

Legal Personality of Artificial Intelligences From the classical canonical concept of legal person to the design of a specific legal personality and a Registry of Artificial Persons

Personalidad jurídica de las Inteligencias Artificiales
Del concepto clásico canónico de persona
jurídica al diseño de una personalidad jurídica
específica y un Registro de Personas Artificiales

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Abstract: On 16 February 2017, the European Parliament made recommendations to the Commission about civil law rules on robotics, including a proposal to design a specific legal personality for autonomous robots and most sophisticated Artificial Intelligences with the capacity to make decisions and interact with third parties. Although the recent European Union's *Artificial Intelligence Act* presents notable advances on supervision, surveillance, control and registration in this field, the question of legal personality remains an open issue. In order to design a specific concept along the lines of the European Parliament's proposal and to make further progress along this legal line, the classical

concept of legal person devised by Sinibaldo Fieschi is an essential reference.

Resumen: El 16 de febrero de 2017, el Parlamento Europeo realizó algunas recomendaciones a la Comisión sobre normas de Derecho civil acerca de la robótica entre las que se encontraba la propuesta de diseñar una personalidad jurídica específica para los robots autónomos e Inteligencias Artificiales más complejas y con capacidad de decisión e interacción con terceros. Aunque el reciente *Reglamento de Inteligencia Artificial* de la Unión Europea presenta notables avances sobre supervisión, vigilancia, control y registro en este campo, la cuestión sobre la personalidad jurídica es un asunto aún pendiente. Para diseñar

un concepto específico en la línea de la propuesta del Parlamento Europeo y seguir avanzando por esa línea jurídica, el concepto clásico de persona jurídica ideado por Sinibaldo de Fieschi es un referente imprescindible.

Keywords: artificial intelligence, legal personality, liability, oversight, surveillance.

Palabras clave: inteligencia artificial, personalidad jurídica, responsabilidad, vigilancia.

1. INTRODUCTION

The history of Artificial Intelligence (= AI) is the history of mankind's technological revolutions. Human beings, using tools and machines to facilitate their activity, have increased their productivity and progressed to the dawn of computer research, a branch in which AI has been the horizon in the course of scientific exploration of this field, only fully reached by science fiction¹.

¹ Cf. Manuel ALFONSECA, "Inteligencia artificial", in Claudia E. VANNEY – Ignacio SILVA – Juan F. FRANCK (eds.), *Diccionario Interdisciplinar Austral*. <http://dia.austral.edu.ar/Inteligencia_artificial> [accessed: 2024, Jul. 29]. The science fiction novels of Philip K. DICK, Arthur C. CLARKE and Isaac ASIMOV, among many others, are a must, inspiring countless cinematic works on autonomous robotics and AI: So, Stanley KUBRICK's *2001: A Space Odyssey* (1968), predicted technologies like video conferencing, artificial gravity, tablets, and autonomous AI with self-awareness, as well as the potential for AI to develop psychological pathologies. Ridley SCOTT's *Blade Runner* (1982) portrays intelligent, self-conscious robots and explores the ethical questions surrounding their existence. John BADHAM's *War Games* (1983) tells the story of a teenager who, while playing an online video game, accidentally challenges a military supercomputer with learning capabilities, nearly causing a nuclear holocaust. James CAMERON's *Terminator* (1984) introduces "Skynet", an AI that attempts to destroy humanity, perceiving it as a threat to its own survival. The WACHOWSKIS' *The Matrix* (1999) explores the destructive relationship between humans, AIs, and machines through a deep philosophical lens on freedom and choice. Alex PROYAS' *I, Robot* (2004), inspired by Isaac ASIMOV's works, follows an autonomous robot and a policeman investigating the supposed suicide of its creator. Alex GARLAND's *Ex Machina* (2014) reflects on the rise of the first autonomous AI robot and its legitimate self-defence against humans. Christopher NOLAN's *Interstellar* (2014) showcases how intelligent, self-aware, and self-sacrificing systems with a sense of humour can assist humans. Finally, Wally PFISTER's *Transcendence* (2014) tells the story of a

However, in a very short time, fiction has partially become reality, and the future seems to be approaching inexorably at unforeseen speeds. Given the growing use of AI in government administration, businesses, and markets—and the indirect integration of these electronic and digital “entities” into the lawful traffic, with all its advantages and disadvantages—the European Parliament has called on the Commission to develop a long-term plan. This plan includes creating a specific legal status for the most advanced AIs, allowing them to be held accountable for damages caused by their autonomous decision-making or interactions with third parties².

In our view, this challenge could be best faced by revisiting the classical canonical concept of legal personality, originally conceived in the 13th century by Sinibaldo FIESCHI (1195–1254), later Pope INNOCENT IV (1243–1254). This concept, with appropriate modifications and precautions, could be applied to Artificial Intelligences in accordance with their unique nature. After all, what is a legal person but a legal fiction that attributes the characteristics of a physical subject of rights and obligations to an entity that is not one, but is treated as such in legal terms?

