RESPONSIVE REGULATION AS A SOLUTION TO THE ASYNCHRONY BETWEEN LAW AND ARTIFICIAL INTELLIGENCE: ANALYSIS OF BILL 2338/2023

A REGULAÇÃO RESPONSIVA COMO SOLUÇÃO PARA ASSINCRONIA ENTRE DIREITO E INTELIGÊNCIA ARTIFICIAL: ANÁLISE DO PL 2.338/2023

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RESUMO

A responsividade jurídica elencada como tema do presente trabalho tem delimitação no campo da Teoria da Regulação Responsiva e consiste num modelo de regulação e aplicação do direito, cuja finalidade é ser eficaz e adaptável às necessidades variáveis das sociedades. De outro modo, tem se acentuado o assincronismo entre o direito e a realidade porque o progresso das novas tecnologias, incorporadas à vida social, tem se dado numa escala de celeridade desmedida e inesperada, como em nenhuma era anterior, com destaque para a evolução dos sistemas de inteligência artificial. Diante desse prognóstico, constitui-se relevante pensar sobre uma fórmula/modelagem regulatória que se mostre mais adequada à pressurosa e disruptiva marcha tecnológica. Nesse sentido, o problema de pesquisa se coloca na seguinte perspectiva: Como atenuar o assincronismo entre o direito e a célere evolução tecnológica? Os

objetivos da pesquisa compreendem, no geral, avaliar a eficiência do sistema regulatório responsivo e, para tanto, especificamente, analisar os elementos da Teoria Da Regulação Responsiva e por fim investigar se o PL 2.338, de 2023 (Marco Legal da Inteligência Artificial), apresenta abordagem responsiva em seu modelo regulatório. A hipótese se predispõe no sentido de reconhecer a modelagem regulatória responsiva como técnica jurídica apta a melhor enfrentar os desafios regulatórios da inteligência artificial no Brasil. A pesquisa adotou o método hipotético-dedutivo e sua abordagem está fundamentada em teoria e legislação, isso é, utilização de livros, artigos científicos e leis.

Palavras-Chave: Direito. Inteligência Artificial. Regulação Responsiva.

ABSTRACT

Legal responsiveness, highlighted as the theme of this work, is delimited within the field of the Theory of Responsive Regulation and consists of a model of regulation and application of law whose purpose is to be effective and adaptable to the variable needs of societies. On the other hand, the asynchrony between law and reality has become more pronounced as the progress of new technologies, integrated into social life, has occurred at an unmeasured and unexpected speed, unlike any previous era, with emphasis on the evolution of artificial intelligence systems. In view of this prognosis, it becomes relevant to consider a regulatory formula/model that proves more adequate to the rapid and disruptive technological march. In this sense, the research problem is posed from the following perspective: How to mitigate the asynchrony between law and the swift technological evolution? The objectives of the research are, in general, to evaluate the efficiency of the responsive regulatory system and, specifically, to analyze the elements of the theory of responsive regulation and finally to investigate whether Bill 2338/2023 (Legal Framework of Artificial Intelligence) presents a responsive approach in its regulatory model. The hypothesis is predisposed to recognize responsive regulatory modeling as a legal technique capable of better facing the regulatory challenges of artificial intelligence in Brazil. The research adopted the hypothetical-deductive method, and its approach is based on theory and legislation, that is, the use of books, scientific articles, and laws.

KEYWORDS: Law. Artificial Intelligence. Responsive Regulation.

INTRODUCTION

In this study, responsiveness is taken as a characterizing and substantive element of the identity of the modeling and architecture of norms. In this way, whether it is for the actions of the State (regulation) or for the creation and institution of laws (regulation), in both situations both Responsiveness and the Theory of Responsive Regulation have equal attribution and application.

It is also very important to point out that, in this work, the term regulation will be used here in the same sense, since regulation is included in the spectrum of regulation. Therefore, the term regulation is used in its broad conception, also including the act of instituting laws under the terms of the recommendation of the OECD[1].

In the same vein, the National School of Public Administration (Enap) considers that regulation has a general meaning and refers to the set of legal-normative instruments, such as laws, decrees and other regulations that the state has at its disposal to establish rules or obligations to be complied with by the private sector, citizens and the government itself. Therefore, it should be noted that regulation and regulation will be used in this study with the same meaning.

