Revista do Direito

https://online.unisc.br/seer/index.php/direito/index
ISSN on-line: 1982 - 9957
DOI: 10.17058/rdunisc.vi76.20442

SMART REGULATION AS A SAFEGUARD OF FUNDAMENTAL RIGHTS

REGULAÇÃO INTELIGENTE COMO SALVAGUARDA DE DIREITOS FUNDAMENTAIS

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Recebido em: 03/07/2025
Aceito em: 08/08/2025

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Abstract: This article examines the concept of regulation and its multiple interpretations, highlighting the emergence of smart regulation, which aims to reduce hyperregulation and implement principles of good regulatory practice. The study hypothesizes that, in regulatory contexts, official discretion often prevails, frequently distant from objective parameters, a condition comparable to the operation of large technology companies. In a democratic State, regulation should be impersonal, equitable, and derived from collective construction, articulated through networks and aligned with higher-ranking principles and norms. Furthermore, sustainable and inclusive digital technologies facilitate new forms of interaction between the State and citizens, enabling the co-creation of regulatory arrangements — termed cryptoregulation — based on blockchain and crowdsourcing models. These arrangements support economic, social, cultural, and environmental development and align with emerging standards of collective intelligence.

Keywords: Cryptoregulation. Fundamental Rights. Smart regulation.

Resumo: Este artigo examina o conceito de regulação e suas múltiplas interpretações, destacando o surgimento da regulação inteligente, que busca reduzir a hiperregulação e efetivar princípios de boa regulação. A hipótese sugere que, em contextos regulatórios, prevalece a discricionariedade oficial, frequentemente distante de parâmetros objetivos, situação comparável ao funcionamento de grandes empresas de tecnologia. Tem-se que em um Estado democrático, a regulação deve ser impessoal, equitativa e derivada de construção coletiva, articulada por redes e alinhada a princípios e normas de hierarquia superior. Além disso, tecnologias digitais sustentáveis e inclusivas permitem novas formas de interação entre Estado e cidadãos, viabilizando a co-criação de arranjos regulatórios — denominada cripto-regulação — baseada em *blockchain* e modelos de *crowdsourcing*. Esses arranjos promovem o desenvolvimento econômico, social, cultural e ambiental, em consonância com padrões emergentes de inteligência coletiva.

Palavras-chave: Cripto-regulação. Direitos fundamentais. Regulação inteligente.

1. INTRODUCTORY HYPOTHESIS

We have commented in another work on the subject (Antik, 2023, p. 1216) that the term regulation does not always mean the same thing, and it could even be argued that its uncertain semantic borders allow us to speak of various concepts of regulation, and even of various kinds, whether the regulation itself is more or less general, or more or less intense: standardizing is

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not the same as standardizing or regulating. These diverse aspects of the meaning could imply different roles for the term and, in particular, different ways of giving meaning to its intended vocation of serving as the basis for official measures (Sacristán, 2015, p. 78).

Thus, regulation will no longer be limited to the sustained and concentrated control exercised by the state body or entity over activities considered valuable by a part of the community, where coercion seems to divide some against others, but, as coordination, it will include the ordering (and the control of that ordering) with a view to the good of the entire community in a kind of exercise that achieves the good of all. On the formal level, this formidable organizer finds support or sustenance in, at least, some type of linguistic explanation –textual, gestural or behavioral– to become knowable and to be able to be an incentive, a mold or an object of evaluation, depending on the point of view adopted (Sacristán, 2015, p. 83).

Now, when we talk about smart regulation, we are referring to something that goes beyond the traditional concept of regulation —in all its nuances—, since "it is not about regulating more, but rather doing so in a more intelligent way"[2], which means working to reduce the phenomenon of hyperregulation and to make effective the principle of good regulation and the subprinciples that are reflected, for example, in article 129 of Law 39/2015 of Spanish administrative procedure.

En el contexto trazado, nos permitimos esbozar la siguiente hipótesis:

In the context outlined, we allow ourselves to outline the following hypothesis:

In regulatory matters, official discretion prevails[3], lacking in measurability and far removed from parameters of objectivity. The same applies to mega-tech companies that operate like state entities.

[2] For more information, please visit the website of the Foro de Regulación inteligente español, https://regulacioninteligente.org. The concept of smart regulation is based on four principles: 1. Simplification: of the relationship between citizens and the public administration, reducing bureaucracy; 2. Legal certainty: it provides a stable legal framework, with clear rules of the game for all; 3. Coherence: it harmonizes the rights of users, consumers, public authorities and companies; 4. Utility: it provides real added value to the sector it regulates.

[3] See the distinction made between the field of discretionary or interpretative power. The interpreter must always adhere to the principles, rules and guidelines, regardless of his subjectivity. On the contrary, discretionary power –without prejudice to the principles and rules– does admit a halo of freedom, constrained by principles and other rules, and supported by the subjectivity of the law-applier (Balbín, 2020, p. 361).

In a democratic State, it is a requirement that regulation be impersonal, equitable and derived from a collective construction, articulated through networks and respond to higher-ranking principles and norms.