Therefore, starting from the classical axiom *ius sequitur vitam*, which is at the heart of every legal system, we will reflect on how the current emergence of AIs of the most diverse nature leads to value the classical canonical institute of legal personality against the regulation of the digital world 3.0 in which we find ourselves.

scientist who, facing imminent death, uploads his consciousness into a digital system.

In this context, ASIMOV's *Three Laws of Robotics* have resonated within legal discussions: “One, a robot may not injure a human being, or, through inaction, allow a human being to come to harm. [...] Two, [...] a robot must obey the orders given it by human beings except where such orders would conflict with the First Law. [...] Three, a robot must protect its own existence as long as such protection does not conflict with the First or Second Laws” (Isaac ASIMOV, *Runaround*, n. c., 1941. <https://web.williams.edu/Mathematics/sjmiller/public_html/105Sp10/handouts/Runaround.html> [accessed: 2024, Jul. 29]).

² Cf. *European Parliament resolution P8_TA(2017)0051 of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))*, n. 59. <https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html#title1> [accessed: 2024, Jul. 29].

2. STARTING POINT: THE EUROPEAN PARLIAMENT'S RECOMMENDATION TO THE COMMISSION TO CREATE A SPECIFIC LEGAL PERSONALITY FOR ROBOTS IN THE LONG TERM³

In 2017, among various points, recommendations and proposals on Artificial Intelligence, the European Parliament called on the Commission:

when carrying out an impact assessment of its future legislative instrument, to explore, analyse and consider the implications of all possible legal solutions, such as: [...] (f) creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently⁴.

This challenge raised a number of important questions:

- 1) What is the concept of "robot" to which the European Parliament refers.
- 2) What does it mean by the term "autonomous robot"?
- 3) What is the level of robotic "sophistication" to which it refers.
- 4) Whether a classification of the above concepts is possible.
- 5) Whether the "most sophisticated autonomous robots" are per se capable of supporting the consideration of legal personality, with all their complexity and autonomy, and under what conditions and controls.
- 6) What should be the conditions of specificity and typology of such a specific legal personality.
- 7) Whether it is possible to speak of the concept of "electronic personality" or whether the concept should be extended to "artificial personality" to include two sub-types: "digital" and "electronic".

³ Cf. *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, n. 59 (f).

⁴ *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, n. 59.

Let us therefore try to take a preliminary approach to these questions:

2.1. Historical background on AIs

Although the history of computing stretches back to ancient times, highlighted by the analogue Antikythera mechanism, the digital era truly began in the 20th century. A key event was the Dartmouth Conference in the summer of 1956, which is recognized as the founding moment of AI as a scientific field. Pioneers like TURING, VON NEUMANN, WIENER and SHANNON —mathematicians who developed the concept of a “program”—envisioned it as a set of procedures or mechanisms that would enable machines to progress towards a certain level of intelligence⁵.

Two lines of research then emerged: the group of NEWELL and SIMON —*Carnegie Institute of Technology*, now *Carnegie-Mellon University*—, focused on the development of mimicking models or simulators of human behaviour; and the group of MCCARTHY and MINSKY —*Massachusetts Institute of Technology*—, focused on the design of intelligent machines or execution models⁶.

It was MCCARTHY who, according to some authors⁷, first coined the term “Artificial intelligence”, understood as “the

⁵ Cf. Carmen PÉREZ, “Inteligencia Artificial (IA) y Educación”, *Anales de Pedagogía* 7 (1989) 82.

⁶ Cf. PÉREZ, “Inteligencia Artificial”, 83.

⁷ Others point to Minsky, at Dartmouth, 1956, as the first to coin the term AI as referring “to a system that can perform repetitive tasks faster and easier than the human brain, ‘capable of imparting reasoning and common sense to machines’” (*Proposición no de Ley presentada por el Grupo Parlamentario Popular en el Congreso, sobre el desarrollo de una estrategia nacional para impulsar la inteligencia artificial y su incorporación en la toma de decisiones*, No. 162/000705, *Boletín Oficial de las Cortes Generales* 12 D 391 [2018, Jul. 16] Exposición de Motivos. <http://www.congreso.es/public_oficiales/L12/CONG/BOCG/D/BOCG-12-D-391.PDF> [accessed: 2024, Jul. 29], translated [= trans.] by Carlos LÓPEZ SEGOVIA). In this respect, to keep in mind the progress that Spain has made in AI, cf. art. 23, *Ley 15/2022, de 12 de julio, integral para la igualdad de trato y la no discriminación*, *Boletín Oficial del Estado* (= BOE) 167 (2022, Jul. 13) 98071-98109. Consolidated text: <<https://www.boe.es/>

science and engineering of making intelligent machines, especially intelligent computer programs”⁸.