That said, the title of this paper is "Responsive Regulation as a solution to the asynchrony between Law and Artificial Intelligence". The thematic section considers Responsiveness as circumscribed by the doctrine on the Theory of Responsive Regulation, presented by John Braithwaite and Ian Ayres at the end of the 20th century, taken here as a theoretical guide/reference. It is a regulatory approach characterized by adapting to the reality and changes in the regulated environment, and also provides for a more flexible relational dynamic between regulator and regulated, with a strong use of persuasive strategies, in view of legal compliance, weighing up the willingness of regulated entities to adapt and comply with the rules.

This approach initially prioritizes dialogue and cooperation, but without excluding punishment (characteristic of the traditional regulatory approach), which gradually becomes stricter with those who ignore or are repeat offenders.

[1] Para a OCDE, regulação é definida de forma ampla, referindo-se ao conjunto diversificado de instrumentos pelos quais os governos estabelecem requisitos para empresas e cidadãos. Regulações incluem leis, normas formais e informais e regras subordinadas emitidas em todos os níveis de governo, além de normas expedidas por órgãos não governamentais ou autorregulados aos quais os governos tenham delegado poderes regulatórios.

Bill 2.338 of 2023, which provides for the use of artificial intelligence in Brazil, presents fragments of the responsive regulatory approach, with some of its provisions being characteristic of responsiveness. The regulation of AI systems in Brazil responds to a strong trend observed around the world, with a view to establish effective governance to better order the upsurge in digital innovation witnessed in recent years.

The disruptive march of technology has been the keynote of social life today, an indelible mark of this new cycle of human life. This new era, also known as the fourth industrial revolution, or revolution 4.0, is identified especially from three singularities that are fundamental to it: the pace (speed), the scope (reach) and the result (effect or impact). These three factors, factually manifested in unprecedented dimensions, can support the conclusion that we are immersed in a new era.

Therefore, the succession of innovations and consequent transformations today is unprecedented in human history. The rapid and very rapid evolution of new technologies, the quantity and depth with which they are incorporated into social life and the resulting changes in habits, customs and the functioning of human relationships and lives, are the aspects that allow us to infer the advent of an unprecedented existential cycle.

The consequence of this very rapid technological development, manifested at an almost always unexpected and surprising pace, marks this new era with a peculiar identity, namely the unpredictability of the degree of evolution.

In the wake of this phenomenon, the Law seeks to provide society with mechanisms to prevent, harmonize, protect and pacify the implications, risks and damages that naturally arise from this technological social transformation, with a predominant zeal for fundamental and democratic rights.

It is in this scenario that reflection on and study of regulatory modeling, its format and efficiency, becomes extremely important. Depending on how they are designed and implemented, on the one hand there is the problem of overuse, i.e. the use of AI systems at a level that could harm human beings and their rights; on the other, the fear that legal instruments will obstruct or underuse artificial intelligence, to the point of preventing society from reaping the countless advances and benefits that can be extracted from these technologies.

Therefore, given this prognosis, it is important to think about a regulatory formula/model that proves to be more appropriate and efficient in the face of the hurried and disruptive march of technology and that, therefore, serves as an

instrument of governance capable of mediating the slight development of current times.

It is important that the law is adapted to reality and, in this sense, the asynchrony between the normative system and reality causes controversy and concern, especially among legal thinkers and operators. Not infrequently, the Law is considered to be refractory to the situations of social life, which deserve and require ordering, in other words, regulation. This involves the efficiency of legal mechanisms in the face of society's demands and pains. From this perspective, this research problem arises: How can we mitigate the asynchronism between the law and the rapid technological evolution of artificial intelligence systems?[2]

The answer to the problem formulated is built on the general objective, which consists of evaluating the efficiency of the responsive regulatory system (responsive regulation) in the face of the evolution of artificial intelligence systems. To this end, the specific objectives are: to analyze the elements of the Theory of Responsive Regulation presented in the books To Punish or Persuade: Enforcement of Coal Mine Safety (1992) by John Braithwaite and Responsive Regulation: Transcending the Deregulation Debate (1992) by John Braithwaite and Ian Ayres and to identify fragments of responsive regulation in the Bill of Law No. 2.338, of 2023 - the Bill that provides for the use of artificial intelligence in Brazil.

It is understood that the Responsive Regulation, when adopted and applied in the regulatory architecture and/or modeling, partially or totally, by inserting the element of responsiveness as a strategy and tactic in the normative instrument, ends up choosing flexibility as the criteria and standard for institutional action, providing an opportunity for a dynamic of governance and compliance between the regulator and the regulated entity that is more relevant and appropriate to reality and its transformations. This is a more functional and efficient response to the sharp and fast evolution of artificial intelligence systems.

