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À PROPOS DE NOUS

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ABOUT US

The **International Journal of Open Governments / Revue Internationale des Gouvernements ouverts (RIGO)** is an academic journal created and edited by Irène Bouhadana and William Gilles at IMODEV, the Institut du monde et du développement pour la bonne gouvernance publique.

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SMART TECHNOLOGIES, FUNDAMENTAL RIGHTS AND POSTHUMANISM

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This paper tries to highlight the challenges facing humanity and, in particular, the Law, in the face of the vertiginous and revolutionary advances experienced in the world in the field of intelligent technologies, proposing the universal application of some legal principles that we believe should unavoidable and transversally act as fundamental pillars from which the pertinent normative regulation is founded.

Likewise, certain questions are also raised about the impact that the phenomenon called posthumanism or transhumanism could have on the fundamental rights of the person and that in our opinion impose the need to set clear legal limits to scientific and technological innovations, avoiding reification of the human body, limits that, as we will see, in no case can dispense with the principle of human dignity.

§ 1 – FOURTH INDUSTRIAL REVOLUTION AND FUNDAMENTAL RIGHTS.

We have to say that in the framework of what both the World Economic Forum and the International Labor Organization call the *fourth industrial revolution*, characterized by the irruption of artificial intelligence, robotics, nanotechnology and 3 D printing, among other technological innovations, it is necessary to outline some legal principles that we understand should prevail for the effective respect and promotion of the validity of the constitutional State and the effectiveness of human rights¹.

Another revolution in relation to which such legal principles must be extended is undoubtedly the one that has been called *almost zero marginal cost*, which is characterized by the emergence of *collaborative commons* –as a new economic system- and by the production of goods and services at an extremely low cost, through the

¹ J. CORVALAN, “Artificial Intelligence and Human Rights (Part I)”, *Supplement No. 1 on Artificial Intelligence and Human Rights of the virtual Legal Journal DPI Quantico. Right to Innovate*, July 3, 2017 [www.dpicuantico.com/area_diario/inteligencia-artificial-y-derechos-humanos-no-1-30-06-2017/].

application of smart technologies, such as the Internet of Things, among others².

Having passed twenty years of the 21st century, no one is strange to the development of science in many areas of knowledge and its massive technological application in all sectors of society³. The emergence of a new paradigm is a reality whose horizon is still difficult to define. The transformation of the usual channels through which social, commercial, political, economic and cultural relations pass, among others, caused by this technological revolution, invites us to reflect on this new reality.

The coexistence of natural and artificial intelligence (AI) is having and will have consequences for society and its citizens in all areas of its existence. It is an zone in continuous expansion that impels us to delimit fundamental issues related to legislation in this field. This accelerated and permanent promotion of research and application of AI and other technologies and its significant imprint on our lives, highlight the shortcomings and deficiencies of traditional theories legal *analog* to respond, with full “technological and digital awareness”, to the needs and demands of the current technological context.

The digitization of information, the improvement of new telematic devices, the integration of intelligent systems and the Internet of Things, introduce us to a world that is increasingly computerized and dependent on these technologies, with the consequent vulnerability of people's rights.

The impact of smart technologies on fundamental rights is an issue of unquestionable relevance, which requires an active role both from international organizations, as well as from National States and private entities. The aforementioned role must be strengthened due to the undoubted potential of that technologies for affecting the human rights, often in conditions that make their documentation very difficult, such as when they are shielded by algorithms under closed code or by opaque decision-making processes. and not transparent. This implies the need for a greater effort to document said practices, effects and damage histories, among other aspects to consider.

A problem that we can find when using AI as a work tool is misuse intentional of it. In short, it's about a system or tool to which a series of data and documentation is offered to analyze, through a process of reasoning, following a series of instructions, to reach a conclusion. In certain cases, it is noted a lack of algorithmic transparency and the absence of adequate perception of the need for approval of a specific legal framework. It is only observed an undeniable concern about compliance in terms of data protection, which is perceived as a limit.

² J. RIFKIN, *The Zero Marginal Cost Society*, Paidós, Buenos Aires, 2014, p. 15.

³ I. LUCENA-CID, “New Technologies and their impact on Human Rights. Towards a new approach”, *CEFD*, No. 40 (2019), p. 130, ISSN: 1138-9877.