Sustainable and inclusive digital technologies tend to promote new forms of global interaction between the State and citizens and allow the co-creation of regulatory arrangements through what we will call cryptoregulation.

These, derived from a process agreed upon using blockchain and the incorporation of crowdsourcing models, promote the economic, social, cultural and environmental development of the community and respond to emerging standards of collective intelligence.

2. DEVELOPMENT OF THE HYPOTHESIS

The idea is to innovate the ideology of unilateral regulation that governs today[4], despite the alleged respect for fundamental rights and condescension to citizen participation through various techniques.

Also, to reconfigure the concept of public interest, so that it abandons its role as legitimizer of unilateral decisions lacking motivation, based on one-dimensional positioning or the whim of officials. This concept, challenged and mutated into collective intelligence, provides a democratic construction and moves away from the idea of citizen subordination. The public interest is not objective, not neutral and partial in favor of the State.

Therefore, power should not be placed over people but should be of people.

With the development of the hypothesis, it is intended to formulate –at least incipiently– a different theoretical framework on regulation, which questions from a new perspective, on the one hand, the power structures and, on the other, the thought that maintains the State as the main and exclusive actor of regulation.

The paradigm shift implies that instead of considering that the State's activity enjoys a presumption of legitimacy, the State must allow itself to doubt, objectifying its activity.

[4] Balbín (2020) has outlined some of this in the book cited above.

This implies abandoning State-centric theories to put the person at the center of the protection of State activity.

Even the language must vary, since the reference to administered ideologically implies a State that considers the person as a good or an object susceptible to administration.

The truth is that the concept of public interest opens the door –in its practical application– to conduct that is very naturalized and that systematically harms the fundamental rights of people.

Now, to abandon the metaphor of the system of balance of powers, let us imagine a different way of legal construction to make all kinds of decisions that require neutrality and serve to create public value. That allow us to build trust, reduce bureaucratic costs and accelerate results.

So, how do we travel the path from public interest to collective intelligence?[5]

As a first question, it is worth putting into crisis some allegories about how citizens make the decision for the election of their representatives, who invest themselves with authority to exercise it for the achievement of the public interest[6].

What makes a person choose, among several possibilities, who will be their representatives?

The answer that will surely come to the reader's mind will be that the choice will be the product of their free will.

That is, after meditating introspectively, the person weighs all the electoral proposals and "chooses" the one that they understand will best represent their interests.

If the representatives do not meet the expectations and the magical solutions promised in the heat of the campaign, community disappointment appears. It is a wheel that keeps turning and produces cycles of euphoria and disappointment and more and more cracks at a global level.

It is proven that today we can use brain scans to predict the desires and decisions of a person long before they are aware of them. Our belief in free will

[5] As conceptualized -as one of the five pillars of smart innovation- in the Ibero-American Charter on Innovation in Public Management, Andorra, October 8, 2020.
[6] Let us allow this simplification to explain the theory of the representation of the sovereign people.

is the result of faulty logic. The person believes that they "choose" their representative; however, they "want" to choose them. That is, they do not "choose", but rather they feel that they must do so and act accordingly (Harari, 2018, p. 314).

Doubting free will is not just a philosophical exercise. It has practical implications. If organisms really do lack free will, it implies that we can manipulate and even control their desires using drugs, genetic engineering, and direct stimulation of the brain (Harari, 2018, p. 316)[7]. Due to obvious ethical restrictions, researchers only implant electrodes into human brains under special circumstances and through noninvasive methods[8].

Science undermines not only the liberal belief in free will, but also the belief in individualism. There is no single self when it comes to making decisions. Some experiments reveal at least two selves: the experiencing self and the narrating self. The first is constantly aware, understanding what is right and wrong, based on lived learning. The other, remembering nothing, is always busy telling stories about the past and making plans, taking many shortcuts. The value of any experience is determined by the average of the highs and lows (Harari, 2018, p. 326). This has a far-reaching impact on all practical decisions. Let us see how through a case study.

In 1999, the Scottish government decided to order the construction of a new parliament building. According to the original plan, it was to cost £40 million and take two years. The work lasted five years and cost £400 million. Each time the contractors asked for more time and more money when they encountered difficulties and unforeseen expenses, the government thought that it would be discredited if, having already spent a significant sum, it did not finish the work. The same is true for private companies. And this is because the narrating self prefers to continue suffering in the future rather than admit that its past suffering was pointless (Harari, 2018, p. 333).

Collective intelligence is a space for building consensus.

[7] Like rats, humans can be manipulated, and even complex feelings such as love, anger, fear and depression can be created or destroyed by stimulating the right spots in the human brain. The US military has begun experiments in which computer chips are implanted in the brains of soldiers to treat them for post-traumatic stress. https//:fusión.net/story/204316/darpa-is-implanting-chips-in-soldiers-brains/, Accessed August 21, 2021.

[8] Continuous stimulation transcranial stimulators, which are attached to the scalp from the outside (Harari, 2018, p. 318). The aim is to sharpen the ability to concentrate and improve the performance of soldiers, both during training and on the battlefield.

