

THE USE OF ARTIFICIAL INTELLIGENCE IN REGULATORY ACTIVITY: A PROPOSAL FOR SUSTAINABLE NATIONAL DEVELOPMENT

William Ivan Gallo Aponte¹

Universidad Externado de Colombia (UEXTERNADO) |

Vivian Cristina Lima López Valle²

Pontifícia Universidade Católica do Paraná (PUC-PR) |

Rafaella Natály Fácio³

Instituto de Direito Romeu Felipe Bacellar |

ABSTRACT

In this work we aimed at analyzing the regulatory function from the perspective of sustainable national development, intertwining the notion of regulatory quality or “smart regulation” and its instruments, specifically the regulatory impact analysis (RIA) carried out with the support of artificial intelligence (AI). We adopted a deductive, descriptive and comparative method, combined with the research technique of indirect documentation of bibliographic and normative references. We concluded that the use of AI in the field of RIA is feasible and desirable to stimulate regulatory

¹ Master student in Law and Economic Development at PUC-PR. Lawyer graduated from Universidad Externado de Colombia. CAPES Scholarship – Brazil. Researcher and professor at UEXTERNADO. Active researcher at the Research Group on Public Policies and Human Development (NUPED) at PUC-PR, from the research group on Environmental Law at UEXTERNADO. Leader of the research group Public Services and Digital Public Administration (GESPAD), from the Faculty of Law of PUC-PR. Deputy Editor of Revista Eurolatinoamericana de Derecho Administrativo. Vice-president of Red Iberoamericana Juvenil de Derecho Administrativo (RIJDA). ORCID: <http://orcid.org/0000-0001-7157-6291> / e-mail: williamg.aponte@gmail.com / william.gallo@uexternado.edu.com.

² Postdoctoral fellow at Universitat Rovira i Vigili (URV). PhD and Master in State Law from the Universidade Federal do Paraná (UFPR). Specialist in Public Procurement from the University of Coimbra (UC). Specialist in Administrative Law from the Instituto Brasileiro de Estudos Jurídicas (IBEJ). Full Professor of Administrative Law at PUC-PR. Deputy Coordinator of the Law Course at PUC-PR. Coordinator of the Specialization Course in Bids and Contracts at PUC-PR. Member of the Instituto Paranaense de Direito Administrativo and of the Instituto de Direito Romeu Felipe Bacellar. Member of the Public Management Committee of the Brazilian Bar Association – Paraná Section. Lawyer specialized in Public Law. ORCID: <http://orcid.org/0000-0002-5793-2912> / E-mail: vivian.lima@pucpr.br

³ Postdoctoral fellow in Administrative Law from the Instituto de Direito Romeu Felipe Bacellar. Bachelor degree in Law from UFPR. Founding member of Red Iberoamericana Juvenil de Derecho Administrativo (RIJDA) and of Instituto de Direito Administrativo Penal (IDASAN). Lawyer at Escritório Bacellar & Andrade. ORCID: <https://orcid.org/0000-0001-8580-1488> / e-mail: rafaellafacio@gmail.com

improvements and contribute to sustainable national development, considering the compatibility between both and their ability to provide a more technical and effective regulatory decision. Such practice, however, must be effective according to two assumptions: (1) first, regarding the extension of the possibility of using AI as a substitute for the public agent decision: as such, it should be alerted and follow up; (2) second, in relation to the mode of implementation of AI, (2.1) the sequence of logical steps should be disclosed; and on the algorithmic decision, (2.2) the provisions of the General Law on Data Protection must be observed, especially with regard to the processing of personal data by the public power.

Keywords: artificial intelligence (AI); regulatory activity; Regulatory Impact Analysis (RIA); regulatory quality; sustainable development.

A UTILIZAÇÃO DA INTELIGÊNCIA ARTIFICIAL NA ATIVIDADE REGULATÓRIA: UMA PROPOSTA PARA O DESENVOLVIMENTO NACIONAL SUSTENTÁVEL

RESUMO

O objetivo deste trabalho é analisar a função regulatória a partir da perspectiva do desenvolvimento sustentável nacional, entrelaçando a noção de qualidade regulatória ou “Smart regulation”, e seus instrumentos, especificamente a Análise de Impacto Regulatório (AIR), realizada com o apoio da inteligência artificial (IA). A metodologia adotada foi dedutiva, descritiva e comparativa, combinada com a técnica de pesquisa de documentação indireta de referências bibliográficas e normativas. Por fim, conclui-se que o uso da inteligência artificial no campo da Análise de AIR é viável e desejável para incrementar as melhorias regulatórias e contribuir para o desenvolvimento nacional sustentável, considerando a compatibilidade entre ambos e sua capacidade de proporcionar uma decisão regulatória mais técnica e eficaz. Tal prática, entretanto, deve ser eficaz de acordo com duas premissas: (1) primeira, em relação à extensão da possibilidade de usar a inteligência artificial para substituir o agente público, nesse sentido a possibilidade da AI substituir a decisão do agente público deve ser anunciada e acompanhada; (2) segunda, em relação ao modo de implementação da inteligência artificial, (2.1) deve-se dar publicidade a sequência das etapas lógicas. Da decisão algorítmica; (2.2)

as disposições da Lei Geral de Proteção de Dados devem ser observadas, especialmente no que diz respeito ao processamento de dados pessoais pela autoridade pública.

Palavras-chave: *Análise de Impacto Regulatório (AIR); qualidade regulatória; desenvolvimento sustentável; função regulatória; inteligência artificial (IA).*

INTRODUCTION

In March 2011, the Brazilian Health Surveillance Agency (ANVISA) issued a resolution on quality assurance of imported drugs. Meanwhile, in the process of preparation, review and approval of the standard, it was realized that it contained a provision that raised doubts about the need for maintenance of reference samples by importers. It was precisely because of such occurrences that the agency began to pay attention to the increase of regulatory quality, developing its first Regulatory Impact Analysis (RIA) (ANVISA, 2018).