The inadequacy of this definition led inexorably to the need to define the concept of “intelligence”⁹, as GARDNER concludes. GARDNER defines it as the “ability to solve problems or create products that are valuable in one or more cultural environments”¹⁰ and distinguishing eight or more types of intelligence¹¹:

eli/es/1/2022/07/12/15/con> [accessed: 2024, Jul. 29]; and cf. *Real Decreto 729/2023, de 22 de agosto, por el que se aprueba el Estatuto de la Agencia Española de Supervisión de Inteligencia Artificial*, BOE 210 (2023, Sept. 02) 122289-122316. Consolidated text: <<https://www.boe.es/buscar/act.php?id=BOE-A-2023-18911>> [accessed: 2024, Jul. 29].

⁸ John MCCARTHY, “What is Artificial Intelligence?”, 2007, Nov. 12. <<http://www-formal.stanford.edu/jmc/whatisai/whatisai.html>> [accessed: 2024, Jul. 29].

⁹ The author completes: “Intelligence is the computational part of the ability to achieve goals in the world. Varying kinds and degrees of intelligence occur in people, many animals and some machines” (MCCARTHY, “What is Artificial Intelligence?”). Other inadequate definitions do not help to clarify the concept; this is the case of some authors: cf. Nils J. NILSSON, *Artificial Intelligence: A New Synthesis*, San Francisco, Elsevier, 1998 (<<https://doi.org/10.1016/C2009-0-27773-7>>); and Shane LEGG – Marcus HUTTER, “A Collection of Definitions of Intelligence”, *Technical Report IDSA 7/7* (2007) 1-2. <<https://arxiv.org/pdf/0706.3639.pdf>> [accessed: 2024, Jul. 29]. They focus on the study and design of intelligent agents, understood as entities that perceive their environment and act in order to achieve objectives with a high possibility of success. However, as ALFONSECA indicates, the typology of the objectives is not defined, cf. ALFONSECA, “Inteligencia artificial”, n. p.

¹⁰ Howard GARDNER, *Estructuras de la mente. La Teoría de las inteligencias múltiples*, México, Fondo de Cultura Económica, 1994, 5.

¹¹ Cf. GARDNER, *Estructuras de la mente*, 5; cf. ID., “Inteligencias múltiples”, *Revista de Psicología y Educación* 1/1 (2005) 23. <<http://www.revistadepsicologiayeducacion.es/pdf/2.pdf>> [accessed: 2024, Jul. 29]; Silvia LUZ DE LUCA, “El docente y las inteligencias múltiples”, *Revista Iberoamericana de Educación* 34/1 (2004) 2 (<<https://doi.org/10.35362/rie3412884>>); Jaqueline SUÁREZ – Francelys MAIZ – Marina MEZA, “Inteligencias múltiples: una innovación pedagógica para potenciar el proceso enseñanza aprendizaje”, *Investigación y Postgrado* 25/1 (2010) 81-94. <<https://www.redalyc.org/pdf/658/65822264005.pdf>> [accessed: 2024, Jul. 29]. Note that the latter two types of intelligence are added by GARDNER, “Inteligencias múltiples”, 23.

- Logical-mathematical, able to elucidate objects and abstractions, as well as their relationships.
- Linguistic, mastering language and words.
- Spatial, based on the perception of the visual world, and transforming or modifying it.
- Musical, mastering the composition, interpretation, listening and judgement of musical pieces.
- Bodily-kinaesthetic, which enables the person to control body movements and handle objects.
- Intrapersonal, able to determine states of mind, being able to apply the information obtained to other people.
- Interpersonal, able to determine moods, mental and emotional states of others and apply the information obtained to them.
- Naturalistic, recognising and categorising natural objects.
- Existential or spiritual, able to grasp and discuss fundamental and transcendental questions of existence, although further evidence is required to determine whether it is an intelligence.
- Emotional, with the ability to process information about one's own life or the lives of others.

It should be added that part of the abandonment suffered around the end of the 1960s was due to the lack of success of the post-Dartmouth Conference studies, which led to a drastic change in the lines of research: the incorporation of specific knowledge of the purpose of processing into the computer systems, depending on the field or subject in which a problem is analysed, by means of a logical structure for linking and applying the data obtained¹². In other words, the system needed to know the rules of application, and thus *Expert Systems* were born, which, without being an AI in themselves, are a part of it¹³.

¹² Cf. Nuria CUADRADO GAMARRA, "Inteligencia Artificial y Derecho: ¿Un encuentro posible?", n. d., 6. <<https://silo.tips/download/inteligencia-artificial-y-derecho-un-encuentro-posible>> [accessed: 2024, jul. 29].

¹³ With expert systems, "it is possible to analyse and provide a solution—or assist in making a decision—to certain problems by applying reasoning similar to that which an expert in that field would apply when solving the same problem" (CUADRADO GAMARRA, "Inteligencia

2.2. Conceptualisation and typology of AIs

The term “robots” (plural) can be ambiguous and confusing from a broad interpretation, in which it would be identified with the concept of “AIs”, among which the concept of “robot” (singular) would be a specific type from a strict interpretation. It is therefore advisable to approach the conceptualisation and typology of AIs (plural, because there are many different types), which will allow us to approach the issue from a scientific-legal perspective.