These wills are not presumed within the framework of the classic system of representation but are based on an objective decision-making process.

How is consensus achieved?

First, we must define what we mean by ‘intelligence’.

Watson – a program created by IBM that beat the people competing in the famous quiz show Jeopardy! in 2011 – carried out a series of procedures that come close to what we can call intelligence, such as the ability to understand natural language, modify the answer that it had originally planned to give if its opponent answered incorrectly before, classify answers according to socio-cultural uses of the language and continue to improve itself with the mere application of the same software. As a result, and against many of the predictions of that year, the system widely defeated the two Jeopardy! champions of the time (Haissiner; Pastor, 2019, p. 63).

This milestone, and others that followed, gave rise to the field of study of machine learning and deep learning.

The latter is a particular type of machine learning, created to continuously analyze information with a logical structure like that followed by humans, using a combination of algorithms called artificial neural networks (ANN) (Haissiner; Pastor, 2019, p. 66).

These systems have been optimized in recent years due to the proliferation of information available and ready to be processed by powerful engines, such as big data and data mining (Haissiner; Pastor, 2019, p. 69)[9].

From these concepts, we will focus –with the intention of attracting technologies that may tend towards better democratic performance– on blockchain and quantum computing.

Regarding blockchain, we will say –in the scope of this work– that it is a technology initially proposed by physicists Stuart Haber and W. Scott Stornetta,

[9] Big data is a set of large-scale information, usually collected by sensors, devices, web pages, search histories, social networks or transactional applications. What is relevant is that, like never before, it is possible to gather practically infinite amounts of data for almost any phenomenon that one wishes to study. Data mining, on the other hand, is the practice of discovering useful and interesting relationships and patterns in large volumes of information. In this field, tools such as statistics and artificial intelligence are combined to study data sets and extract figures of interest to humans (www.britannica.com/technology/data-mining).

with the idea of having a digital, immutable and decentralized record of audio, image, video or text files ordered chronologically (Beyer, 2021)[10].

There are authors who directly allude to its creation in 2008, when a group of people, under the pseudonym of Satoshi Nakamoto, conceived it as a technology based on a decentralized and public network protocol, which includes data encryption and would allow the verification of the information entered for all users, guaranteeing, in turn, its integrity and inviolability (Bielli; Ordónez, 2020, p. 368).

And this is because this group created the bitcoin protocol (Nakamoto, 2021), publishing a document that year that described a peer-to-peer system (P2P) digital money, launching the first software that contained the bitcoin network in January 2009.

From there, this software has offered technological support to more than two thousand cryptocurrencies as well as many other digital solutions that have nothing to do with non-fiduciary money. Some examples of the multiple applications of this technology can be found in supply chains, transparent voting systems, traceability of energy supply, financial inclusion, remittances, digital identity, humanitarian aid, medical and property records, academic certifications, etc.

Without prejudice to their uses, it is worth clarifying that bitcoin and blockchain are not the same thing, although many publications treat them as synonyms.

Some important conceptualizations that provide greater clarity to the subject[11]:

[10] The paper by Haber and Stornetta proposed computing hash values for documents and storing them with a timestamp. Records are linked in a data structure by including hash values from certificates of previous records. In addition to using hashes to verify data integrity, the time-stamping protocol also makes use of private key signatures for data sent by signals. Hashing refers to a mathematical algorithm that transforms any arbitrary block of data into a new series of characters with a fixed length. Regardless of the length of the input data, the output hash value will always be the same length. The most common form of hashing is related to passwords. Antivirus companies such as Kaspersky Lab use cryptographic hash functions to detect malware. They are also used to ensure “message integrity”, confr. Donohue (2021). To access the first article on blockchain, received for publication in August 1990, see Haber and Stornetta (1991).

[11] We will follow those provided by Binance Academy, https://academy.Binance.com/es/blockchain/difference-between-blockchain-and-bitcoin, Accessed August 21, 2021.

Blockchain is a specific technology used to record information (blocks of data).

Cryptocurrency is one of the most popular and well-known ways to use blockchain.

In turn, Bitcoin is the first and most popular example of a cryptocurrency.

Most blockchains are designed as a distributed and decentralized digital ledger. In simple terms, blockchain is a digital ledger that is basically an electronic version of a paper ledger and is responsible for recording a list of transactions.

More specifically, a blockchain is a linear chain of multiple blocks that are connected and secured by cryptographic proofs. Blockchain technology can also be applied in other activities that do not necessarily require financial transactions, but in the context of cryptocurrencies, they are responsible for keeping a permanent record of all confirmed transactions.

"Distributed" and "decentralized" refer to the way the ledger is structured and maintained. To understand the difference, one can think of common forms of centralized ledgers, such as public records of house sales, records of ATM withdrawals from a bank, or eBay's list of sold items. In all cases, only one organization controls the ledger: a government agency, the bank, or eBay.