With regard to the regulation of the use of artificial intelligence systems, in accordance with the considerations made in the Bill 2.338 of 2023, it is possible to identify fragments of responsiveness in the legal text; however, its repository in this respect should be more comprehensive and diversified.

This study was organized into four chapters: the first deals with the asynchrony between law and reality, especially through the evolution of new technologies; the second deals with the importance of regulatory modeling; the

[2] No sentido de: A regulação responsiva serve como atenuante do assincronismo entre o direito e evolução tecnológica dos tempos atuais?

third chapter deals with the Theory of Responsive Regulation with a presentation of its main characteristics, in light of the works mentioned in the specific objectives; and finally, the fourth part served to identify the intersections between Responsive Regulation and the text of the Bill No. 2,338 of 2023, which provides for the use of artificial intelligence in Brazil.

The research adopted the hypothetical-deductive method and its approach is based on theory and legislation, i.e. the use of books, scientific articles and laws.

1 THE ASYNCHRONY BETWEEN LAW AND TECHNOLOGICAL EVOLUTION

The asynchrony between law and social reality is a relevant issue for both the legal sciences and the social sciences. This disconnection often arises due to the complexities inherent in the application of legal norms in a dynamic and multifaceted society.

Essentially, the law is a set of rules that apply to all members of a society, with a view to order, justice, harmony and social peace. However, social reality is influenced by a diversity of experiences, values and interests, which is the cause of a mismatch between the formal law and current life.

One of the central aspects of this lack of cohesion is the rigidity of the laws in contrast to the fluidity of social reality. Laws are often formulated in generalizing language and designed to be applied with little or no flexibility, with a bias towards oppressive and punitive hierarchical control.

This traditional approach and structure often proves to be the cause of the inefficiency of the rule, since it fails to capture the complexity and specificity of individual, collective and/or sectoral experiences, apparently formatting itself as an obstacle to the exercise of the regulated activity, as well as sometimes proving to be inept in the environments it is intended to regulate.

Thus, the lack of synchrony between the law and social reality is a reflection of the tensions between the static nature of the law and the fluid dynamics of social life. In this sense, it is worth emphasizing the importance of a legal system that is responsive and sensitive to the needs and realities of the society it aims to serve.

Law, in its normative essence, faces a constant challenge to keep in line with the evolution of society, particularly with regard to technological innovations. Considering the growing use and incorporation of artificial intelligence systems into human life, adapting the law to technological innovations is of fundamental importance, with a view to avoiding abuse, preventing damage, mitigating risks

and guaranteeing protection for fundamental rights and guarantees, consolidating order, harmony and social peace in the face of computer development and advances.

However, social and technological evolution has often outstripped the ability of formal law to adapt at the same pace. In an era of rapid technological change and social transformation, laws can quickly become obsolete or inadequate if they are not thoughtfully shaped, architected and/or structured.

Emerging issues, such as regulating the use of artificial intelligence systems, data privacy and rights in cyberspace, are examples of areas in which the law is struggling to keep pace with innovation and social practices.

Currently, the danger of perpetuating injustices also lies in the inflexibility of the normative system, a typical characteristic of traditional regulatory modeling, in which the rigid verticalized control, as well as the sanctioning and punitive nature of the rule, takes precedence.

The law focuses on being a weapon against evil rather than a weapon for good, in other words, there is too much concern with curbing and punishing wrongdoing rather than rewarding the good and promoting civic virtue.

In this regard, Aranha (2021, p.110) criticizes the traditional and inflexible regulatory approach, known as command and control regulation, and referring to these he states that “Manichean proposals would be bound to failure precisely because they disregard the disruptive and, at the same time, complementary effects of other orders”. This is a regulatory design whose purpose is merely to retaliate.

In addition, a critical aspect is the need for continuous dialog between technologists and jurists. Mutual understanding between these fields can help to create more adaptive and foresighted laws, which can anticipate possible technological developments or at least have the flexibility to adapt quickly to these changes.

However, this interaction also raises concerns about ethics and fairness, as decisions about how to regulate new technologies are not only technical, but also moral and political. For example, regulating digital surveillance and the collection of personal data involves weighing up security, privacy and individual freedom.

Therefore, the efficiency of a regulatory instrument largely depends on the regulatory model adopted and present both in its creation and structure, since this is where its suitability and penetrability over the reality, environment and/or sector to be regulated comes from.

When the modeling chosen does not dialogue with and/or reflect the nature of the reality to be regulated, it creates a gap between what is done, what is possible to do and what is allowed to be done, between what is real, what is legal and what is ethical. This gap can compromise the protection of fundamental rights such as privacy, freedom of expression, intellectual property, legal certainty and, consequently, the democratic rule of law.