The main problem is that there is no legal definition of the concept of AI or its analogous concepts, such as “robot”, “intelligent robot” or “autonomous robot”, nor of their complexity or sophistication.

Let’s start with the conceptualisation of AI, which is not easy, given the ups and downs this branch of computer science has gone through almost since the origins of computer programming research¹⁴, but an essential issue in order to approach the problem of the possibility and design of a specific

Artificial”, 7, trans. by LÓPEZ SEGOVIA). For a comprehensive study of the concept of “expert system”, which are proliferating in the field of law, cf. *ib.*, 7-15; and Jorge Isaac TORRES MANRIQUE, “Breves consideraciones acerca del aterrizaje de la inteligencia artificial en el derecho y su influencia en la realización de los derechos fundamentales”, *Pensamiento Americano* 10/19 (2017) 214-216 (210-227) (<https://doi.org/10.21803/pensam.v10i19.39>).

¹⁴ Cf. ALFONSECA, “Inteligencia artificial”, n. p. Computer science has, since its inception, posited the possibility of designing complex computers and systems, with intelligence comparable or superior to human intelligence. However, “[t]he discrepancy between these expectations and the repetitive and rigid nature of most of our computer applications [...] has not been enough to cast doubt on the feasibility of that dream. [...] there are quite a few supposedly intelligent human activities (such as playing chess) that have been falling under the domination of computers. But by an understandable reaction, [...] once dominated by computer programs, they no longer seem so intelligent to us. There is even a definition of artificial intelligence based on this, which we can consider ironic, as it is not intended to be serious, but which contains a grain of truth: artificial intelligence would be everything that we do not yet know how to do with a computer. Like the horizon, real artificial intelligence seems to be moving away from us as we move towards it” (ALFONSECA, “Inteligencia artificial”, n. p., trans. by LÓPEZ SEGOVIA).

legal personality for AIs, an approach to the conceptual complexity of the subject must first be made.

In this sense, linguistic definitions serve as a preliminary step to any legal definition. Thus, following SANTOS GONZÁLEZ's reasoning and argumentation¹⁵, here expanded, the REAL ACADEMIA ESPAÑOLA defines "robot" with four meanings:

A programmable electronic machine or device that is capable of manipulating objects and performing various operations.

[...] Robot that mimics the figure and movements of an animated being.

[...] Person who acts mechanically or unemotionally.

[...] Software that automatically scans the web for information¹⁶;

also defines "intelligence" with five meanings:

Ability to understand or comprehend.

[...] Problem-solving skills.

[...] Knowledge, understanding, act of understanding.

[...] Ability, skill and experience.

[...] Purely spiritual substance¹⁷.

Moreover, "emotional intelligence" is defined as the "ability to perceive and control one's own feelings and to know how to interpret the feelings of others"¹⁸; and finally, the concept of AI as the "scientific discipline concerned with creating computer programmes that perform operations comparable to those performed by the human mind, such as learning or logical reasoning"¹⁹.

From a scientific point of view, over the last few decades, definitions of AI have evolved into more accepted concepts

¹⁵ Cf. María José SANTOS GONZÁLEZ, "Regulación legal de la robótica y la inteligencia artificial: retos de futuro", *Revista Jurídica de la Universidad de León* 4 (2017) 30-32 (<https://doi.org/10.18002/rjule.v0i4.5285>).

¹⁶ *Sub vocem* (= s. v.) "robot", in REAL ACADEMIA ESPAÑOLA, *Diccionario de la lengua española. Edición del Tricentenario*, Madrid, Espasa, 2014 (= DLE). <<https://dle.rae.es/?id=4TsdiBo>> [accessed: 2029, Jul. 29], trans. by LÓPEZ SEGOVIA.

¹⁷ S. v. "inteligencia", en *DEL*, trans. by LÓPEZ SEGOVIA.

¹⁸ S. v. "inteligencia emocional", en *DEL*, trans. by LÓPEZ SEGOVIA.

¹⁹ S. v. "inteligencia artificial", in *DEL*, trans. by LÓPEZ SEGOVIA.

that attempt to encompass the cognitive and decision-making processes resulting from experience:

AI is concerned with extending the ability of machines to perform functions that would be considered intelligent if performed by humans. It aims to build machines and, in doing so, can be considered a branch of advanced engineering. However, in order to build such machines, it is generally necessary to think not only about the nature of the machines, but also about the nature of the intelligent functions to be performed²⁰.

Another definition, in a broader sense, starts from the concept of AI as cognitive science with respect to machines. It considers that:

It is necessary to probe deeply into the nature of learning and to make it receive instructions in natural language; it is necessary to probe deeply into the nature of language as well. In this sense, AI shares its territory with older disciplines such as linguistics and psychology. But what is unique to AI is that its methodology and style of theorising are strongly reminiscent of theories of computation²¹.