Organizations such as the United Nations have taken note of these problems. Thus, in early August 2018, the United Nations Development Program (UNDP) joined the technology giants in the Alliance for Artificial Intelligence⁴, a consortium of companies, academics and non-governmental organizations (NGO) that work to ensure that AI is developed in a safe, ethical and transparent manner. UNDP will work with partners and communities to test AI and scale its applications responsibly to achieve the Sustainable Development Objectives.

The actions deployed by international organizations, demand the effective consecration of legal principles that, based on human dignity, we understand are universal, and must be incorporated and respected in the field of international law as well as in the internal law of each of the nations. They are undoubtedly unavoidable and mandatory if we want to walk a path that reconciles the unstoppable technological advance with respect for human rights.

§ 2 – SOME LEGAL PRINCIPLES APPLICABLE TO SMART TECHNOLOGIES.

Framing this phenomenon of smart technologies in the constitutional and democratic rule of law presupposes focusing its design, development and use on the basis of respecting human dignity and human rights.

The adaptation of the legal system to smart technologies challenges must come hand in hand with the interpretation of currently existing texts according to the new social reality by the competent authorities. The judges and other applicators of the Law have a huge challenge: adapt their knowledge and skills to the new reality. Given the difficulty in adopting norms and that they do not quickly become obsolete, another important resource to facilitate adaptation of the legal order are the instruments of soft law. A good example is the work carried out by the European Committee of Data Protection with their guides and reports, which provide legal security.⁵

Both the jurisprudence of the European Court of Human Rights and the international instruments for the protection of human rights related to the new technologies, are based on legal principles linked to fundamental freedoms: freedom of expression, right to confidentiality and privacy, rights to integrity, right to access and control of data⁶, right to protection of life, access to information,

⁴ The Alliance for Artificial Intelligence was founded in 2016 by Amazon, DeepMind/Google, Facebook, IBM and Microsoft, in addition to Accenture, Intel, Oxford Internet Institute-University of Oxford, eBay and other associations such as UNICEF and Human Rights Watch, among other.

⁵ V. ZAPATERO GÓMEZ, *The art of legislating*, Cizur, Thomson Aranzadi, 2009, p.161.

⁶ Article 8 of the Charter of Fundamental Rights of the European Union, in relation to the protection of personal data, indicates that: «1. Everyone has the right to the protection of personal data that concerns them. 2. These data will be processed fairly, for specific purposes and based on the consent of the person concerned or by virtue of another legitimate basis provided by law. Everyone has the right to access the data collected

participation public, access to justice, etc. Many of these rights together with other social rights are being affected by new technologies, therefore, new legal protection mechanisms are required against invasive digital technology contamination and the increasing dependence that the people have on these.

In the field of so-called intelligent technologies, whose projection over our lives will be increasing, the theoretical-legal contribution is necessary, as well as the construction of a legislative framework (national and international) that regulates the use and scope of the application of these technologies (in the military field, in medicine, in biotechnology and scientific research in general, in economics and commerce, in law, in education, in public administrations, etc.), since human beings are the recipients of its benefits, but they can also be the recipients of its threats and potential risks to their personal integrity and that of their rights.

Thus, it is undoubtedly necessary to make the system for the protection of fundamental rights more robust, incorporating into the legal block a series of general principles tending to regulate it. Below we will develop some of these legal principles, which in our opinion should be taken into consideration by every operator of the Law when resolving a conflict of interest derived from the application of smart technologies.

A) Algorithmic Self-Determination.

Self-determination is a fundamental right that derives from the dignity of the person.

Dignity belongs to all people, so that all attempts that try to consider some lives as not worthy, or not worth living, or that even deny them their legal capacity, should be considered illegitimate, as has happened with the racist laws that have confined millions of human beings to the category of *non-persons*. Likewise, dignity constitutes a principle that prohibits considering the person as an instrument or a tool, exploiting it. As a result, its autonomy must be respected, and it cannot be an object of other people's decisions⁷.

Thus, it is about ensuring, starting from recognizing the informative self-determination that is the free development of the personality oriented to guarantee the right to choose –as well as freedom of information–, the right to know, to knowledge and the self-regulation of information.