2 REGULATORY MODELING

Regulation and the choice of a regulatory model function as a legal form of social engineering. Whether it's the enactment and institution of laws or state normative action, regulatory modeling is an important factor, as it can affect the effectiveness and efficiency of the implementation and application of public policies, both in terms of social development and the protection of enshrined rights.

According to the National School of Public Administration Foundation (Enap), regulatory policy, as a choice of modeling, has played a fundamental role in enabling the management of increasingly complex, open and rapidly changing economies and societies (Brazil, 2020).

Furthermore, improving the quality of regulation is essential for sustainable development, since the relationship between the legal institutional environment and the projection of investment and local projects is clear.

In this sense, Aranha (2021, p.37) points out:

> A regulação assimila a qualidade do 'planejamento' estatal não como ideologia, mas como método, ou melhor ainda, como tecnologia; como forma de expressão humana criativa oriunda da relação do ser humano com a natureza. Enquanto tecnologia, a regulação é uma forma de produção da existência social dependente de um projeto humano de acompanhamento conjuntural dos sistemas sociais. Assim entendida, a regulação seria melhor definida como uma tecnologia social de sanção aflitiva ou premial orientadora de setores relevantes via atividade contratual, ordenadora, gerencial ou fomentadora.

Regulation and/or regulatory modeling are notoriously important for a list of values and assets of a nation, since it is from them that the state manages, guarantees and distributes these assets, which is corroborated in the lesson below:

> O certo é que o conceito de regulação é um pressuposto do Estado Regulador, que, sinteticamente se apoia: a) no Estado garante dos direitos fundamentais, inclusive a igualdade de condições competitivas; b) no Estado de intervenção permanente e simbiótica; c) no Estado Administrativo, por sua apresentação de agigantamento da função de planejamento e gerenciamento das leis; d) no Estado legitimado na figura do administrador, do processo de gerenciamento normativo da realidade ou do espaço público regulador; e) no Estado de direitos dependentes de sua conformação objetiva em ambientes regulados; f) no Estado Subsidiário, em sua apresentação de potencialização da iniciativa privada via funções de fomento, coordenação e fiscalização de setores relevantes; e g) no conceito de regulação como processo de realimentação contínua da decisão pelos efeitos dessa decisão, reconformando a atitude do regulador em uma cadeia infinita caracterizada pelo planejamento e gerenciamento conjuntural da realidade (Aranha, 2021, p.39).

Regulation is therefore a force for systemic coherence – for restoring order – especially when a social system is dysfunctional, as can be seen in the asynchrony between the law (normative system) and the rapid evolution of new technologies (reality).

3 THE THEORY OF RESPONSIVE REGULATION

The existence and use of the term "responsive regulation" precedes the conception and configuration of a theory with the same name, such as the public hearings for the Aviation Regulatory Reform of 1977 (USA, 1977), in which the expression was used in the literal context of greater harmony between the regulator and the demands of the regulated. However, the theory we are dealing with here is restricted to the one devised by John Braithwaite and Ian Ayres (1992) at the end of the 20th century.

It was in the 1980s that John Braithwaite, studying regulation in the American political context of the time, concluded that conceptual changes in the form of regulation were necessary, since they were not being sufficient in supporting the state in its role of protecting the public interest.

A few years later, Braithwaite teamed up with Ian Ayres to produce another fundamental work on Responsive Regulation (Ayres; Braithwaite, 1992).

They set out a regulatory theory as a response to the rhetoric of opposition between deregulation and more intense regulation, in honor of the new reality of

regulatory flow, or also called institutional flow. This theory was called the theory of responsive regulation.

Aranha refers to and explains the Theory of the Responsive Regulation of Braithwaite and Ayres in the following terms:

> A teoria da regulação responsiva propõe que a regulação seja compreendida como um esforço de criação de incentivos morais para o cumprimento da lei. Na tentativa de ultrapassar o debate entre regular e desregular, Ayres e Braithwaite propõem a chamada regulação responsiva (responsive regulation), segundo a qual a efetividade da regulação depende da criação de regras que incentivem o regulado a voluntariamente cumpri-las, mediante um ambiente regulatório de constante diálogo entre regulador e regulado (Aranha, 2021, p.145).

The Theory of Responsive Regulation, conceived primarily by John Braithwaite and Ian Ayres at the end of the 20th century, was originally published and presented in the works of 1992 To Punish or Persuade: Enforcement of Coal Mine Safety by Braithwaite and Responsive Regulation: Transcending the Deregulation Debate by Ayres and Braithwaite.