On the other hand, ALFONSECA's notion is more precise and lies somewhere between these two definitions—in the narrow and broad sense—when he defines AI as “a set of techniques that try to solve problems related to symbolic information processing, using heuristic methods”²². From this definition, the author points out, an AI must meet at least the following characteristics:

- That at least part of the information to be dealt with is of a symbolic nature.
- That the problem to be solved gives rise to a very extensive solution search space (configuration space), that it is

²⁰ Cf. PÉREZ, “Inteligencia Artificial”, 84, trans. by LÓPEZ SEGOVIA, who on this point follows PAPERT.

²¹ Cf. PÉREZ, “Inteligencia Artificial”, 84, trans. by LÓPEZ SEGOVIA, who on this point follows PAPERT.

²² ALFONSECA, “Inteligencia artificial”, n. p., trans. by LÓPEZ SEGOVIA.

not a trivial problem, that it is not possible to solve it with a simple exhaustive search.

- That the most practical way to approach the problem is to use heuristic rules based on experience, which shorten the solution search process and avoid combinatorial explosion.
- In principle, the programme should be able to extract these heuristic rules from its own experience, i.e. it must be able to learn. For this purpose, techniques such as pattern recognition (Bishop 2006), Markov chains (Norris 1998) or genetic algorithms (Goldberg 1989) can be used, which in themselves are not limited to artificial intelligence, as they can be applied in many other fields, but can also be useful in this field²³.

Along these lines, the pinnacle of AI will be reached when, with these intelligences fully understood and all simulation excluded, a self-aware AI with real feelings and awareness of its own existence and identity is achieved²⁴.

However, AI must be distinguished, strictly speaking, from less powerful computational systems —capable of extracting patterns through less complete and accurate numerical processes— or from systems inspired by evolutionary or genetic processes: that is, a distinction must be made between apparent intelligence and the ability to think and act²⁵.

Thus, two lines of research emerge: the branch of engineering, which focuses on computer systems and robotic or

²³ ALFONSECA, “Inteligencia artificial”, n. p., trans. by LÓPEZ SEGOVIA. Regarding mathematical pattern recognition, cf. Christopher, M. BISHOP, *Pattern Recognition and Machine Learning*. New York, NY, Springer Science, 2006, 1-5; and David E. GOLDBERG, *Genetic Algorithms in Search, Optimization and Machine Learning*, Reading, MA, Addison-Wesley Publishing Company, 1989. Similarly, NORRIS points to the possibility of certain random processes that do not need memory but only the current state of the process to take the next step, i.e. “Markov chains”, cf. James NORRIS, *Markov chains*, Cambridge, Cambridge University Press, 1998, 1-3.

²⁴ Cf. TORRES MANRIQUE, “Breves consideraciones”, 212; and José Antonio MALPICA VELASCO, “Inteligencia Artificial y conciencia”, n. d. <<https://frasca.web.uah.es/inteligencia-artificial.pdf>> [accessed: 2024, Jul. 29].

²⁵ Cf. ALFONSECA, “Inteligencia artificial”, n. p.

physical supports that perform intelligent tasks; and the branch that studies intelligent behaviour, which tries to explain the behaviour of intelligent natural beings, in order to guide the creation of artificial entities with similar capabilities²⁶.

However, as NISA ÁVILA points out, it is necessary to arrive at legally useful definitions that allow for an objectively regulable classification of AIs, as the current ones tend to interrelate, and sometimes even confuse, the concepts of AI and “robotics”²⁷. Thus, the author comes to define the concept of “robotics” from a dual perspective:

Sociologically, robotics would be anything that is incapable of appearing spontaneously outside the habitat of human beings or any derivation of that habitat and that has a socio-technical relationship with the members of a society and has profound interactions with them. The legal definition of robotics is more complex than it seems, since there is practically no exact legislation in any country that defines what a robot is beyond a vague legal concept that we have derived from the current machinery existing in assembly lines or sanitary or military matters; where such machinery could be considered a robot. But a robot is on the lowest rung of robotics, being only sophisticated machinery. Robotic science goes much further and the same should be expected from the legal sphere²⁸.

This conceptual ambiguity, between AIs and robotics, becomes more apparent when approaching international normative texts, which only refer to the field of robotics and not to AIs —the former legal concept only covers “machines

²⁶ Cf. Alejandro PAZOS – Nieves PEDREIRA – Juan Ramón RABUÑAL – Javier PEREIRA, “Inteligencia Artificial y Computación Avanzada”, in Juan Jesús ROMERO – Carlos DAFONTE – Ángel GÓMEZ – Fernando Jorge PENOUSAL (eds.), *Inteligencia Artificial y computación avanzada*, Santiago de Compostela, Fundación Alfredo Brañas, 2007, 14.