Given the possible violation of freedom and privacy in the processing of data, the aspiration of the subjects to control their personal data is materialized in the right to informative self-determination. For many authors, this claim is a derivation of the right to privacy, as a kind of autonomous branching aimed at protecting the sphere of life private. Informative self-

concerning him and to rectify it. 3. Respect for these rules will be subject to the control of an independent authority.»

⁷ P. ZATTI, *Masks of law, faces of life*, Giuffrè, Milan, 2009, p. 176.

determination is specified in the power of every person to exercise control over personal information stored on computer media both by the public administrations as private entities or organizations. Treatment of this information requires regulatory instruments given the sensitivity of the data that is transferred through computer networks⁸.

On this basis, the States and the international community must responsibly invest and deploy the maximum efforts of all kinds so that human self-determination can be guaranteed against the use of intelligent algorithms.

As AI increasingly mediates between data/information and people's decisions, it is essential to protect their rights by promoting respect for the principles of necessity, purpose, proportionality and ownership of personal data.

B) Maximum Algorithmic Transparency.

Transparency constitutes a sine qua non condition and an ethical imperative, on which any type of decision process based on algorithms must be built.

The design, development and use of AI must be transparent and open.

One of the fundamental values of transparency in the use of algorithms is that makes it possible to understand their results and learn about their performance to evaluate if it's fair or not.

Algorithmic transparency is linked to the prohibition of the existence of *black boxes* in the algorithms or the existence of flaws, in the face of damage or injuries that they may cause.

To address the phenomenon of *black boxes*, it is important to emphasize the fact that artificial intelligence systems are designed to maximize results and to optimize information and data processing. But when fundamental rights of the people are at stake (health, life, freedom, privacy, freedom of expression, etc.) it is essential that the intermediate results of the system are validated. This implies that the reasoning structures that are followed until decisions or predictions are arrived at, must undergo a process of three major phases: 1) verification, 2) validation and 3) evaluation. This is where ensuring the quality and transparency of algorithmic processes comes into play⁹.

In accordance with the above, the Association for Computing Machinery (ACM)¹⁰ proposes that these processes must have auditability and validation components: a) Auditability: models, algorithms, data and decisions must be recorded so that they can be audited in cases where there is suspicion of damage. b)

⁸ I. LUCENA-CID, op. cit., p. 135.

⁹ J. CORVALÁN, « Artificial intelligence: challenges and opportunities - Prometea: the first artificial intelligence of Latin America at the service of the Justice System », *Journal of Constitutional Investigations*, Vol. 5 No. 1, Curitiba, Jan./Apr. 2018, [http://dx.doi.org/10.5380/rinc.v5i1.55334].

¹⁰ [https://www.acm.org/public-policy/ustpc].

Validation and testing: There must be rigorous methods to validate the models and document such methods and results, in order to identify if the algorithms generate biases, promoting that these results are public.

Likewise, in its report on The Ethical Management of Data for 2019, the Inter-American Development Bank raises the need to design measures of this type to mitigate biases in the construction of algorithms and the use of data, which include mechanisms of rectification and repair of errors and internal monitoring tools, planning evaluations once the decision-making process is implemented through the use of data and algorithms.

AI must be *transparent* in its decisions, which means that an "understandable explanation" can be inferred or deduced about the criteria on which it is based to arrive at a certain conclusion, suggestion or result.

The transparency of data and algorithms implies the ability to know what data is used, how it is used, who uses it, what it is used for and how the data is used to make decisions that affect the vital sphere of whom claim this transparency. If a person has been rejected in any process (for example, they do not receive a scholarship or a loan), they should know from what data that decision was made and how it was decided to exclude them. Today, an informed public sphere should be composed of agents capable of finding out the subtext of the algorithmic universe in which citizens develop as economic and political subjects.

However, this first level of transparency, reflected in very worthy initiatives such as the European regulation on data protection, is only a first step and quite weak. It is commonly argued that transparency must also include not only access to data, but also to the code of the algorithms that process it¹¹.

Hartzog and Stutzman refer to *darkness by design* that is typical of big data. The lack of transparency is one of the key problems to face the uses of big data and artificial intelligence. Against this, now advocates Algorithmic accountability and transparency (European Parliament, 2017, cons. 1 and 21)¹².