Another common factor is that there is only one master copy of the ledger and anything else is simply a backup that is not the official record. Traditional ledgers are therefore centralized because they are maintained by a single entity and usually rely on a single database.

In contrast, a blockchain is usually built as a distributed system that works as a decentralized ledger. This means that there is no single copy of the ledger (distributed) and no single authority in control (decentralized). Simply put, each user who decides to join and participate in the process of maintaining a blockchain network maintains an electronic copy of the blockchain data, which is frequently updated with the latest transactions, in sync with the other user's copies.

In short, blockchain is a distributed system maintained by the collective work of many users, who are spread across the globe. These users are also known as network nodes, and all these nodes participate in the process of

verifying and validating transactions, according to the rules of the system. Consequently, power is decentralized –there is no central authority–.

In relation to quantum computing[12], it is convenient to first explain how the computers we use everyday work, which we call digital or classic computers. These, like the rest of the electronic devices such as tablets or mobile phones, use bits as fundamental units of memory. This means that programs and applications are encoded in bits, that is, in binary language of zeros and ones. Every time we interact with any of these devices, for example, by pressing a key on the keyboard, strings of zeros and ones are created, destroyed and/or modified within the computer (Allende López, s. d.).

That is, in digital computing, there are only zeros and ones, which are what are known as bits.

The zero and one states of the bits correspond to electric current that flows, or not, through microscopic pieces called transistors, which act as switches. When there is no current flowing, the transistor is “off” and corresponds to a bit 0, and when it is flowing, it is “on” and corresponds to a bit 1 (Allende López, s. d.).

The central issue in quantum computing is given by the speed of data processing and by a more efficient way of processing the data[13].

The fundamental unit of information in quantum computing is the quantum bit or qubit. Qubits are, by definition, two-level quantum systems that, like bits, can be in the low level, which corresponds to a state of low excitation or energy defined as 0, or in the high level, which corresponds to a state of greater excitation or defined as 1. However, and here lies the fundamental difference with classical computing, qubits can also be in any of the infinite intermediate states between 0 and 1, such as a state that is half 0 and half 1, or

[12] It is in full development and will have a transversal impact on blockchain, IoT, cybersecurity, artificial intelligence, robotics, digital cryptography, among others. It is a field that focuses on the small things in the universe, since in these phenomena appear that do not occur in larger things (Haissiner; Pastor, 2019, p. 73).

[13] Let's imagine that we are in Bogotá, and we want to know which the best route is to get to Lima from among a million options to get there (N=1,000,000). To be able to use computers to find the optimal route, we need to digitize 1,000,000 options, which implies translating them into bit language for the classical computer and into qubits for the quantum computer. While a classical computer would need to go through all the paths one by one until it finds the desired one, a quantum computer takes advantage of the process known as quantum parallelism that allows it to consider all the paths at once. This means that, while the classical computer needs to follow 500,000 attempts, the quantum computer will find the optimal route after only 1,000 attempts.

three-quarters of 0 and a quarter of 1. This phenomenon is known as quantum superposition and is natural in quantum systems (Allende López, s. d.).

The above excerpt is intended to outline an attempt at collective intelligence that can be brought to light in the digital technology environment.

Effective regulation and, by extension, effective management is the result of a common approach in which transparency and public participation are valued and weighed more heavily when making decisions. For the first time in human history, non-state and participatory networks are being formed to solve global problems. In recent decades, there have been two major advances that have laid the foundations for a new model. The emergence of the Internet, which has allowed participants of all sizes to communicate, share resources and coordinate actions, without needing state officials to call them together to join forces and coordinate objectives. Secondly, entrepreneurs, academics, NGOs and other non-state participants have acquired the capacity to play an important role in the global cooperative effort. The combination of these factors makes the new model possible. To meet a growing number of global challenges, self-organizing collaboration now makes it possible to cooperate, manage and solve problems on a global level, as well as progress more quickly than state institutions (Taspcott; Taspcott, 2019, p. 421).

3. SMART REGULATION PROPOSAL

In terms of the exercise of regulatory activity, we still have a lot of work to do to ensure that the rules comply not only with the formalities for their issuance, but also respect a minimum standard of mandatory content that derives from the constitutional texts.

The exercise of rights is not a minor issue in countries such as Argentina, where there are alarming exclusion rates.

This calls for redefining the institution of regulation, so that it becomes a useful tool for solving public problems.

We have said in the introduction that, in regulatory matters, the discretion of the official prevails, lacking in measurability and far from parameters of objectivity, an issue that also involves the technological mega-companies that operate like a state entity.

And that in democracy, regulation must be impersonal, equitable and derive from a collective construction, articulated through networks and respond to principles and norms of a higher rank[14].

To this end, we believe that sustainable and inclusive technologies are necessary, which tend to promote better forms of relationships between the State and companies, with people, allowing the co-creation[15] of appropriate regulatory arrangements.

Likewise, a concept of regulation is formulated here –as a proposal– understood as the activity of conditioning fundamental rights to harmonize them with others, in a whole that conforms to principles and norms of a higher rank, objective, measurable and sustainable, which operates through codes inscribed in encrypted computer systems, consolidated through universal consensus that derive from collective intelligence.