An analysis of the key points of these two works is of inescapable importance in order to understand the Theory of the Responsive Regulation.

In the work of 1992 mentioned above, Braithwaite investigates the effectiveness of punishment and persuasion strategies in the application of safety laws in coal mines in the United States. This is an empirical study that contributed significantly to the embryonic configuration of the Theory of the Responsive Regulation. The use of empirical data collected directly from the field was the methodology that was able to provide a solid basis for the conclusions of the author.

Among the key elements characteristic of the work is the comparison of regulatory strategies, i.e. between punitive strategies (traditional command and control) and persuasive strategies (modern, adaptable and flexible with an emphasis on education and cooperation).

It was in this work that the concept of pyramidal enforcement was introduced into the field of regulatory modeling. The way it works is based on the idea that regulators should start with mild methods of persuasion and only escalate to more severe punishments when the initial methods fail to produce results. This model proposes a staggered and adaptive structure for the application of rules,

regulations and laws, characterized by a dialectical, gradual and flexible approach.

Another fundamental and characteristic point of the theory presented is the dialog between regulators and the regulated, in order to promote a real understanding of the operational complexities of the area to be regulated, with a view to develop effective standards.

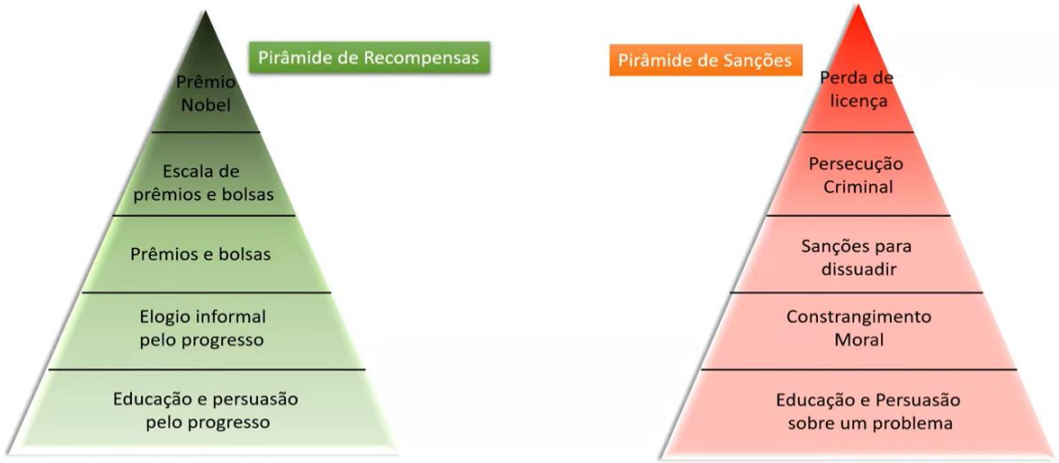
In summary, as a result of the comparison made, the work presents evidence that, although the (traditional) command and control approach of a punitive nature is necessary, the strategies of persuasion and education have proved to be more effective in promoting lasting change, in other words, with greater efficiency and effectiveness.

Braithwaite and Ian (1992) explain that the effectiveness of regulation depends mainly on something beyond its own existence, i.e. it depends on how it is applied. The authors therefore highlight a model of responsive regulation, which dynamically adapts to the circumstances and behaviors of the regulated.

The book further develops the concept of pyramidal enforcement introduced by Braithwaite in his previous work, but this time the model suggests that regulators should start with gentle interventions, adding advice, guidance and also persuasion, and only then escalate to more severe sanctions.

With this in mind, they present the model in two perspectives: a Pyramid of Rewards and a Pyramid of Sanctions. The following figures illustrate the ideas of the authors:

Figure 1 – Pyramid of Rewards and Pyramid of Sanctions



Source: Braithwaite (2011).

It is important to note the staggered adoption of the measures, which takes place from the bottom of the pyramid to the top, with persuasion and counseling measures at the bottom of both pyramids,

The choice of pyramid to be used in practical action will depend on the counterpart of the regulated party, which, if it displays positive and more collaborative (virtuous) behavior, will follow the reward pyramid. Otherwise, the regulator will first opt for advice, dialog and persuasion, which, if responded to negatively or indifferently, will be followed by the higher levels of sanctions.

One of the points that deserves special attention is that which calls for the attribution of Rewards, an aspirational element, in which the authors explain that regulators should consider not only the costs of regulation, but also the potential benefits of promoting ethical behavior, social function and the practice of civic virtue.