In the public sphere, the principle of maximum algorithmic transparency must be applied with undoubted intensity and robustness. In the literature developed by experts, the relevance of raising the transparency levels of algorithms in the public sector is reflected, this, derived from the importance and scope of public decisions, which acquire greater relevance, since they come from those who must ensure the full and effective validity of the right of access to information and, in general, a fair legal order.

¹¹ R. SANGUESA, « Artificial intelligence and algorithmic transparency: It's complicated ». BiD: university texts on librarianship and documentation, no. 41 (December), 2018. [http://bid.ub.edu/es/41/sanguesa.htm].

¹² L. COTINO HUESO, «Big Data and Artificial Intelligence. An Approach from a Legal Point of View about Fundamental Rights», DILEMATA, year 9, 2017, No. 24, p. 142. ISSN 1989-7022.

C) Algorithmic Non-Discrimination.

The design and implementation of intelligent algorithms must respect the principle of non-discrimination, which consists of preventing intelligent machines –based on AI systems– from processing information or data under biases or distinctions in front of human beings, for reasons of race, color, sex, language, religion, political or other opinion, national or social origin, economic position, birth or any other social condition, as it is provided in article 2, clause 2 of the Covenant on Economic, Social and Cultural Rights¹³.

In this regard, it is possible to indicate that the European Parliament has warned of the danger of *discrimination and bias algorithmic* (2017, consideration 20). Against this, in addition to an *ethical framework common solid* or *maximum prudence* (cons. 20 and 31), refers to the need for *periodic evaluations on the representativeness of the sets of data [and of] examining the accuracy and importance of the predictions* (cons. 20).

As can be inferred from the foregoing, discrimination can be caused, among other causes, by a wrong design and choice of algorithms, the weight they attribute to one or other factors or to errors in the development of machine learning systems. Detecting the causes of biases and discrimination can be really complex, being essential for this the effective protection of the guarantees of transparency, white box and due process.

We must take into account the phenomenon of data called proxies or indirect, that is, data that in principle are not considered sensitive; however, from them may derive specially prohibited factors or specially protected data. So It happens, for example, from data such as tastes, type of purchases, neighborhoods where move, etc. possible *maskings* and the intentional choice of factors that are close to prohibited or related data to those specially protected. In such cases, the algorithms themselves must be programmed to ignore or minimize the importance of prohibited factors in people decisions.

§ 3 – THE SYRI CASE RESOLVED BY THE DISTRICT COURT OF THE HAGUE.

Regarding the principles enunciated and developed, it is interesting to highlight sentence¹⁴ issued on February 5, 2020 by the District Court of The Hague on the Sistem of Risk Indication (SyRI), which has caused a justified impact on specialists in digital law, data protection, artificial intelligence and the public in general,

¹³ J. CORVALÁN, «Artificial Intelligence and Human Rights (Part II)», *Constitucional and Human Rights Journal*, No. 157, DPI Quantico. Right to Innovate, July 10, 2017 [<https://dpicuantico.com/sitio/wp-content/uploads/2017/07/Juan-Gustavo-Corvalan-Constitucional-10.07.2017.pdf>].

¹⁴ District Court in The Hague (Rechtbank Den Haag). Reference: ECLI: NL: RBDHA: 2020: 865. Available at: <https://bit.ly/2SpN2O4>.

considering what was stated by the said Court regarding public management systems based on algorithms.

The District Court of The Hague declared that the regulations on the System of Risk Indication (SyRI), specifically, Article 65 of the SUWI Law¹⁵ and Chapter 5.a of the SUWI Decree, is incompatible with Article 8.2 of the European Convention of Human Rights (ECHR) to the extent that SyRI's interference in the right to privacy by the Dutch Government does not comply with the guarantees required by the judgments of necessity and proportionality contained in that article.

In said judgment, without a doubt, the Court gives the greatest weight of its argument to the principle of algorithmic transparency. It understands, firstly, that the regulations do not offer any kind of information on how certain data or circumstances may lead to increased risk (paragraph 6.87). At the same time, it does not offer any information on the algorithmic model used by the tool, with which it is impossible to verify how a risk profile is formed, or how the data processing of those people who do not lead to risk profiles results. The State argued that the Registry of Risk Notifications validated the algorithmic model and verified the risk indicators. However, the Court indicated that the regulations do not offer any type of information on these validation and verification processes, to which the same court has not even had access in the process. The State (paragraph 6.49) argued that the operation of the algorithm must be obscure, otherwise massive data on the behavior of citizens of sufficient quality would not be obtained¹⁶.