²⁷ Cf. Javier Antonio NISA ÁVILA, “Robótica e Inteligencia Artificial, ¿legislación social o nuevo ordenamiento jurídico?”, *Elderecho.com* (2016, Mar. 30) n. p. <<https://elderecho.com/robotica-e-inteligencia-artificial-legislacion-social-o-nuevo-ordenamiento-juridico>> [accessed: 2024, Jul. 29].

²⁸ NISA ÁVILA “Robótica”, n. p., trans. by LÓPEZ SEGOVIA.

controlled directly or indirectly by operators, i.e. they do not have any kind of artificial intelligence”²⁹—.

As a result, the regulation of autonomous or intelligent machines is still rather limited, with a few exceptions, although in the last five years there has been a certain legislative explosion³⁰.

²⁹ NISA ÁVILA, “Robótica”, n. p., trans. by LÓPEZ SEGOVIA. The author reports on the most relevant regulations of the *International Organization for Standardization* (= ISO): the ISO 13855:2010, *Safety of machinery — Positioning of safeguards with respect to the approach speeds of parts of the human body*. <<https://www.iso.org/standard/42845.html>> [accessed: 2024, Jul. 29]; the ISO 10218-1:2011, *Robots and robotic devices — Safety requirements for industrial robots*. <<https://www.iso.org/standard/51330.html>> [accessed: 2024, Jul. 29]; the ISO 10218-2:2011, *Robots and robotic devices — Safety requirements for industrial robots — Part 2: Robot systems and integration*. <<https://www.iso.org/standard/41571.html>> [accessed: 2024, Jul. 29]; and the ISO/TS 15066:2016, *Robots and robotic devices — Collaborative robots*. <<https://www.iso.org/standard/62996.html>> [accessed: 2024, Jul. 29]. With regard to the specific regulations concerning autonomous AIs, some inaccuracies have been found in the sources cited by NISA ÁVILA, especially in the regulations concerning South Korea and Japan, which this study attempts to correct.

³⁰ Examples include the following:

In the Republic of Korea (South Korea), art. 2 (1) of the *Korean law, Development and distribution of intelligent robots*, 2008. 2023 consolidated text: <<http://law.go.kr/LSW/eng/engLsSc.do?menuId=2§ion=lawNm&query=robot&x=0&y=0#liBgcolor0>> [accessed: 2024, Jul. 29]; defines “intelligent robot” as “Mechanical device (including software required for operating the mechanical device) that perceives the external environment for itself, discerns circumstances, and moves voluntarily”. See also, the *South Korean Robot Ethics Charter*, 2012 —cited by Minkyu KIM, “New Legislation and the Reform of the Rules on Robots in Korea”, in Eric HILGENDORF – Uwe SEIDEL (eds.), *Robotics, Autonomics, and the Law. Legal issues arising from the AUTONOMICS for Industry 4.0 Technology Programme of the German Federal Ministry for Economic Affairs and Energy*, Baden-Baden, Nomos, 2017, 132-133 (<<https://doi.org/10.5771/9783845284651-129>>—, without offering any definition, starts from the concept of an “intelligent robot” capable of interacting with human beings, and states in art. 1: “The aim of the Robot Ethical Charter is to confirm human ethics for the co-existence and co-prosperity of human beings and robots”; in art. 2: “(Common principles of human beings and robots): Human beings and robots must bear the dignity, information, and engineering ethics of

life”; and art. 4: “(Robots ethics): Robots should obey human beings as a friend, helper and partner, and should not injure human beings”.

In Japan, cf. MINISTRY OF ECONOMY, TRADE AND INDUSTRY, GOVERNMENT OF JAPAN, *Safety guidelines for next-generation robots*, 2007, 2. <https://web.archive.org/web/20160418174641/http://www.meti.go.jp/policy/mono_info_service/mono/robot/pdf/guideline.pdf> [accessed: 2024, Jul. 29], which do not make any definition but use the term “next generation robots” and classify them according to their usage; and HEADQUARTERS FOR JAPAN’S ECONOMIC REVITALIZATION, *New Robot Strategy. Japan’s Robot Strategy - Vision, Strategy, Action Plan*, 10/02/2015. <https://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/robot_honbun_150210EN.pdf> [accessed: 2024, Jul. 29], which distinguishes between robots that perform “simple routine tasks” and “autonomous” robots “equipped with self-learning abilities and action initiatives”, and even its transformation into “...‘information terminal device’ replacing such existing devices as personal computers and mobile phones”, even interconnecting with each other (cf. *ib.*, part. I., ch. 1, sec. 2, subsec. 1, 4-5).