On another point, the dialog between Regulators and Regulated is highlighted. In this sense, Ayres and Braithwaite (1992) point to the dynamics of mutual cooperation, which can lead to more voluntary compliance with the law.

The book also emphasizes the Contextualized and Flexible approach, in the sense that regulation should be adaptable and sensitive to the context, rather than a rigid, "one size fits all" approach. On the contrary, regulation should be shaped to suit the specificities of the sector.

In summary, this latest work presents the Responsive Regulation as an alternative to the rigidity of traditional forms of regulation, while challenging regulators to act more creatively and sensitively in the adoption and application of their strategies, aspects that resonate in contemporary regulatory policies.

The doctrine on this subject is as follows:

> A teoria da regulação responsiva se afasta de discussões sobre a razão de ser da regulação para afirmar-se como uma teoria que, em seu nascedouro, procurou transcender o impasse entre posições extremadas que advogavam, de um lado, a intensificação da regulação estatal e, de outro, a desregulação (Aranha, 2021, p.118).

The Theory of the Responsive Regulation is a theoretical milestone in the field of regulatory models, because it presents the creation of moral incentives in a responsive manner as a central element in ensuring compliance with the law by those regulated.

In this sense, it is observed:

> Ayres e Braithwaite propõem a chamada regulação responsiva (responsive regulation) segundo a qual a efetividade da regulação depende da criação de regras que incentivem o regulado a voluntariamente cumpri-las, mediante um ambiente regulatório de constante diálogo entre regulador e regulado. A regulação, para Braithwaite, consiste em um conjunto de atividades distribuídas em uma pirâmide em que, na base, encontram-se atividades persuasivas da conduta do regulado, enquanto, no topo, um conjunto de penas draconianas de condutas indesejadas (Aranha, 2021, p.145).

The responsive regulatory model provides and promotes a space for integration and mutual intervention, i.e. reciprocity and convergence between state and private regulation, thus creating an environment conducive to generating better and more appropriate regulatory architecture alternatives.

In this case, there is an incentive for the state to be more participative in private initiative, as well as for private entities to be closer to the state, in a dynamic of cooperation for regulatory compliance and social good.

As it can be seen, the Theory of the Responsive Regulation presupposes state action that is closer to the regulated entity and continues to look for new strategies when the regulator is confronted with recurrent failures, assuming that most regulatory initiatives fail in the majority of application contexts (Braithwaite, 2011, p. 22.).

It is worth remembering that traditional state regulation (command and control) is based on prescriptive command and control rules and the use of punishment as a way of ensuring compliance. This is a type of punitive regulation, in which the force of law is imposed in order to curb or prohibit specific conduct, while demanding positive actions under conditions and/or restrictions. The validation of the norm is supported by criminal sanctions, the purpose of which is to control not only the quality of a service or the form of production, but also the allocation of resources and products (Souza; Adamczyk, 2022).

However, instead of a purely punitive or persuasive perspective, responsive regulation suggests that the ideal regulatory standard is based on the adoption of flexible and adaptable strategies. Regulation should present clear standards and minimum requirements, while also providing a list of incentives and awareness programs, with the aim of encouraging voluntary compliance.

It is not a question of banishing the punitive perspective and its mechanisms, but of favoring persuasive approaches that nurture an environment conducive to compliance with regulations.

Research of Braithwaite showed that regulated entities are not exclusively motivated by an economic logic of maximizing results, advantages and profits (Braithwaite, 1985). Other variables relating to the motivation of those regulated were identified, which serves as a warning for the actions of regulators, requiring the adoption of different regulatory strategies depending on the nature of the motivations.

In this sense, it was observed that the regulated are even driven by a sense of social responsibility, since the Theory of the Responsive Regulation starts from the premise that "regulated actors are combos of contradictory commitments to values of economic rationality, respect for the law and responsibility in business" (Ayres; Braithwaite, 1992, p. 24).

On this point, depending on the motivation that drives the attitude and behavior of the regulated entities, it is worth noting:

> Não era possível desenvolver uma política sólida de implementação da regulamentação a menos que se entendesse o fato de que, às vezes, os agentes empresariais eram fortemente motivados por ganhar dinheiro e, às vezes, eram fortemente motivados por um senso de responsabilidade social. Portanto, ele rejeitou uma estratégia regulatória totalmente baseada em persuasão e uma estratégia totalmente baseada em punição. Ele concluiu que os agentes empresariais interagem melhor com uma estratégia de persuasão e autorregulação quando são motivados pela racionalidade econômica. Mas uma estratégia baseada principalmente em punição prejudicará a boa vontade dos atores quando eles forem motivados por um senso de responsabilidade (Ayres; Braithwaite, 1992, p. 24).