Regulation is the object of multiple transformations, understandings and incorporations, including vanguard in technological issues, all aimed at investigating which is the best option to become more effective and less costly, both in terms of normative production and in relation to the costs borne by all the actors affected. To achieve this goal, it is increasingly necessary, both in Brazil and in the international community, that the publication of norms is not erratic, i.e., that it bets between error and rightness. Above all, it must be preceded by specific methodologies that take into consideration all relevant information, such as the opinion of companies and users, as well as expressive amounts of data that provide the manager with a conscious decision making based on a reliable picture of reality.

1 THE ROLE OF THE REGULATORY FUNCTION FOR SUSTAINABLE NATIONAL DEVELOPMENT

The construction of Administrative Law in the French context of the 19th century is based on the paradigm of legal positivism, according to which the actions of the Public Administration were based solely on law. Thus, the will of the sovereign was replaced by the general will, whose maximum expression, according to Rousseau's dogma, was the law. The space for selection or administrative choice was therefore rather limited in

that it was linked to the subsumption of strict legal precepts (GUERRA, 2018, p. 60). This archetypal decision began to change with the creation of the French Council of State and with the strengthening of the administrative machine under Napoleon (WAR, 2018, p. 64). Although, it was only in post-modernity⁴ that it proved unequivocally insufficient

Legal positivism has tried to dissociate itself from the axiology and substantive content in law enforcement with the pretense of becoming a “pure” science. Meanwhile, by dispensing with such values or assumptions, it has ended up substantiating the most catastrophic historical errors of human abuse. Therefore, it is urgent to re-establish the law on different bases, which express values, purposes and capital interests that are not available to human nature. This culminated in neoconstitutionalism, a model characterized by constitutions with a broad catalog of fundamental rights, as well as values and principles that shift the notion of legality to the notion of juridicity (CARBONELL, 2003).⁵

The Brazilian fundamental law of 1988, as the post-modern constitution it is, reflects this transformation: it requires an Administrative Law according to which the State administers the public interests constitutionally attributed to it beyond compliance with the legal rules emanating from the legitimate bodies (MOREIRA, 2011, p. 19-20). Finally, it calls for a post-modern administrative law (MOREIRA, 2008). For this reason, it is important to study the contours of this postmodern administrative law specifically in relation to independent regulation, since they are special in relation to other administrative acts practiced in the exercise of the administrative function. This is because the laws that instituted the regulatory system have a lower normative density, which necessarily opens space for greater discretion on the part of the Public Administration. And, moreover, this factor increases the complexity of analyzing the legality of acts, taking into account that the absence of a symmetrical subsumption to the law requires more complex assessments of proportionality, reasonability and impartiality (MOREIRA, 2008, p. 9).

The state regulatory model was confirmed in Brazil with the enactment of the 1988 Brazilian Constitution (GUERRA, 2018, p. 139). It should be

4 The term post-modernity was popularized by Jean-François Lyotard and refers to the new conceptions that emerged after World War II, as well as the subsequent transformations in the 1980s and 1990s: In: (LYOTARD, 1985) (GUERRA, 2018, p. 116).

5 One of the authors who mostly investigated neoconstitutionalism was Miguel Carbonell. According to the author, the subject can be analyzed on three levels: (i) Constitutional texts, which are currently more substantive, and analyses more values, fundamental rights, and principles; (ii) interpretation and application of constitutional norms, by applying more open methods than syllogism and subsumption; and (iii) new theoretical models for understanding the constitution and the law as a whole.

clarified that, reaffirming the regulatory model, it is not intended to reconcile the indefensible idea that the State can dispense with the provision of public services granted to it, replacing them with mere regulation, since such understanding has no constitutional support.⁶ As established in art. 175 of the Constitution, the Public Power is responsible for providing, and not just “guaranteeing” or “regulating” the provision of public services. Against this understanding, Odete Medauar states that although the notion of public service is rethought and even with the purpose of “entering economic data, competition, private management,” the presence of the state can never be suppressed (MEDAUAR, 2003, p. 126).

State regulation can be understood in a broad or strict sense. In the broad sense, it is equivalent to any position that the state adopts oriented to the correct functioning of a given market, including even the monopolization of an activity. In the strict sense, regulation is equivalent to a specific state action through which the state acts as regulator and controller of the exercise of an economic activity, whose objective is also to guarantee the best possible functioning and development of the regulated market. The proper functioning of the market is not only related to commercial interests, but also to the interests of service users and the state itself (SCHIRATO, 2013, p. 4-5).

In other words, the goal of ensuring development is immersed in the very concept of regulation. But what would be sustainable development? It is a controversial word, without a legal concept, to which many meanings have already been attributed. Until the 1960s, a structurally economic view of development prevailed, while the precepts of the 1988 Brazilian Constitution gave the term a meaning closely linked to the value of equality (HACHEM, 2013, p. 150). Beyond economic growth, the notion represents a process of continuous elevation of citizens’ lives, as well as social and political growth (GABARDO, 2009, p. 243). Moreover, development must embrace the present generation as well as future ones, so it must also be sustainable (SCHIER, 2019, p. 42-43).

Thus, long before the regulatory function gained prominence in the context of the administrative reform of the 1990s, whose ideological nature

⁶ Some authors take the opposite view, arguing that the powers to provide public services can only be exercised by “ensuring” that the activity is provided in some way: (SCHIRATO, 2012, p. 138-139); or that this activity is “in some way assured by the state: (MOREIRA NETO, 2000, p. 140-141). However, the legal content of state ownership of public services does not include the understanding that the state plays a role of guarantor, neither from regulatory activity nor by any other means. In this sense, Mello (2017) and Schier (2016).

of development was notoriously neoliberal,⁷ the dogmatic range about it must be based on several aspects, in addition to the economic, as previously listed: the social and political aspects. Nothing is more natural than that, considering the regulatory function of the state, the commercial interests of private agents and also the interests of service users (SCHIRATO, 2013, p. 2-3).