The United Nations special rapporteur on extreme poverty and human rights pointed out in a report contributed to the procedure that the development of SyRI has a discriminatory and stigmatizing effect. The District Court of The Hague acknowledges that, up to now, SyRI had only been employed in neighborhoods that were considered *problematic* (paragraph 6.92). On the one hand, it understands that this by itself does not imply a disproportion in terms of article 8.2 of the ECHR; On the other hand, the kind of treatment used for its development—that is, the processing of large amounts of data, which includes data of special protection—does constitute a risk that the use of SyRI is centered on biases based on the low socioeconomic status or migrant origin (paragraph 6.93). The Court linked this consideration to the lack of transparency regarding the algorithmic model and risk indicators, as well as the absence of safeguards to alleviate said opacity, concluding that said interference in the right to respect for private

¹⁵ Law on the organization of work performance and income.

¹⁶ It is inadmissible for the State itself to provide as an argument in defense of its position, indicating that the algorithm must be opaque. Only in exceptional cases in which supreme values are at stake, such as citizen security or national defense, could the use of algorithmic tools at odds with the publicity and transparency typical of a Constitutional and Democratic Rule of Law be allowed.

life is not proportional in the terms required by the Convention (paragraph 6.95).

As recognized in the judgment (also by the State), SyRI's operation is opaque. The State refuses to provide this information, claiming that in order to fight fraud it is essential to obtain *quality data*, understood as those that monitor the behavior of citizens without their knowledge. These considerations seem incompatible with the right to information contained in articles 13.2 f), 14.2 g) and 15.1 h) of the General Data Protection Regulation of the European Union, which includes, at least, the right to know the preparation of a profile and to know significant information about the logic applied by the algorithm, in understandable terms in accordance with the principle of transparency and sufficiently exhaustive at the same time, without the need to include information about the algorithms used or the disclosure of the entire algorithm. Otherwise, the suggestion made by the algorithm can be hardly discussed. When algorithms are used in the public sector, as is the case with SyRI, opacity is even more incomprehensible, since they functionally act as norms. If they act in practice as rules, the frontal breach of a principle as basic as that of normative advertising is not understood¹⁷.

§ 4 – POST-HUMANISM, TECHNOLOGICAL INNOVATION AND LEGALITY

On the other hand, technology and law have an unquestionable link with the phenomenon called post-humanism.

In the description of the transformations of the world caused by scientific and technological innovation, it is talked about a body destined to become a *neuro-bio-info-nano-machine*.

The body, that is, the support by definition of the human, would appear to us as an object in which a transition is manifested that seems to want to dispossess the person of their territory, the corporeity, folding him to the virtual or by modifying their characters, in such a way that one can speak of post-human or trans-human.

This process of transformation of the human being based on technological innovation raises severe questions, such as ¿what impact will post-humanism have on the fundamental rights of the person, positive, negative, one and the other? In particular, ¿could this post-humanist movement affect the right to physical and mental integrity of the person?

When facing the issue of integrity, the Charter of Fundamental Rights of the European Union indicates four reference principles that reflect widely disseminated guidelines: consent of the interested party, prohibition of making the body a commodity,

¹⁷ G. LAZCOZ MORATINOS and J.A. CARTILLO PARRILLA, "Algorithmic profiling in the light of human rights and the General Data Protection Regulation: the SyRI case", *Chilean Journal of Law and Technology*, vol. 9, No. 1, Santiago, jun. 2020: <http://dx.doi.org/10.5354/0719-2584.2020.56843>.

prohibition of mass eugenics and prohibition of cloning reproductive¹⁸.

According to the above, the human would be incompatible with its serial production, irreducible to the logic of the market and, above all, it would require full autonomy of decision on the part of each interested party.

Some scholars like James Hughes view with almost unlimited confidence the new opportunities offered by science and technology, underlining, however, that the full acceptance of post-humanism, in a democratic environment, depends on the ability to guarantee the security of technologies, the possibility of accessing these opportunities under conditions of equality for all and respect for the right of each person to freely govern their body.