We will call the preceding definition cryptoregulation.

4. CLARIFICATION OF THE CONCEPT

IV.1. *Conditioning activity:* we refer to the way in which rights must be exercised, adhering to the classic thesis that rights are not absolute, for which reason we immediately determine the teleological element that requires that this conditioning be carried out to harmonize certain fundamental rights with others of the same nature.

We speak of activity, deliberately omitting the authority in charge, given that it is set out in full accordance with principles and norms of a higher rank. There is no need to formulate further clarifications, considering that the constitutional pyramid indicates - in most texts - that at the top vertex is the

[14] Principles impose a generic duty of respect, but not specific obligations. We can derive full subjective rights from principles (as we can from norms), although law and principle are not the same thing. Principles are a guarantee of rights. Specific obligations, prohibitions, sanctions, powers and others arise from the law (in some cases from the will of the business). In both sources, the key is that the content of the obligation is clearly defined (Navarro Fallas, 1998).

[15] Trying to overcome the cases of frustrated cooperation according to Nino (2020). Each ruler, in pursuing the best option for himself, and failing to agree on cooperation based on an institutional scheme that would reconcile conflicting interests and ideologies, ended up frustrating their respective aspirations, which in many cases united personal and regional projects with the ambition of the general progress of the country. This made the nation lose half a century of institutionalization and social cooperation, in which other countries laid the foundations for their future growth (Nino, 2020, p. 144).

National Constitution and the Human Rights Treaties incorporated or signed, then and in descending order we have the Treaties, the law, the regulations and norms issued by lower authorities.

IV.2. Objective activity, that is, it should not depend on the will of the officials.

IV.3. Measurable, that is, it should be possible to measure the fulfillment of the intended purposes in a concrete manner.

IV.4. Sustainable, which implies that it cannot be subject to conjunctures, but must be maintained over time.

IV.5. It operates through codes registered in computer systems: This is the basis by which the activity can comply with the characteristics mentioned above.

IV.6. Consolidated through universal consensus: the construction of universal consensus necessarily places us in the “digital environment”, which generates a legal ecosystem very different from the current one.

Technological advances that have no ceiling and that are accelerating more and more, place us before the scenario of other ways of cementing consensus that can complement and even optimize those that derive from the system of representation, which is currently in crisis.

These avenues are considered disruptive[16] and are possible within the framework of blockchain implementation.

Blockchain technology has profound implications for many institutions. And as far as this work is concerned, it seeks to shift the weight of power from the State to the protection of people's fundamental rights. Or at least to legitimize, through non-traditional responses, the actions of state bodies.

Let's think of a flexible and secure network that quickly and relatively cheaply enables new services, integrates more participants and generates greater public value.

This configuration is called a 'mesh network' and consists of a network that connects computers and other devices directly to each other. They can automatically reconfigure themselves depending on the availability of

[16] As for the degree of novelty and impact they generate, the term disruptive technology was coined by Clayton M. Christensen in an article written with Joseph Bowe, entitled “Disruptive technologies: catching the wave”, Harvard Bussines Review, january-february 1995. For more information see Veltani (2020, p. 71).

bandwidth, storage capacity and other functions, and therefore resist breakages and other forms of interruption. Communities can use mesh networks to provide basic connectivity when and where they do not have or cannot afford internet access. Mesh networks are alternatives to the traditional hierarchical model of organization, regulation and control; they can provide greater privacy and security because [data] traffic does not go through a central organization (Filippi, 2014, *apud* Tapscott; Tapscott, 2019, p. 215).

Organizations are already combining mesh networks with blockchain technology to solve complex infrastructure problems (Tapscott; Tapscott, 2019, p. 216)[17].

We can also see the great evolution that is observed in terms of computer processors. In the fifties and sixties of the last century, mainframe computers dominated[18]. In the 1970s and 1980s, microcomputers appeared. In line with technological advances, communication networks also evolved. From Arpanet to the Internet[19], a lot of water has flowed under the bridge. Devices have also changed dramatically. Today, in addition to providing traffic or weather data, they can sense and respond, i.e. execute a transaction or act according to predefined instructions (Tapscott; Tapscott, 2019, p. 221). Devices can communicate with each other, with computers and databases directly or through the cloud and with people. These devices, with artificial intelligence constantly evolving with the data they collect, put data analysis, pattern recognition and trend identification in our hands (Tapscott; Tapscott, 2019, p. 223).

So why not believe that there are other alternatives to build consensus?

Let us imagine fundamental rights inscribed in a distributed computer program that can process and coordinate public needs or problems with available human and material resources. This distributed program works and

[17] For example, consider completely new and egalitarian models of electricity production and distribution. We all participate in a large electricity grid based on a blockchain. Thanks to a program sponsored by the State of New York to increase energy resilience, even in extreme weather conditions, a community microgrid is being created in the Park Slope neighborhood of Brooklyn. With electricity generated on site, it can deal with emergency situations, reducing costs for customers, while promoting clean and renewable electricity, increasing energy efficiency and giving storage options to the community (Tapscott; Tapscott, 2019, p. 258).
[18] Among others IBM (International Business Machines).
[19] Although the Internet was designed in 1973 and published in 1974, it was launched in 1983 and was not used globally until 1990.

acts according to its own criteria generated through the prior incorporation of higher-ranking standards, principles and norms, which are also universal.