The juxtaposition among regulation, development and sustainability was well observed by Juarez Freitas, for whom the regulatory function aims to defend, in the long run, the preponderance of principles, objectives and fundamental rights, taking into account “multidimensional welfare in the present, without compromising welfare in the future” (FREITAS, 2011, p. 278-279). For the author, the 21st century requires a new administrative theory of state regulation as part of a sustainability agenda, and must be based, among other things, on good regulation (FREITAS, 2011, p. 278-254). In the end, sustainability requires a consistent, long-term regulatory range (FREITAS, 2011, p. 255).

Thus, as indicated by Vitor Rhein Schirato (2013, p.4), the incorrect performance of this function causes instability in relations between the affected parties and hampers the development of the regulated sector, which makes it impossible to adopt long-term sustainable actions. The lack of exemption and political influence, for example, implies non-exempt and non-technical decisions, because the principal oriented element is not the quality or long-term sustainability of the sector’s regulated activity.

Despite the importance of regulation for sustainable development, the current Brazilian regulatory system is facing a deep crisis. For Vitor Rhein Schirato, there are at least three basic premises that guarantee its good functioning: (i) the independence of regulatory authorities; (ii) their decision-making process, which should be technical and open to dialogue with other players in the regulated sector; and (iii) respect from control bodies (internal and external) for technical decisions issued by regulatory authorities (SCHIRATO, 2013, p. 1-2). All of them are spoiled: (i) the independence of regulatory authorities is increasingly mitigated by political influence; (ii) the decision-making process of agencies is threatened by the lack of both technicity and respect of their leaders for the rules of the process; and (iii) control bodies often interfere with the discretion that is specific of agencies (SCHIRATO, 2013, p. 2).

In this context, a paradigm shift in the form of regulatory public

⁷ The observation was made by Daniel Wunder Hachem, who pointed out: Luiz Carlos Bresser-Pereira as a Brazilian example, one of the main axes of the neoliberal reform of the Brazilian State in the 1990s; and also one of the great authors on the subject of development: Hachem (2013, p. 150).

administration action is essential, involving “a much more complex process of identifying and weighing all the public interests underlying the decision, with the aim of issuing a balanced final statement, for the proper functioning of the regulated sector” (SCHIRATO, 2013, p. 9). In this article we propose the incorporation of RIA with IA, as a support to the regulatory decision, to collaborate on the realization of the technical budget of its content.

2 SMART REGULATION: CONCEPT, TRANSFORMATIONS, INSTRUMENTS AND BRAZILIAN AND INTERNATIONAL EXPERIENCE

The concept of smart regulation has been understood indiscriminately. In most cases, it is understood as an action or effect of regulating or ordering a certain activity or service with a given skill, ability or experience, according to the literal meaning of its words. Following this general line, we can understand such notion as a mechanism capable of combining it with protagonism, dynamism and coordination (SILVA, 2004, p. 343).

Smart regulation is also related to the concept of effectiveness, because of the increase of the real processes knowledge, functions and structures of the economy, education and health, among others. So there is the promotion of respect for the peculiarities of each one of the social subsystems. Based on this assumption, the solution to problems related to the adequacy of regulation to a certain area will be conceived as “more intelligent” (ARAGÃO, 2000, p. 276).

To better understand the importance of the notion of regulatory quality (MORENO; GALLO, 2019) and how it can be effective in legal systems, especially in Brazil, two analyses are particularly important: (i) a historical and theoretical view of the notion, highlighting how it emerged and how it was later transformed into its current conception; (ii) and another specifically on one of its instruments to make it effective, the RIA, highlighting the experience of Brazil and other countries in its implementation.

The concept of smart regulation was introduced in 1998 by Neil Gunningham (2017, p. 133-149) as an alternative proposal to understand regulation, through which different types of social control are accommodated in a flexible, creative and innovative manner. Thus, the application of smart regulation would allow the participation of various actors who, as previously highlighted, have a legitimate interest in the regulatory process

and should have their participation ensured. Open participation results in more effective and efficient measures than traditional types of regulation, in which the state only participates and decides.

In the context of interaction among the various actors previously mentioned, Gunningham points out that the traditional conception of the regulatory process in which the state acts as regulator and companies as “regulated” third parties undergoes a substantial transformation. The tendency is to incorporate these stakeholders through multiple mechanisms that enable an efficient integration of standards or parameters, in most cases international, with the objective of obtaining quality results (GUNNINGHAM; SINCLAR, 2017, p. 134).

Such tendency was proposed in order to analyze the lack of effectiveness of solutions designed for the complex environmental problems that the world is suffering. Indeed, it has assumed general proportions, in the sense that it must be incorporated into the various regulated segments, which is why it can be said that it is a new type of public policy (TOFFELSON, 2008), whose main objective is to respond effectively to citizens’ needs.⁸

For Michael Moran, unlike Gunningham’s proposal, smart regulation emerged as an answer to a critical question related to the transition of government strategies in the most subtle way possible (MORAN, 2002, p. 391-413). This concept further expands the notion of smart regulation. Initially, as we have seen, the idea was inherent to environmental issues and adopted in several sectors, with the objective of guaranteeing the participation of those legitimately interested. In a second moment, the objective is not only to guarantee the participation of other actors, but above all to ensure the effectiveness of the regulation.

This is precisely the connotation of smart regulation adopted in this work, according to which there must be regulatory quality in all regulated sectors, the purpose of which is not only to increase the participation of stakeholders, but also to increase the technicity of decisions. Thus, despite the imprecision of the term regulatory quality, we could say that the notion is built on several other principles besides social participation, such as: preference for the variety of regulatory instruments, option for alternative measures to avoid excessive regulation (MASSIMINO, 2015, p. 39) (and not deregulation) and, finally, the search for the maximization

⁸ This is the case of Colombia, where the concept has been incorporated as public policy (COLÔMBIA). Departamento Nacional de Planejamento (DNP), 2018).

of satisfactory results (GUNNINGHAM; SINCLAR, 2017, p. 134).