This was the perspective indicated by the scholar to whom the introduction of the term trans-humanism is attributed, Julian Huxley, who in 1927 wrote that "perhaps trans-humanism is valid: man will continue to be man, even transcending himself and carrying out new possibilities for his own human nature"¹⁹ and added "a vast new world of infinite possibilities awaits its new Columbus"²⁰.

A more sober definition of the post-human, is postulated by Pramod K. Nayar, who says that is the "technology that allows to overcome the limits of the human form"²¹. This definition announces in general and clearer terms the problems that arise when the subject is considered under the legal dimension.

I anticipate that the difficult task that concerns us as legal operators is to ensure the exercise of rights looking to the future.

Within the framework of the transition from the human to the post-human, it is pointed out that the great discovery of information theorists sees the possibility of transferring information from one medium to another, without any loss.

Thus, it is ventured that the information contained in human brain can be transferred to enter it in another body, in a machine or in a robot.

Longo has argued that if identity consists of a certain neural configuration, then the biological body is only an occasional support²².

The discarnate post-human is reached, in which framework, using nano-electronic neural implants, brain activity could be connected with data processing systems, extracting information from the human brain to replicate it on a computer.

¹⁸ S. RODOTÁ, *The Right to have Rights*, Trotta, Madrid, 2014, p. 315.

¹⁹ J. HUXLEY, *New Bottles for New Wine. Essays by Julian Huxley*, Chatto & Windus, London, 1957, p. 17.

²⁰ Ibidem, p. 14.

²¹ P.K. NAYAR, *Virtual Words: Culture and Politics in the Age of Cybertechnology*, Sage, New Delhi, 2004, p. 71.

²² G.O. LONGO, *The body and the code*, Tempo Fermo, 2004.

On the other hand, the possibility of connecting the brain with an external entity would make it possible to connect to the internet through a neural implant.

In this way, the internet would become a part of us in a way as natural and simple as the use of our hands²³.

¿Could this generate the propensity to transform the body into an instrument that allows total control of the person? Law -and ethics applied to science and technology- must regulate the movement called post-humanism, based on the application of central legal principles, such as human dignity, which opposes the transformation of the body into an object.

The law and not only it, is in the situation of having to govern transition states.

A varied transition, which affects anthropology, language and law, the body and the mind, which designs a profoundly modified cultural horizon.

Posthumanism ultimately generates a deep transition that, in any case, we will have to live.

CONCLUSION

The Law faces the enormous challenge of regulating artificial intelligence and its manifestations through the different smart technologies, granting the necessary legal security to those who carry out their activity from it and, fundamentally, guaranteeing the dignity of the person, understood as inherent to the human being by its sole condition of such²⁴.

Philosophers and legal theorists together with researchers from other disciplines have ahead of them an enormous reflective work that contributes a new approach to the discussion on the Law in general, and Human Rights, in particular, in a rapidly advancing technological environment. Are increasingly necessary reference principles that allow the elaboration of normative frameworks of greater guardianship effectiveness. The traditional legal doctrines do not contemplate many of the current problems and in many cases, lag behind the application of these technologies²⁵.

We understand that said regulation must ensure the fundamental right to identity, integrity and reservation of technological computer systems (which are those that by themselves or through their interconnection, may contain data of the interested person that, due to its characteristics and due to their diversity, can result in access to them becoming an interference in essential aspects of

²³ M. CHOROST, *World Wide Mind. The Coming Integration of Humanity, Machines, and the Internet*, Free Press, New York, 2011, p. 45.

²⁴ Let us remember that the other general principles of law are based on the dignity of the human person. Human dignity, as a basic principle of law, has been recognized in numerous international treaties, such as the Universal Declaration of Human Rights, the Covenant on Civil and Political Rights, and the Covenant on Economic, Social and Cultural Rights, among others.

²⁵ I. LUCENA-CID, op. cit., p. 143.

the person's way of life or allowing a significant profile of their personality to be made), as part of the general right of the personality recognized constitutionally.

Likewise, we understand that the Law must protect citizens, today more than ever, in a context of exponential and unstoppable development of smart technologies, in matters of privacy and self-regulation of information, preserving, universally, their human right to algorithmic non-discrimination, maximum algorithmic transparency and algorithmic self-determination.

Finally, as we said before, the new legal order in gestation cannot and should not dispense with respect for human dignity, a pillar of that legal order, which opposes the transformation of the body into a manipulable and controllable object from a distance, a mere supplier of information.