Can a regulatory model for democracy be generated in this way?

Will basic consensus be achieved to address increasingly complex public problems?

IV.7. *Which derive from collective intelligence*: And here we intend to mutate the classic indeterminate concepts of public interest, collective interest, collective well-being, for another that we understand to be more appropriate for the solution of public problems.

Collective intelligence occurs within the framework of an inclusion strategy, which does not sacrifice long-term objectives to obtain immediate and ephemeral benefits.

Planning for sustainable development is an indispensable tool for leading the process of transformation of public management and society subject to a scheme of national, regional and global agreement and public-private alliances and must be reoriented towards the search for an appropriate provision of the demands of people and the protection of their rights.

The call for openness of governments is imminent, because people want to take part in the decisions and actions that involve them, and it is necessary to channel this intention towards this construction. Governments must "talk" with people and evolve from an electronic government to one where collaboration, participation and transparency are the central axes in the development of public policies.

In this scenario, governments have begun to ask themselves how to incorporate this new approach of government openness into their e-government strategies. Governments must become online platforms for information and data for the individual, where modularity, minimal redundancy, scalability and interoperability are no longer a barrier to successfully carrying out strategies, but rather a tool for public management transformation processes to generate a real change in the model.

This is how this new concept of management involves the generation of communication channels to work with society and individuals in order to co-create public value, merging the intensive use of ICTs with management,

planning and administration modalities, where the traditional system of governing is supported by four dimensions or fundamental pillars (Cepal, s. d.):

i. Transparency in government action, processes, and data.

ii. Collaboration within government and with individuals that allows for the generation of new ideas to solve social problems.

iii. Participation that seeks to actively and truly involve people in the formulation and execution of policies.

iv. Management of public information channeled through open data.

If we think of both crypto networks and “commons,” then the tactics to govern their resources require three necessary conditions: An institution of rules, a credible commitment to follow them, and a system of collective monitoring to ensure that the rules are followed (Ostrom, 2000, p. 297).

Collective intelligence is an intelligence that is distributed everywhere, constantly valued, coordinated in real time, leading to an effective mobilization of skills. We add to our definition this indispensable idea: the foundation and objective of collective intelligence is the recognition and mutual enrichment of people, and not the cult of fetishized or hypostatized communities. An intelligence that is distributed everywhere: this is our starting axiom. Nobody knows everything, everyone knows something, all knowledge is in humanity. An intelligence that is constantly valued: Intelligence is distributed everywhere; it is a fact. But it is now necessary to move from the fact to the project, because this intelligence, often despised, ignored, unused, humiliated, is not valued fairly. While we are increasingly concerned with avoiding economic or ecological waste, it seems that the most precious resource is being impetuously squandered by refusing to take it into account, develop it and use it wherever it is found (Lévy, 2004, p. 20).

The most daring thing expressed in these pages is the question of the registration of what is regulated in computer codes and the abdication of the institute of public interest, towards the more appropriate one of collective intelligence.

Another point of the proposed concept refers to the construction of universal consensus. This is only possible in digital environments that allow the objective compliance of the norm to be clearly identified, which leads to the

creation of a legal ecosystem very different from the fragmented one of today, which leads to the existence of both excesses and regulatory gaps.

The theorists of responsibility aim to demonstrate that true representation implies a degree of responsibility towards the represented, attention to their desires and needs; other authors tell us that there must exist between representative and represented a link that must correspond to the desires or needs of the latter (Fenichel Pitkin, 1985, p. 123).

The theoretically outlined representation systems are not effective for building consensus, so the proper relationship between the democratic and social State of law and people must seek a channel in other ways of building agreements.

We must explore ways to dismantle the criterion of State powers based on public interest, to strengthen the protection of fundamental rights and the fulfillment of clearly established duties.

The configuration of a mesh network was brought up, which connects computers and other devices directly with each other and which tend to overcome the traditional hierarchical model of organization, regulation and control, providing greater privacy and security because data traffic does not go through a central organization (Tapscott; Tapscott, 2019, p. 215).

Based on this point, the possible regulatory design must innovate in terms of being able to have a set of fundamental rights registered in a decentralized and shared computer registry, the rules that expressly or implicitly protect it together with the fulfillment of duties, which can process and coordinate the satisfaction of public needs or public problems with the available material and human resources, with the real possibility of resorting to other non-traditional sources of financing.

5. PROPOSAL FOR SOFT LAW AND CONCLUSION

Soft law plays a role in the formation of general norms and in the elaboration of uniform standards –for example, the defence of human rights and the protection of the environment– to address the defence of interests together with the impossibility of adopting a binding and universal regulation (Abbot; Snidal, 2000, p. 421).