In the same vein, the Organization for Economic Cooperation and Development (OECD) conceives smart regulation as an instrument to reduce the multiplicity of regulatory sources that affect the same case. This causes legal uncertainty insofar as the recipients of the standard cannot be sure which rule should be followed and obeyed (KLINGBEIL, 2019) (CONSELHO EUROPEU, 2018).

In the United States, regulatory improvement instruments were developed based on executive orders (BETANCOR, 2009, p. 107). The practice was initiated in that country under the command of then President Ronald Reagan, who issued orders determining that the regulation must be preceded by a cost-benefit analysis. There was some skepticism about the proposal, as the purely economic analysis was not compatible with the regulation of issues such as the environment and health. Even so, Presidents Bill Clinton and Barack Obama continued the practice satisfactorily, as could be observed that the methodology helped to identify regulations that did not fulfill their purpose and to welcome other good ideas in terms of effectiveness (SUSTEIN, 2019).

These instruments, initially conceived in the United States, were recognized as good practices by the OECD in 1995, and since then the international body has recommended their adoption by other member countries. These basically consist of a regulatory agenda, analysis of normative or regulatory impact, ex ante or ex post evaluation, competition advocacy, standard setting and public consultation. The objective of this work is to investigate RIA. Therefore, it goes deeper into the use of the tool in Brazil, also comparing it with the experience of other countries.

Regulatory activity gained prominence in Brazil with the administrative reform of the 1990s and the growing delegation of public services. The ideology proposed by the then government was focused on “reducing the size of the state.” In this context, regulatory agencies were conceived (or at least that was the intention) as autonomous and independent institutions, whose objective was to improve the range of regulations in order to obtain more effective results (RAGAZZO, 2018). This need inaugurated “a new phase in the debate on regulatory improvement in Brazil” (RAGAZZO, 2018, p. 516), constituting a paradigm for the implementation of tools with a tendency towards systematization and coordination to increase regulatory quality.

In this context, Decree number. 6,062 created the Institutional Capacity

Strengthening Program for Regulatory Management (PRO-REG) in 2007. In terms of concrete initiatives, it is important to mention that several agencies, such as National Land Transport Agency (ANTT), National Health Surveillance Agency (ANVISA) and National Water Agency (ANA) started to carry out RIA (in 2009, 2010 and 2015, respectively), albeit in a punctual and not mandatory manner (BRASIL, 2018).

RIA, as its own name announces, consists of the process⁹ of analyzing the impacts of the regulatory standard and may be performed before or after its promulgation, considering that the regulatory decision must be continuously evaluated. The purpose of this tool is, above all, to provide the cost-benefit value of the standard to be issued. The analysis, however, is not just economic, involving also social, political, environmental and cultural aspects (FERREIRA, 2015).

The use of this public management tool for decision-making has promoted a real transformation of the administrative culture (CASTRO, 2014). In addition to the increase in relation to its intrinsic purpose, which is to enhance the effectiveness of regulation (MENENGUIN & BIJOS, 2016, p. 7), regulatory improvement is also verified in the following aspects: (i) increase in the participation of interested parties, considering the process of this enterprise; (ii) increase in the technicity of the decision, clearly delimiting discretion (BLANCHET; BUBNIAK, 2017, p. 1-15), avoid the political use of the function; and (iii) establishing clearer standards for the control of the decision-making process (JORDÃO, et al. 2019, p. 75).¹⁰

From the point of view of normative achievement, the implementation of RIA as a mandatory tool is recent. In 2015, a bill was presented that established general guidelines for the implementation of the RIA regarding regulatory decision-making. However, the rule was never sanctioned (BRASIL, 2015). In November 2017, the Federal Government issued Decree number 9,203, which established the implementation of good regulatory practices, including RIA, as a guideline and principle of public governance. In 2018, the Federal Government published the General Guidelines and a Guide for the Development of RIA (BRASIL, 2018), a reference document in which important aspects of implementation, analysis and projection of the regulatory improvement tool are developed.

⁹ The word “process” is chosen instead of “procedure” to emphasize that the participation of interested and affected persons is essential for the institute, aiming not only at the effectiveness of regulation but also at the fundamental rights and guarantees of citizens: (BACELLAR FILHO, 2014, p. 107-135) For an in-depth reading on the processing of the administrative function: (MEDAUAR, 2008).

¹⁰ In this sense, also Bill number 1,539 of 2015 of the Chamber of Deputies establishes the obligation to conduct regulatory impact analysis within the Federal Administration.

In June 2019, Law number 13,848 was enacted, which determines the implementation of RIA for the adoption and proposals to amend regulatory acts of general interest to economic agents, consumers or users of services provided. The interpretation of the tool, in turn, depends on the promulgation of specific regulations. Another regulation that addressed the issue was the so-called “MP of economic freedom,” i.e., the Provisional Measure number 881/2019, currently converted into Law number 13,874 of 2019, which instituted the declaration of economic freedom rights, establishing free market guarantees. The referred rule also requires RIA in cases of issuance or amendment of normative acts of general interest of economic agents or users of public services provided (RODRÍGUEZ-ARANA, 2014), and extends the existence to any agency or entity of the Federal Public Administration, including the autarchies and public foundations.

Considering the initiatives and standards previously mentioned above, it is clear that the progressive inclusion of RIA as a tool for regulatory improvement within the Public Administration is a contemporary and increasingly frequent issue. Thus, Brazil is aligning itself with an international tendency, considering the already diverse experiences of other countries in the matter, which are occasionally mentioned in the sequence.¹¹

In Mexico, the so-called General Law for Regulatory Improvement, enacted in 2018, includes RIA as a tool of the National System for Regulatory Improvement. The objective of the initiative is to ensure that the benefits of regulation outweigh its costs and that regulatory selection be the best alternative for a given problem, without disregarding the general interest (MEXICO, 2018). In Spain, the so-called Common Administrative Procedure Law for Public Administrations implicitly integrates RIA. According to the law, the regulatory rule must be appropriate to the principles of good regulation, promoting the economic analysis of its impact and avoiding the institution of unjustified or disproportionate restrictions to economic activity (JEFATURA DEL ESTADO ESPAÑOL, 2015). And in Chile, the Chilean Guide to Good Regulation was published in April 2019, which incorporates the in all subalegal bills and regulations, proposing a preliminary evaluation to determine the need, the magnitude of the impact and the option with the greatest social benefit (CHILE-MINISTERIO DE ECONOMÍA, 2019).