Consequently, the core concept of the Theory of the Responsive Regulation is that regulation should be adaptive, flexible and reactive to changes in society. In order to achieve legal compliance, the idea is to favor an environment of mutual cooperation between the regulator and the regulated, reducing the draconian imposition of rules.

In this approach, the theory employs a scale of intervention, also called the "pyramid of intervention", which starts with soft strategies, such as persuasion and education, moving to more severe actions only if the softer approaches fail. It also promotes dialogue and cooperation between regulators and the regulated.

The focus prioritizes adaptability and a proportional response to the behaviors of regulated entities, and the approach can vary depending on the response and behavior of the regulated party.

It can be seen that Responsive Regulation provides a more plural regulatory ecosystem, with specializations that end up making discussions more in-depth and enabling the development of innovative and appropriate solutions to the regulatory problems faced.

This dynamic makes Responsive Regulation an appropriate and applicable measure in sectors and realities that are rapidly evolving, such as new technologies and especially the use of artificial intelligence systems, where rigid rules can quickly become outdated and obsolete.

4 RESPONSIVENESS IN THE BILL NO. 2.338 OF 2023, WHICH PROVIDES FOR THE USE OF ARTIFICIAL INTELLIGENCE IN BRAZIL

In light of the Theory of the Responsive Regulation developed by Ian Ayres and John Braithwaite, presented above, we must now identify fragments of responsive regulation in the Bill 2.338 of 2023[3] – Bill on the use of artificial intelligence in Brazil.

Debates on the subject of artificial intelligence in the Brazilian legislature began with the Bill No. 5,051 of 2019, followed by Bill No. 21 of 2020, both approved by the Chamber of Deputies. This was followed by Bill 872 of 2021. By order of the President of the Federal Senate, via the Act No. 4 of February of 2022, in view of drafting a more technically refined bill, the Commission of Jurists was set up to prepare a draft substitute for the mentioned bills.

The commission was made up of eighteen renowned jurists[4], who worked diligently for almost nine months and held a series of public hearings, as well as an international seminar, listening to more than seventy experts on the subject, representing various segments: organized civil society, government, academia and the private sector.

Finally, on December 6th, 2022, the Commission of Jurists presented its final report, along with a draft law to regulate artificial intelligence. It is from this legal

[3] Brasil, 2023.

[4] O Ministro do Superior Tribunal de Justiça, Ricardo Villas Bôas Cueva (Presidente); Laura Schertel Ferreira Mendes (Relatora); Ana de Oliveira Frazão; Bruno Ricardo Bioni; Danilo Cesar Maganhoto Doneda (in memoriam); Fabrício de Mota Alves; Miriam Wimmer; Wederson Advincula Siqueira; Claudia Lima Marques; Juliano Souza de Albuquerque Maranhão; Thiago Luís Santos Sombra; Georges Abboud; Frederico Quadros D'Almeida; Victor Marcel Pinheiro; Estela Aranha; Clara Iglesias Keller; Mariana Giorgetti Valente e Filipe José Medon Affonso. Não poderia deixar de agradecer, ademais, ao corpo técnico do Senado Federal, em especial à Consultoria Legislativa e aos servidores que prestaram suporte ao colegiado: Reinilson Prado dos Santos; Renata Felix Perez e Donaldo Portela Rodrigues.

text that we will highlight provisions and fragments with responsive quality, for the purpose of this work.

It is worth noting that the PL 2.338 of 2023 has predominantly adopted risk-based regulation and rights-based regulatory modeling. However, elements of responsiveness (the core of responsive regulation) can be identified:

Adaptability to the changing reality and the regulated environment: the law states that the list of artificial intelligence systems of excessive risk or high risk will be updated, identifying new hypotheses (article 18). From another point of view, the law guarantees that the competent authority may establish other criteria and elements for the preparation of the impact assessment, which, although not provided for in the law, may be relevant to the regulated reality, which is constantly evolving. To this end, the law also provides for the inclusion and participation of the different social segments affected, depending on the risk and economic size of the organization (article 24, § 3).