A su vez, debemos analizar de qué manera este fenómeno, se enlaza con el *hard law*.

Las cuestiones a tener en cuenta tienden a simplificar, clarificar, ordenar y consolidar un sistema jurídico que respete la jerarquía del ordenamiento que emana de los textos constitucionales.

Likewise, to give a sense of full compliance with the principle of inexcusability, this creates the need for those who must comply with the law to be certain of what must be respected.

Sin embargo, nos encontramos con excesos y lagunas que obstaculizan contar con una regulación adecuada al respeto de estas circunstancias.

Redefining the concept of regulation by constructing the concept of cryptoregulation implies impacting the traditional categories of Administrative Law.

With the issue addressed in this way, it is proposed to work on the following scheme:

i. Generate computer codes based on the guidelines that emanate from all laws in force at the national and local level with the ability to restrict rights, or any other format that facilitates the comparison and ordering of the same.

ii. Detect through specific programs based on blockchain technologies, that is, decentralized for the simultaneous control of public, private organizations and people, the opposition of norms of any type –laws, decrees of any nature, in all jurisdictions– to the National Constitution and the International Human Rights Treaties incorporated or signed.

iii. Develop indicators that consider all regulations that oppose higher-ranking regulations, making such circumstances known to take measures –by the competent authorities– tending to repeal unconstitutional or unconventional regulations, those that have been issued outside of the faculties and covering gaps that allow a state performance consistent with the objectives pursued.

iv. Generate intelligent platforms that invite simultaneous and permanent citizen participation and control.

These devices that accompany the conception of cryptoregulation as soft law, are intertwined with hard law, in the following way:

i. Respect for the legal pyramid that is operational law.

ii. Respect for local spheres, in terms of the power not delegated to the nation and the municipal autonomies recognized in the constitutional texts.

iii. Respect for fundamental rights is also an operational right and must be framed within the principle of progressiveness contemplated in Article 26 of the American Convention on Human Rights and in Article 2.1 of the International Covenant on Economic, Social and Cultural Rights, to which we must add the environmental paradigm.

iv. As a corollary to the above, respect for the principle of reservation, which implies that no one is obliged to do what the law does not command or deprived of what it does not prohibit.

v. Order and regulatory clarity go hand in hand with the fulfilment of duties. In recent times, the subject of constitutional duties, traditionally undervalued in relation to that of rights, has begun to be more developed. There seem to be three reasons for this relative change in trend: 1- The drive towards universalism of rights, which has also led to the rethinking of some aspects of legal and political culture of Eurocentric origin; 2- The demands of sustainable development also with respect to future generations; 3- The weakness that is affecting the social State, which has once again proposed –in industrial and post-industrial systems– the subject of the duties of solidarity of individuals and groups, but, above all, has once again raised the role of state institutions (Lanchester, s. d.).

Constitutional duties go hand in hand with respect for fundamental rights.

Based on the above, a cryptoregulation model is proposed that lists all existing regulations in any jurisdiction, whose registration in a distributed database –peer network– is protected with high-tech cryptography, tending to provide background information on compliance with constitutional and conventional standards in terms of normative production.

This scheme entails the intention of building trust and transparency, simultaneous and permanent accountability and measuring the results of each of the listed regulations, for better management of scarce resources.

In a complementary way, having a clear regulatory utility, intelligent platforms can be created that permanently update public needs, in the manner of the simulator that is currently in the testing phase at the United Nations (UN).

The software, called Policy Priority Inference (PPI), uses models based on artificial intelligence agents to predict what would happen if policy makers spent money on one project instead of another. This makes it easier for governments to decide which policies to prioritise, according to the UN and the Alan Turing Institute in London, UK, which is also supporting the project. The tool is being tested by authorities in Mexico and Uruguay, with Colombia next. The UK Department for International Development is also interested. How does it work? The PPI draws on economics, behavioral science and network theory to simulate a "government" allocating a lot of money and "bureaucrats" spending it on different projects. The model, which was created by economists in London and Mexico, includes a range of data, such as government budgets, the impact that spending has had on policies in the past, the effectiveness of a country's legal system, estimated losses due to known failures and so on. It then suggests which policies are worth investing more in. The idea is that the tool will help policymakers anticipate ripple effects in their decision-making. For example, investing in education can mitigate gender inequality, but investing in GDP growth may not be good for reducing greenhouse gas emissions[20].

Let us then consider the possibility of having an intelligent system, made up of rules identified with an alphanumeric code.