¹¹ It is important to specify that, unlike Brazil, some countries adopt another name for Regulatory Impact Analysis. For example, in Colombia, it is called Normative Impact Analysis (NIA); in Mexico, Regulatory Impact Statement; in the United Kingdom, Regulatory Impact Analysis (RIA).

Whether in the national or international context, it is clear that the inclusion of RIA, as well as other regulatory improvement tools, is progressively permeating regulatory decision-making processes. In light of this, it is natural to move on to discussions on specific aspects of its application, such as the use of resources and technological means. As this is the central topic on which this document focuses, the next section will specifically address the use of AI in the RIA mechanism.

3 THE USE OF AI IN REGULATORY IMPACT ANALYSIS (RIA): COMPATIBILITY, CONSIDERATIONS AND ASSUMPTIONS

AI is a term whose definition is not univocal, but it is possible to highlight the agreement in at least three of its characteristics: (i) intentionality, in the sense that the algorithmic system does not operate in a passive and relatively autonomous way to perform specific tasks; (ii) intelligence itself, since the system learns in a sequence similar to that of humans; (iii) and adaptability, as it has the cognitive capacity to make adjustments and gathers large amounts of information (FREITAS, 2019, p. 16). Thus, although AI should not be confused with automation, it also must not be equated with human intelligence, as it is the latter that conditions the programming of the former.

Among the many applications of AI to the law that should receive special attention is digital assistance for public decision-making (FREITAS, 2019, p. 19). The issue of the use of AI in the legal system has been increasingly addressed, especially in the area of state regulatory intervention. In this field, the promise is to avoid market failures (such as asymmetric information, abuse of dominant power and negative externalities) and governance failures (such as failure to prevent and protect, and patrimonialism), incorporating “high algorithmic values, in full respect dignity and the right to the future” (FREITAS, 2019, p. 17-18). The promise is tempting, as it seeks to replace an erratic regulatory model that is susceptible to patrimonialism with an excellent model, that is, it seeks to promote the so-called “Smart regulation.”

The incorporation of AI into the regulatory process, within the scope of RIA, contributes to the training of the function, as it helps public decision-making. In this case, its use could optimize the flow of data and information available to the public manager, since it would allow solving

issues that previously required multiple steps, procedures and phases (CORVALÁN, 2017, p. 58). The new technology and the regulatory improvement instrument are compatible in that both are oriented, among other things, to reduce costs and promote systematic and reliable analyzes. The result of the combination of the two will be none other than regulatory quality based on the prioritization of efforts and the simplification of the decision-making process (OECD, 2016, p. 122).

RIA, more than a regulatory tool that allows the assessment of the likely benefits, costs and effects of the standard to be edited, is an auxiliary process for regulatory decision-making (OECD, 2008). Thus, AI gains relevance and importance as the logical process of forming RIA. With the support of the former, data collection and organization can be done intelligently, conducted according to the regulatory problem to be solved. In addition, it is possible to schedule the supply of several alternative solutions to be given by the system itself, which increases the technicity of the regulatory decision and its adherence and according to reality.

A good practical example can be given in the field of urban transport regulation. Assuming that it is empirically observed that a city's public transport system is no longer effective, the regulator should investigate the causes, list possible solutions and have clear criteria for choosing one. Therefore, it is necessary to synthesize a reality that can be learned from countless data. In the hypothetical case, the AI could be used to identify several aspects of the passenger flow: the quantity, the starting point and the point of arrival, peak times, lines and full cars, among others. The solutions can be several: change of routes, inclusion of new lines or cars, encouragement to move around by alternative means (such as bicycles and skateboards) in certain places, among others. This task would be tortuous, expensive and delayed if done with little or no support to the public agent. However, with AI's support in the RIA process it would be quick and accurate.

In other countries, it is possible to clearly observe the combination of AI in the regulatory process. In Australia, adaptation to technological changes is part of the principles of regulation, whose practical application is oriented to the identification of data and instruments that strengthen the best decision of public agents (AUSTRALIA- COMMISSIONER FOR BETTER REGULATION, 2016), in order to improve regulatory processes in terms of evaluation and review of costs and benefits (AUSTRALIA,

2007). The European Commission, in turn, claims that AI, supported by big data¹², creates new possibilities for the analysis of social and economic circumstances (COMISSÃO EUROPEIA, 2015, p. 17). In Moldova, the government has developed a methodological guide for assessing the impact of public policy regulation. It is stated in the document that this presupposes the use of technological means that make it possible to obtain references and consultancies during the impact assessment (suggesting solutions and simulating scenarios, for example). This is only possible thanks to AI (MOLDOVIA, 2009, p. 57).

In general, the introduction of technological tools in the process of identifying problems, alternatives and their impacts constitutes a transformation that requires efforts (MENENGUIN; SILVA, 2017), but converges towards the consolidation of a digital government and public administration (STRINGHINI, 2018), a model in which the verification of successes and failures is more assertive (BRASIL-MINISTÉRIO DO PLANEJAMENTO, 2019).

Despite the numerous benefits derived from AI in the regulation process in the RIA phase, the phenomenon must be analyzed as parsimony in the light of the legal system, especially regarding fundamental rights and guarantees. Therefore, in addition to proposing this practice, in this work we also list the budgets for both. And they are in relation to the: (i) extent of the possibility of using AI; (ii) way of implementing AI.

As for the first aspect, the AI must be implemented without the final decision being replaced by the public agent himself. Certainly, the function of this practice is to make digital support viable by helping to identify problems and suggest solutions, but the decision should always be made by those who interrupt the competition for this¹³. In this way, the manager will not be obliged to apply the conclusions provided by the AI, but will use them only in motivating his decision. This is an important ethical limit for at least two reasons: to avoid the possible “digital tyranny,” to safeguard the inevitable subjective component of discretion (SANTOFIMIO, 2019, p. 17-42); and to avoid the elimination of the human component of a function whose ultimate goal is precisely the well-being of citizens.