And in the EU, cf. Wolfgang HEUSEL – Marta BALLESTEROS – Xandra KRAMER – Lionel BENTLY – Andrea BERTOLINI – Erica PALMERINI. *Workshop on Upcoming Issues of EU Law [Excerpt - Regulating robotics a challenge for Europe]*, Brussels, Directorate General for Internal Policies, Policy Department C of European Union: Citizens’ Rights and Constitutional Affairs Legal Affairs, 2014, sept. 24. <[http://www.europarl.europa.eu/RegData/etudes/IDAN/2014/509987/IPOL_IDA\(2014\)509987\(ANN01\)_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2014/509987/IPOL_IDA(2014)509987(ANN01)_EN.pdf)> [accessed: 2024, Jul. 29]; cf. Nathalie NEVEJANS – UE (ed.), *European Civil Law Rules in Robotics. Study for the JURI Committee*, Brussels, Directorate General for Internal Policies, Policy Department C of European Union: Citizens’ Rights And Constitutional Affairs Legal Affairs, 2016, Oct. <[http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571379/IPOL_STU\(2016\)571379_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571379/IPOL_STU(2016)571379_EN.pdf)> [accessed: 2024, Jul. 29]; cf. Rinie VAN EST – Joost GERRITSEN, *Human rights in the robot age. Challenges arising from the use of robotics, artificial intelligence, and virtual and augmented reality*, The Hague, Rathenau Instituut, 2017, Apr. 28. <<https://www.rathenau.nl/sites/default/files/2018-02/Human%20Rights%20in%20the%20Robot%20Age-Rathenau%20Instituut-2017.pdf>> [accessed: 2024, Jul. 29]; cf. EUROPEAN COMMISSION FOR THE EFFICIENCY OF JUSTICE, *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment. Adopted by the CEPEJ during its 31st Plenary meeting (Strasbourg, 3-4 December 2018)*, Brussels, 2019, Feb. <<https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c>> [accessed: 2024, Jul. 29]); and, at last, recently emanated, cf. *Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU)*

On 25 April 2018, the EU established a more up-to-date definition and developed on 8 April 2019 by a *High Level Expert Group on IAs*³¹, launched by the European Commission in June 2018. Thus, the EU Commission pointed out that:

Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions—with some degree of autonomy—to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be

2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (Text with EEA relevance). *Official Journal of the European Union* 1689 L (2024, Jul. 12). <<http://data.europa.eu/eli/reg/2024/1689/oj>> [accessed: 2024, Jul. 29].

Thus, while Korean and Japanese standards regulate robotics and human interaction along with their social impact, the EU is limited to the standardisation of industry standards in the various sectors where robotics is used to assist in the performance of human tasks (cf. NISA ÁVILA, “Robótica”, n. p.). The EU has not yet fully responded in the new regulation to the request to the European Commission made in 2017: “to propose common Union definitions of cyber physical systems, autonomous systems, smart autonomous robots and their subcategories by taking into consideration the following characteristics of a smart robot:

- the acquisition of autonomy through sensors and/or by exchanging data with its environment (inter-connectivity) and the trading and analysing of those data;
- self-learning from experience and by interaction (optional criterion);
- at least a minor physical support;
- the adaptation of its behaviour and actions to the environment;
- absence of life in the biological sense” (cf. *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, n. 1).

³¹ Cf. DIRECTORATE-GENERAL FOR COMMUNICATIONS NETWORK, CONTENT AND TECHNOLOGY OF THE EUROPEAN UNION, *Call for Applications for the selection of members of the High-Level Expert Group on Artificial Intelligence*, Brussels, 2018, Mar. 09. <<https://digital-strategy.ec.europa.eu/en/news/call-high-level-expert-group-artificial-intelligence>> [accessed: 2024, Jul. 29]; and cf. ID., *High-Level Expert Group on Artificial Intelligence*, 2018. <<https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai>> [accessed: 2024, Jul. 29].

embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)³².

And, in a 2019 communication, it has set out seven essential requirements that were covered by the guidelines of the aforementioned high-level group of experts³³:

- Human agency and oversight.
- Technical robustness and safety.
- Privacy and data governance.
- Transparency.
- Diversity, non-discrimination and fairness.
- Societal and environmental well-being.
- Accountability.

Subsequently, on 19 February 2020, the European Commission of the EU published the *White Paper on Artificial Intelligence — A European approach to excellence and trust*³⁴, in which, starting from the uncertainties and risks of AI systems and other digital technologies, it moved away from the specific concept of legal personality for AIs and instead focused on the

³² *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions “Artificial Intelligence for Europe”* (COM/2018/237 final), 2018, Apr. 25. <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0237>> [accessed: 2024, Jul. 29]. For an update of the above-mentioned definition of AI by the above-mentioned group of experts cf. EUROPEAN COMMISSION’S HIGH-LEVEL EXPERT GROUP ON ARTIFICIAL INTELLIGENCE, *A Definition of AI: Main Capabilities and Disciplines*, 08 abr. 2019. <<https://digital-strategy.ec.europa.eu/en/library/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines>> [accessed: 2024, Jul. 29].

³³ Cf. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “Building Trust in Human-Centric Artificial Intelligence”* (COM/2019/168 final), Brussels, 2019, Apr. 08. <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0168>> [accessed: 2024, Jul. 29].