Cooperation between the entities involved: it is possible to notice this characteristic because the law defines that the competent authority may adopt different criteria and elements, in view of the preparation of an impact assessment, based on the participation of different social segments affected (article 24, § 3). From another angle, the bill adopts collaborative dialog as an attribute in the creation and updating of the Brazilian Artificial Intelligence Strategy (article 32, II);

Dialogue between regulator and regulated: regulator and regulated will have space for dialectical correlation when it comes to updating the algorithmic impact assessment, in addition to public cooperation, and also through the consultation procedure with interested parties (article 25, § 2);

Dissuasive, aspirational element with rewards for precautionary conduct (pyramid of rewards): the legal text encourages good practices on the part of the regulated entities at various points, giving them the possibility of individually or through associations, formulating codes of good practice and governance that establish the organizational conditions, operating regime, procedures, safety standards, technical standards and specific obligations for each implementation context. In this sense, it is also worth highlighting the incentive to develop educational actions, internal supervision and risk mitigation mechanisms, as well as the appropriate technical and organizational safety measures for managing the risks arising from the application of AI systems (article 30 caput).

Recognition and encouragement is given to voluntary adherence to a code of good practice and governance, which is valued as an indication of good faith on the part of the agent, and which will be taken into account by the competent authority for the purposes of applying sanctions (art. 30, § 3).

There is also a clear incentive to adopt good practices, even codes of conduct, in the development and use of artificial intelligence systems (art. 32, IV);

Scaling of measures (pyramidal enforcement): the scalability of measures, a characteristic of Responsive Regulation, can be seen in the fact that the legal text establishes that sanctions will only be applied after an administrative procedure in which the right to an adversarial hearing has been amply granted, and also gradually and individually, in accordance with the peculiarities of the specific case (art. 36 § 1) and taking into account a universality of parameters of a responsive nature. 36 § 1) and taking into account a universality of parameters of a responsive nature, namely the good faith of the offender, the cooperation of the offender, the repeated and demonstrated adoption of internal mechanisms and procedures capable of minimizing risks, even the analysis of algorithmic impact and effective implementation of a code of ethics, the adoption of a policy of good practices and governance, the prompt adoption of corrective measures, as well as recidivism (items in § 1 of the art. 36).

Therefore, as can be seen above, PL 2.338 of 2023 has selected several points and provisions[5], contains elements of responsiveness in its content, all of which are linked, correlated and integrated with the Theory of the Responsive Regulation.

FINAL CONSIDERATIONS

As you can see, the asynchronism between law and reality is nothing new; however, it has become considerably more pronounced because the progress of new technologies, incorporated into social life, has taken place on a scale of unmeasured and unexpected speed, as in no previous era, with emphasis on the evolution of artificial intelligence systems.

In this sense, the need for the law to constantly adapt to technological changes is not forgotten, seeking to balance security and development, as well as the benefits and risks that computer innovations offer society.

The asynchrony between the law and contemporary social and technological realities is a significant challenge, as it requires a delicate balance between

[5] Brasil, 2023.

preserving the stability and predictability of the legal system and its necessary evolution to keep up with changes in society. The task facing jurists, legislators and legal operators is to create and interpret laws in a way that respects traditional legal principles, while being sensitive to the current demands and challenges of the modern world.

What is needed is a dynamic approach that combines legal foresight, rapid adaptation to new technological realities and a constant dialog between the fields of law and technology. Only in this way will we be able to ensure that laws not only accompany but also promote technological development in an ethical and equitable manner, above all while safeguarding fundamental and democratic rights.

In this respect, responsive regulatory modeling, with its adaptive approach and sensitivity to the context in which it is applied, provides a scenario in which the legal institutional universe is better adapted to technological innovations, especially with regard to the use of artificial intelligence systems. In response to the problem formulated, better synchronization between law and technological evolution.

Whether for state action or for the enactment of laws, Responsive Regulation stands out for its elementary characteristics, namely: persuasion as an element promoting legal compliance, adaptability to the changing reality and the regulated environment, cooperation between the entities involved, dialogue between regulator and regulated, the dissuasive and aspirational element with the rewarding of precautionary conduct (pyramid of rewards), as well as the gradual escalation in the application of measures and sanctions (pyramidal enforcement).

Therefore, the formula, the architecture, the responsive regulatory modeling, in our opinion, based on the theoretical framework demonstrated, as well as on this study, are the best way to regulate the rapid advance of new technologies, especially those that refer to the use of artificial intelligence systems, because they have this aspirational and sanctioning scale, promoting interaction, cooperation and dialectics in response to normative instruments and the achievement of compliance.

The presence of incentives for strategic behavior in terms of safety on the part of the regulator and the regulated gives rise to the promotional aspect of civil liability.

We are no longer living in a time of the law of damages, but of a law beyond damages, so that nowadays it is not just a question of compensating, punishing or preventing, but of rewarding virtues, with a view to encourage the passage from the ethical minimum to the ethical maximum in life in society.

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