Second, regarding the way of implementing AI, Juarez Freitas was

¹² Term designating large data sets that can be processed and harmonized.

¹³ As André Luiz Freire pointed out, the scope of public activity is guided by the principle of competition, according to which the State cannot be excused from providing it with something of confidence (FREIRE, 2014, p. 246).

already a pioneer in the idea of guaranteeing access to the sequence of logical steps in the algorithmic decision. The demand is justified as behind the data analysis by AI there seems to be a neutral process, but it is not. Behind the AI is the programming made by a human being, who as such can be biased and addicted. An example can help to understand the importance of this premise: if a racist promotes the analysis of the regulation of the public water service, he/she can unduly create algorithms that tend to indicate that regions more inhabited by blacks do not require improvements in the service.

Finally, there is one more requirement regarding the way of implementing the AI. As has been seen, AI is developed from a significant amount of data, since only from that is it possible to identify patterns and sequence logical steps. In terms of regulation, the data will necessarily belong to individuals: regulated companies, users of public services and consumers. The situation is influenced by the rules of the General Data Protection Law, especially the provisions on the processing of personal data by the Government. Considering the scope and extent of this work, a detailed analysis of what these provisions are and how they should be observed in practice will not be done. For the time being, it should be noted that the Public Administration, in carrying out its regulatory function with the support of AI, is not exempt from respecting the inherent rights of the people it operates.

CONCLUSIONS

The modern paradigm according to which the public administration could only act according to its strict subsumption of the law has been overcome. The prevalence of the neoconstitutional paradigm is now recognized, characterized by constitutions with a wide catalog of fundamental rights, as well as values and principles that transfer the notion of legality to that of juridicity. This paradigm shift has a direct impact on public administration, which now manages the public interests constitutionally assigned to it, rather than acting legalistically. The so-called postmodern administrative law has appeared.

Postmodern administrative law has an impact on all administrative activity, especially independent regulatory activity. The laws that institute regulatory systems have less regulatory density, which leaves room for greater discretion on the part of the Public Administration. This factor

increases the complexity of the analysis of the legality of acts, taking into account that, instead of a purely legalistic analysis, more complex assessments of proportionality, reasonableness and impartiality are needed.

The objective of the regulatory function is to ensure the best possible functioning and development of the regulatory market, considering the interests of companies, but also those of service users, the society as a whole, as well as those of the state itself. Thus, the purpose of ensuring development is embedded in the concept of regulation itself, and such development must be understood from economic, environmental, social and political points of view, considering the aspect of sustainability.

For the regulatory function to achieve this objective, it is essential that the regulatory decision to be technical and made based on the maximum amount of information that reflects reality, so that it gives adequate weight to all the interests involved. Therefore, it is extremely important to discuss the instruments that can increase this technicity, among them, the incorporation of RIA with AI supporting the regulatory decision.

Smart regulation is a concept that has undergone transformations, it can be defined as a policy whose objective is not only to increase the participation of interested parties, but also to increase the technicity of decisions and, consequently, maximize their effectiveness and efficiency. There are several instruments for conducting out smart regulation, including RIA.

RIA consists of a process for analyzing the impacts of the regulatory standard that enables the measurement of the cost-benefit of the standard to be issued, not only from an economic point of view but also including social, environmental, political and cultural points of view. The use of the tool increases the effectiveness of the regulation, increases the participation of interested parties, increases the technicity of the decision and establishes clearer parameters for its control. Considering its benefits, the tool was gradually incorporated into the Brazilian legal system and in other countries.

The increased use of the tool leads to specific discussions, such as the use of AI for digital assistance in public decision-making. The use of AI in RIA promises to avoid market failures and governance failures, analyzing all the data and information available to the public manager. Therefore, the new technology and the regulatory improvement instrument are compatible, as both figures are oriented, among other things, towards cost reduction and the promotion of systematic and reliable analyzes of reality.

Despite the benefits that can be derived, the use of AI in the regulatory

process should be considered with caution, in the light of the legal system. Therefore, this work argued that such a practice should be performed according to the premises that follow. As for the extent to which AI should be used, it must be alerted and monitored that it is aimed at strengthening, but not replacing the decision of the public agent. Finally, according to the implementation of the AI, the sequence of logical steps of the algorithmic decision must be disclosed, as well as the provisions of the General Data Protection Law must be followed.

REFERENCES

ANVISA – AGÊNCIA NACIONAL DE VIGILÂNCIA SANITÁRIA. *Análise de Impacto Regulatório* – Processo 25351365875200953. Brasília, DF, 2018. Available from: http://portal.anvisa.gov.br/analise-de-impacto-regulatorio?p_p_id=110. Access on: Sept. 19, 2019.

ARAGÃO, A. S. O poder normativo das agências reguladoras independentes e o Estado democrático de Direito. *Revista de Informação Legislativa*, Brasília, DF, ano 37, n. 148, p. 273-299, out./dez. 2000.

AUSTRALIA. *Best practice regulation handbook*, 2007. Available from: http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/AustralianGovernment_Best_Practice_Regulation.pdf. Access on: Sept. 19, 2019.

AUSTRALIA. Commissioner for Better Regulation. *Victorian guide to regulation: a handbook for policy-makers in Victoria* (Australia), 2016. Available from: <http://www.betterregulation.vic.gov.au/files/98181269-905c-4893-bff3-a6bb009df93c/Victorian-Guide-to-Regulation-PDF-final.pdf>. Access on: Sept. 19, 2019.

BACELLAR FILHO, R. F.; PIVETTA, S. L. O regime jurídico do processo administrativo na Lei n. 9.784/99. *A&C – Revista de Direito Administrativo & Constitucional*, Belo Horizonte, ano 14, n. 58, p. 107-135, out./dez. 2014.

BETANCOR, A. *Mejorar la regulación: una guía de razones y medios*. Madrid: Marcial Pons, 2009.

