualified person, under oath, which indicates the qualification of the person to carry out the certification, with some requirements such as the closing time and time of entry, the registration on the blockchain, and that it is maintained on the network in a manner regular, providing authenticity (COVARRUBIAS, 2019, p. 1).

In this sense, COVARUBIAS (2019) highlights the following:

It is decided, if Bob has a house and wants to resell it to Alice, he has to go through several procedures to transfer the property, deal with registry offices, notaries and, possibly, lawyers. From the above it is concluded that, in order to have a system based on proof of existence or ownership, the solution is not merely a record with blockchain [...] (COVARRUBIAS, 2019, p. 1).

Furthermore, in an accelerated moment of innovations, mainly technological ones in the view of Josef Schumpeter (2017)

“Producing other things, or the same things with a different method, means combining different materials and forces. Insofar as

the “new combinations” may in time grow out of the old ones by continual adjustment through small steps, there is certainly change, possibly growth, but not a new phenomenon or development in our sense. To the extent that this is not the case, and to the extent that new combinations appear discontinuously, then the phenomenon that characterizes development appears. (...) development, in the sense we give it, is then defined by the realization of new combinations (SCHUMPETER, 2017, p. 57)

In this sense, Schumpeter highlights innovation, in the technological case, as transforming society, and it is in this sense that it makes the old way of acting completely obsolete, in this case it was detected that this may be happening with notary and registrar offices in Brazil, but it is still not possible to verify that this will actually happen.

The national legal system already allows, as seen in provision 38/2021 Internal Affairs of Justice - Court of Justice - RS:

PROVISION No. 038/2021 - CGJ

File No. 8.2021.0010/001575-8

Notarial and Registry Matter

Agenda 2030 - ONS 16.6 - Develop effective, accountable and transparent institutions at all levels

Regulates the drawing up of public deeds for the exchange of real estate with a counterpart of tokens/cryptoactives and the respective real estate registration by the notarial and Registry Services of Rio Grande do Sul.

Art. 1 - Notary Publics will only draw up public deeds for the exchange of real estate in exchange for tokens/crypto assets subject to the following cumulative conditions:

I - Declaration by the parties that they recognize the economic content of the tokens/crypto-assets object of the exchange, specifying their value in the title;

II - Declaration by the parties that the content of the tokens/crypto assets involved in the exchange does not represent rights over the property exchanged, either at the

time of the exchange or shortly thereafter, as a conclusion of the legal transaction represented in the act;

IV - That the value declared for the tokens/ cryptoassets keep reasonable economic equivalence in relation to the valuation of the exchanged property;

IV - that the tokens/cryptoassets involved in the exchange do not have a name or address (link) of registration in blockchain that suggest that their content refers to the property rights over the property exchanged (Corregedoria-Geral da Justiça - Court of Justice - RS, 2021, <https://irirgs.org.br/wp-content/uploads/2021/11/Provimento-38.pdf> accessed on 03/07/2023 at 15:40).

In addition, it is necessary to understand that the exposed difficulties are well below what we can perceive and understand, because for that it would be necessary to carry out field research, to have access to the reality of people in this situation and their families, in view of the complexity of the situation. construction of the individual, his rights, his dual disability, and technological innovations such as blockchain that are yet to come.

The blockchain may also extinguish the function of the notary, currently appointed either by public tender or acquired right if before the 1988 Constitution, and which currently byIt is an ex officio duty to ensure the protection of double disabilities, it is questioned whether the world of blockchain, within a discourse of freedom, will have the same protection

Notário is a legal advisor to the parties, legally advising them on the regulations relevant to the acts they intend to celebrate, as well as on the legal consequences of such acts, in order to guarantee a priori legal certainty and security, ensuring the creation of legal acts perfect, preventing litigation (BRANDELLI, 2011, p. 1).

Therefore, due to the information collected in this work, the advantage and legal certainty

of applying blockchain technology for people with double disabilities is proven.

## CONCLUSIONS

Regarding Blockchain Technology Protection for People with Dual Disabilities, it is concluded:

Vulnerable populations, especially those with double disabilities, in addition to general difficulties, have challenges regarding technology, especially blockchain, the object of study was to analyze the relationship between Blockchain Technology and populations with Double or even Multiple Disabilities.

Blockchain Technology promises to be a renegotiation of the Social Contract, in the sense of Rosseau, at a very negative and distant first moment for people in vulnerability, as one more of the social ills that already affect this population, this was one of the starting points of the present search.

However, situated in the so-called fourth Industrial Revolution, the research demonstrated that Blockchain is a ledger, in the classic sense given by business activity, which even prioritizes legal certainty, with the advantage that it can prevent fraud in its operation.

This technology is even the same used in transactions with Bitcoin, which until now has not presented any type of defect in the legal transaction, being customarily used in various cryptocurrencies, which demonstrates digital security and, to a certain extent, economic stability and legal predictability in the transactions. private relationships.

Therefore, an eventual legal uncertainty is not only unlikely, the result of a lack of understanding of technology, but also has the effect of greater stability in legal activities, with some examples already in everyday life, considering that the so-called public and private blockchains have dealt with the subject in practice.

Considering that disability is protected by Fundamental Rights, the person with more than one disability, such as the mental and physical, for example, is in a situation of greater vulnerability, therefore it is necessary to analyze the real possibilities of protection.

The research found that in the Republic of Georgia, in Eastern Europe, this country which is one of the most technologically advanced in the world, promoted the extinction of property registration.

The North American Member State of Vermont has also included Blockchain in its legal business, highlighting its effectiveness, existence and validity, demonstrating a trend towards this technology.

Innovation, in the technological case, as a transformer of society, and it is in this sense that it makes the old way of acting totally obsolete, in this case it was detected that this may be happening with notary and registrar offices in Brazil, but not yet it can be seen that this will indeed happen.

The Court of Justice of the State of Rio Grande do Sul, through Provision 28/2021, already deals with Tokens and Cryptoassets, demonstrating that there is already Blockchain Technology, in the national Legal Order, demonstrating its development.

Blockchain technology allows for greater security of acts, due to the worldwide computer network, and greater effectiveness of the blockchain book, even allowing verification of the veracity of its acts, being even more traceable than the traditional way.

This increases the perception of constitutional equality and legal certainty, as already happens in the Sovereign State of Georgia (Eastern Europe), or even in our country with TJRS authorization for blockchain application.

It appears that due to its nature as a “network book”, technology can replace the current registry systems in Brazil, if there

is political will, in addition to convenience and opportunity, and it is important, given this possibility, in the abstract to analyze the impact on populations with double handicap.



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