Now, in order to form this scheme according to blockchain technology, it becomes necessary to know one of its basic elements, cryptography, which is the art of transforming a readable message into an unreadable one. This process is called "encryption", while the reverse process of transforming something unreadable into a readable format is called "decryption". Currently we have three main types of cryptography: i. Hashing[21]; ii. Conventional symmetric cryptography[22]; iii. Asymmetric or public key cryptography[23]. In

[20] The United Nations (UN) World Organization is backing a computer simulation tool that it hopes will help governments tackle the world's biggest problems, from gender inequality to climate change (Heaven, 2020).
[21] Hash is a verb meaning to chop or grind. It is a graphic expression that consists of transforming content until obtaining a series of characters of a fixed length, something like a fingerprint of a message or document (Nunez Miller, 2019, p. 203).
[22] It uses a single key to encrypt and decrypt a message. Today, the most widely used algorithms are in the public domain and known to everyone, so security is based on a key and only those who know it can decrypt the message. It is important to note here that "key" and "password" are not the same thing (Nunez Miller, 2019, p. 207).

practice, the hash is obtained by applying a mathematical function to some data, also called a “summary” or digest, which will give a result as we see in the following examples:

Word	**Hash result**[24]
Perro	5CDC4F3FEB31CEB78
El perro de San Roque	96C32852CB4C69E71

Appropriate indicators must be worked on to measure various aspects: budget sustainability for the fulfillment of objectives, clarity, necessity, usefulness, among others.

As observed in the Ibero-American Charter on Innovation in Public Management (Clad, 2020), The decade 2020-2030 will be crucial, as all countries in the world will face extraordinary challenges that will require renewed and innovative, effective and useful public institutions. There are two major vectors of transformation and change, one substantive and the other technological:

a) The countries of the region will have to face unexpected and unprecedented crises such as COVID-19 or climate change within the framework of the implementation of Sustainable Development Goals (SDGs) that are as ambitious as they are unavoidable. If we want the SDGs to be truly relevant to the governments of the region, they should be linked to the central objectives of their policies and budgetary programs, which, in the end, are those that guide and determine the action and responsibility of governments. To do so, it is essential to reinvent institutional designs to achieve public bodies with a high innovative capacity.

b) A radical change can be anticipated in management models and methodologies linked to emerging and disruptive technologies: digital administration, the management of large data sources (Big Data & Analytics), the Internet of Things, virtual reality, blockchain and, especially, the introduction

[23] It uses two keys, one public and one private, both created and linked together by a special function. These functions calculate the public key from an original key (private key) that is generated randomly (Nunez Miller, 2019, p. 209).
[24] The purpose of a hash is not to hide a word for later decryption, but to check its integrity and verify that it has not been altered (Nunez Miller, 2019, p. 204).

of artificial intelligence and process automation through robotization into public management.

This challenge not only requires a radical change for public administration, but also encompasses other state bodies, both due to the management function they oversee and the powers that are inherent to them.

It is not just a matter of questioning what governments do and should do. It will also be necessary to question how they do it, especially now that public institutions are introducing other forms of intervention that are more sophisticated than traditional ones, such as soft law, nudging, public-private collaboration, crowdsourcing, innovative public procurement, the incorporation of social criteria in public contracting, self-management or social co-management, etc. (Clad, 2020).

In short, administrative law has before it the vital task of redefining its essential institutions in such a way that it adapts to the public problems that global society brings.

We have taken a topic that we understand to be transversal, such as regulation, redefining its content and framing its essential values within the framework of the principle of regulation.

Taking up a maxim that is not discussed, which indicates that rights can only be restricted by law, affirming that only through norms –according to the priority of their sources– can specific obligations, sanctions, powers tending to limit the exercise of rights, prohibitions, privileges, immunities be imposed.

Unlike the norm, the principle can protect a right or a state of freedom but cannot create sanctions, taxes, prohibitions, or obligations, except for a generic duty of respect.

This impossibility of the principles to create obligations, sanctions, prohibitions and others, is a consequence of the principle of legal certainty and the structure of the principle that is by nature a guarantee in favor of rights or legal situations of advantage. Without prejudice to reiterations, the principles are superior to legal norms of equal or lower rank, written or unwritten.

That is why the development of the principle of regulation, to provide a framework for the concept of regulation and, in times of disruptive technologies, for crypto-regulation.

Blockchain represents the image of decentralization as a model of life using records based on cryptography, to build these consensuses.

It is evident that the equation state powers = satisfaction of the public interest must be abandoned.

To make effective the postulates of the democratic State in a substantial sense that Ferrajoli proclaims, we must lower ideas to praxis, advocating the construction of models that allow the exercise of regulation framed in a public policy and within the framework of a system that articulates the activity of the bodies involved with a clear and effective social participation.

As Carles Ramió Matas (2018, p. 8) says, The question is not about technology, but about how it can transform public administration. “It is already unbearably obvious that when we say that digital technology is disruptive, we are not referring to its ability to bring technological innovation to processes or businesses, but to its ability to transform society. Digital technology is following the same path as other previous technologies such as steam or electricity, and after some initial stages of discovery and engineering, it is now in a phase of transformation, which is evident in the fact that we are no longer talking about new products or services, but about changes in people's habits and even changes in the scales of values.” The objective is to determine what problems and opportunities will emerge in the immediate encounter between public administration and smartification processes.

From the conceptual framework developed, we hope to achieve substantial changes in the protection of fundamental rights, through the consolidation of the model promoted in these pages.

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