BLANCHET, L. A.; BUBNIAK, P. L. T. Análise de Impacto Regulatório: uma ferramenta e um procedimento para a melhoria da regulação. *Revista*

de Ciências Jurídicas, Fortaleza, v. 22, n.3, p. 1-15, sep. /dic. 2017.

BRASIL. Casa Civil da Presidência da República. *Inventário AIR – Visão Geral da Análise de Impacto Regulatório nas Agências Reguladoras Federais*. Brasília, DF 20 jun. 2018.

BRASIL. Congresso Nacional. *Projeto de Lei n. 1.539/2015*. Available from: https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra;jsessionid=0E6A4D328962E24E5E9213B11A5CBC21.proposicoesWeb2?codteor=1334093&filename=PL+1539/2015. Access on: Sept. 19, 2019.

BRASIL. Ministério do Planejamento, Desenvolvimento e Gestão. *Estratégia de governança digital – EGD*. Brasília, DF, 2019. Available from: <https://www.governodigital.gov.br/EGD/documentos/revisao-da-estrategia-de-governanca-digital-2016-2019.pdf>. Access on: Sept. 19, 2019.

BRASIL. Subchefia de Análise e Acompanhamento de Políticas Governamentais. *Diretrizes gerais e guia orientativo para elaboração de Análise de Impacto Regulatório – AIR /*. Brasília, DF: Presidência da República, 2018. Available from: http://www.casacivil.gov.br/governanca/regulacao/apresentacao-regulacao-pasta/acesse-aqui/comite-interministerial-de-governanca-aprova-as-diretrizes-gerais-e-roteiro-analiticosugerido-para-analise-de-impacto-regulatorio-diretrizes-air-e-o-guia-orientativo-para-elaboracao-de-analise-de-impacto-regulatorio-guia-air/diretrizes_guia_air_cig_11junho2018.pdf. Access on: Sept. 19, 2019.

CARBONELL, M. (Org.). *Neoconstitucionalismo(s)*. Madrid: Trotta, 2003.

CASTRO, C. M. Some aspects of implementing Regulatory Impact Analysis in Brazil. *Revista de Administração Pública*, Rio de Janeiro, v. 48, n. 2, p. 323-342, abr. 2014.

CHILE. Ministerio de Economía, Fomento y Turismo. *Guía chilena para una buena regulación*. Santiago, 2019. Available from: https://open.economia.cl/wp-content/uploads/2019/04/Guia-Chilena-2019_25abril.pdf. Access on: Oct. 10, 2019.

COLOMBIA. Departamento Nacional De Planeación (DNP). *Colombia da los primeros pasos hacia una regulación inteligente basada en la participación de los ciudadanos*. 2018. Available from: <https://www.dnp.gov.co/Paginas/Colombia-da-los-primeros-pasos-hacia-una->

regulaci%C3%B3n-inteligente-basada-en-la-participaci%C3%B3n-de-los-ciudadanos.aspx. Access on: May 9, 2018.

CONSEJO EUROPEO. Comunicación n. 543, de 08 de outubro de 2010. *Comunicación de La Comisión al Parlamento Europeo, al Consejo, al Comité Económico y Social Europeo y al Comité de las Regiones*: Documento para trabajo 2011. Bruselas: Consejo Europeo, 8 oct. 2010.

CORVALÁN, J. G. Administración Pública digital e inteligente: transformaciones en la era de la inteligencia artificial. *Revista de Direito Econômico e Socioambiental*, Curitiba, v. 8, n. 2, p. 26-66, mayo/ago. 2017.

EUROPEAN COMMISSION. Better Regulation “Toolbox”, 2015, p. 17. Available from: https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en. Access on: Sept. 19, 2019.

FREIRE, A. L. *O Regime de direito público na prestação de serviços públicos por pessoas privadas*. São Paulo: Malheiros, 2014.

FREITAS, J. Direito Administrativo e artificial intelligence. *Interesse Público – IP*, Belo Horizonte, ano 21, n. 114, p. 15-29, mar./abr. 2019.

FREITAS, J. *Sustentabilidade: direito ao futuro*. Belo Horizonte: Fórum, 2011.

GABARDO, E. *Interesse público e subsidiariedade: o Estado e a sociedade civil para além do bem e do mal*. Belo Horizonte: Fórum, 2009.

GUERRA, S. *Discrecioniedade, regulação e reflexividade: uma nova teoria sobre as escolhas administrativas*. 5. ed. Belo Horizonte: Fórum, 2018.

GUNNINGHAM, N.; SINCLAIR, D. Smart regulation. In: DRAHOS, P. *Regulatory theory: foundations and applications*. Camberra: Australia National University, 2017. p. 133-149. Available from: <https://press-files.anu.edu.au/downloads/press/n2304/pdf/book.pdf>. Access on: Apr. 10, 2019.

HACHEM, D. W. A noção constitucional de desenvolvimento para além do viés econômico: reflexos sobre algumas tendências do Direito Público brasileiro. *A&C – Revista de Direito Administrativo & Constitucional*, Belo Horizonte, año 13, n. 53, p. 133-168, jul./set. 2013.

JEFATURA DEL ESTADO ESPAÑOL. *Lei n. 39, de 1 de outubro de 2015*. Del Procedimiento Administrativo Común de Las Administraciones Públicas. Madrid, 2015. Available from: <https://www.boe.es/buscar/act.php?id=BOE-A->. Access on: Oct. 10, 2019.

- MASSIMINO, L. F. La intervención estatal, la regulación económica y el poder de policía. *Revista de Direito Econômico e Socioambiental*, Curitiba, v. 6, n. 677, p. 36-63, 2015.
- MEDAUAR, O. *A processualidade no Direito Administrativo*. 2. ed. São Paulo: Revista dos Tribunais, 2008.
- MELLO, C. A. B. *Serviço público e concessão de serviço público*. São Paulo: Malheiros, 2017.
- MENDONÇA, J. V. S. Art. 21 da LINDB – indicando consequências e regularizando atos e negócios. *Revista de Direito Administrativo*, Rio de Janeiro, p. 43-61, nov. 2018.
- MENEGUIN, F. B.; BIJOS, P. R. S. *Avaliação de impacto regulatório: como melhorar a qualidade das normas*. Brasília, DF: Senado Federal, 2016. Available from: <https://www2.senado.leg.br/bdsf/bitstream/handle/id/519196/OED0024.pdf?sequence=1&isAllowed=y>. Access on: Sept. 19, 2019.
- MENEGUIN, F.; SILVA, R. S. (Orgs.). *Avaliação de Impacto legislativo: cenários e perspectivas para sua aplicação*, Brasília, DF: Senado Federal, 2017. Available from: <https://www2.senado.leg.br/bdsf/bitstream/handle/id/519163/TD193.pdf?sequence=1&isAllowed=y>. Access on: Sept 19, 2019.
- MÉXICO. Congreso General de la Unión de los Estados Unidos Mexicanos. 18 de maio de 2018. *La Ley General de Mejora Regulatoria*. Ciudad de México, 2018. Available from: http://dof.gob.mx/nota_detalle.php?codigo=5523172&fecha=18/05/2018. Access on: Sept. 17, 2019.
- MOLDOVIA. *Methodological guide on ex-ante assessment of the impact of Public policies*, 2009. Available from: <https://www.legislationline.org/documents/id/17155>. Access on: Sept. 19, 2019.
- MORAN, M. Review article: understanding the Regulatory State. *British Journal of Political Science*, v. 2, n. 2, p. 391-413, mar. 2002.
- MOREIRA NETO, D. F. (Coord.). *Uma avaliação das tendências contemporâneas do Direito Administrativo*. Rio de Janeiro: Renovar, 2003.
- MOREIRA NETO, D. F. Mito e realidade do serviço público. *Revista de Direito da Procuradoria Geral do Estado do Rio de Janeiro – RDPGE*, Rio de Janeiro, v. 53, p. 140-141, 2000.

MOREIRA NETO, D. F. O direito administrativo do século XXI: um instrumento de realização da democracia substantiva. *A&C – Revista de Direito Administrativo & Constitucional*, Belo Horizonte, ano 11, n. 45, p. 13-37, jul./sep. 2011.

MOREIRA NETO, D. F. *Quatro paradigmas do direito administrativo pós-moderno: legitimidade, finalidade, eficiência, resultados*. Belo Horizonte: Fórum, 2008.

MORENO, L., GALLO, W. De la simplificación administrativa a la calidad regulatoria. *Revista del Círculo de Derecho Administrativo*, v. 17, n. 17, p. 246-273, 2019. Available from: https://www.academia.edu/40551524/Simplifacio_n_Administrativa_Ferney_y_Gallo_-_RDA_17_1_ Access on: Sept. 19, 2019.

OCDE – ORGANIZAÇÃO PARA A COOPERAÇÃO E DESENVOLVIMENTO ECONÔMICO. *Panorama de las Administraciones Públicas: América Latina y el Caribe 2017*. Paris: OCDE, 2016.

OCDE – ORGANIZAÇÃO PARA A COOPERAÇÃO E DESENVOLVIMENTO ECONÔMICO. *Building an institutional framework for regulatory impact analysis*. Version 1.1 Regulatory Policy Division Directorate for Public Governance and territorial Development. Paris, 2008. Available from: <http://www.oecd.org/gov/regulatory-policy/40984990.pdf>. Access on: Dec. 12, 2015.

RAGAZZO, C. Coordenação efetiva e sistematização: novas tendências da melhora da qualidade regulatória no Brasil. *Revista Estudos Institucionais*, Rio de Janeiro, v. 4, n. 2, p. 513-536, jul./dic. 2018.

RODRÍGUEZ-ARANA MUÑOZ, J. El derecho fundamental a la buena administracion en la constitución española y en la Unión Europea. *Revista Eurolatinoamericana de Derecho Administrativo*, v. 1, n. 2, p. 73-93, dic. 2014.

SANTOFIMIO GAMBOA, J. O. Tecnología y inteligencia artificial: incidencias en el derecho aplicable a la administración pública: dos ideas en torno a su futuro inmediato de frente al cumplimiento eficaz de los propósitos y finalidades de la función pública administrativa. In: ZEGARA VALDIVIA, D. *La proyección del Derecho Administrativo Peruano: estudios por el Centenario de la Facultad de Derecho de la PUCP*. Lima: Palestra, 2019. p. 17-42.

SCHIER, A. *Serviço público: garantia fundamental e cláusula de proibição de retrocesso social*. Curitiba: Íthala, 2016.

SCHIER, A. *Fomento: administração pública, direitos fundamentais e desenvolvimento*. Curitiba: Íthala, 2019.

SCHIRATO, V. R. A deterioração do sistema regulatório brasileiro. *Revista de Direito Público da Economia – RDPE*, Belo Horizonte, ano 11, n. 44, p. 249-274, oct./dic. 2013.

SCHIRATO, V. R. *Livre iniciativa nos serviços públicos*. Belo Horizonte: Fórum, 2012.

SILVA, L. N. O processo de globalização e a instabilidade dos modelos econômicos de Estado. *Revista de Informação Legislativa*, Brasília, DF, ano 41, n. 163, p. 331-346, jul./set. 2004.

STRINGHINI, A. Administración pública inteligente: novedades al ecosistema normativo digital de la República Argentina. *Revista Eurolatinoamericana de Derecho Administrativo*, v. 5, n. 2, p. 199-216, 28 de dez. 2018.

SUSTEIN, C. Costs, benefits and regulation post-Trump. *Bloomerang The Company*, 1 ago. 2019. Available from: <https://www.bloomberg.com/opinion/articles/2019-08-01/cost-benefit-analysis-regulation-after-trump>. Access on: Sept. 19, 2019.

TOFFELSON, C, et.al. *Setting the standard: certification, governance and the Forest Stewardship Council*. Vancouver: UBC Pres, 2008.

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