³⁴ Cf. EUROPEAN COMMISSION, *White Paper on Artificial Intelligence — A European approach to excellence and trust* (COM/2020/65 final), Brussels, 2020, Feb. 19, n. p. <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0065>> [accessed: 2024, Jul. 29].

principles of supervision, oversight, legal certainty and civil liability of AI, the internet of things and robotics. All of this was framed within the data economy and data protection. To this end, the European Commission proposed the following actions:

Action 1: The Commission, taking into account the results of the public consultation on the White Paper, will propose to the Member States a revision of the Coordinated Plan to be adopted by end 2020. [...]

Action 2: the Commission will facilitate the creation of excellence and testing centres that can combine European, national and private investments, possibly including a new legal instrument. The Commission has proposed an ambitious and dedicated amount to support world reference testing centres in Europe under the Digital Europe Programme and complemented where appropriate by research and innovation actions of Horizon Europe as part of the Multiannual Financial Framework for 2021 to 2027. [...]

Action 3: Establish and support through the advanced skills pillar of the Digital Europe Programme networks of leading universities and higher education institutes to attract the best professors and scientists and offer world-leading masters programmes in AI. [...]

Action 4: the Commission will work with Member States to ensure that at least one digital innovation hub per Member State has a high degree of specialisation on AI. Digital Innovation Hubs can be supported under the Digital Europe Programme. [...]

Action 5: In the context of Horizon Europe, the Commission will set up a new public private partnership in AI, data and robotics to combine efforts, ensure coordination of research and innovation in AI, collaborate with other public-private partnerships in Horizon Europe and work together with the testing facilities and the Digital Innovation Hubs mentioned above. [...]

Action 6: The Commission will initiate open and transparent sector dialogues giving priority to healthcare, rural administrations and public service operators in order to present an action plan to facilitate development, experimentation and adoption. The sector dialogues will be used to prepare a specific “Adopt AI programme” that will support public procurement of AI systems, and help to transform public procurement processes themselves³⁵.

³⁵ EUROPEAN COMMISSION, *White Paper on Artificial Intelligence*, n. p.

This document also proposes to improve the regulatory framework to address the following risks and situations³⁶:

- Effective application and enforcement of existing EU and national legislation
- Limitations of scope of existing EU legislation.
- Changing functionality of AI systems.
- Uncertainty as regards the allocation of responsibilities between different economic operators in the supply chain.
- Changes to the concept of safety.

For reasons of length, we will not discuss the *Proposal for an Artificial Intelligence Act*³⁷, of 2021, Apr. 21, but on 13 June 2024 was finally enacted by the European Union (= EU) the mentioned *Artificial Intelligence Act* (= *AI Act*), in whose art. 3 (1) appears the definition of the above-mentioned COM/2018/237 final, on “AI system”. This is the wording:

a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.

The *AI Act* completes these definitions and classification with some notions relating to the purpose of AI and the possible risk it may cause (cf. art. 6), as in Whereas n. 4:

AI is a fast evolving family of technologies that contributes to a wide array of economic, environmental and societal benefits across the entire spectrum of industries and social activities. By improving prediction, optimising operations and resource allocation, and

³⁶ Cf. EUROPEAN COMMISSION. *White Paper*, n. p.

³⁷ Cf. EUROPEAN COMMISSION. *Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts (COM/2021/206 final)*, Brussels, 2021, Apr. 21. <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206>> [accessed: 2024, Jul. 29].

personalising digital solutions available for individuals and organisations, the use of AI can provide key competitive advantages to undertakings and support socially and environmentally beneficial outcomes, for example in healthcare, agriculture, food safety, education and training, media, sports, culture, infrastructure management, energy, transport and logistics, public services, security, justice, resource and energy efficiency, environmental monitoring, the conservation and restoration of biodiversity and ecosystems and climate change mitigation and adaptation.

However, given the risks associated with these new technologies, the *AI Act* emphasizes the need to establish common standards across Member States to safeguard public interests, particularly in areas such as health, safety, and fundamental rights, including the right to religious freedom. The *Act* also seeks to create a framework for systems of control, surveillance, and human oversight (see arts. 14 and 72–76), as well as to define liability in cases of potential harm caused by AI (see arts. 22–26)³⁸.

The impact that AI can have on fundamental rights, including Religious Freedom, is not a trivial issue. Art. 5 expressly prohibits certain AI practices, among others, those that subliminally affect the individual or collective behaviour of persons, the exploitation of their vulnerabilities, the causing of harm, prejudicial or unfavourable treatment, evaluations or classification of persons, etc.

The *AI Act* expressly takes religion into account in Whereas 16 and 29–30 on the prohibition of biometric categorisation or discrimination on religious grounds.

In this regard, art. 27 of the *AI Act* requires impact assessments to be carried out on high-risk AI systems in matters relating to the impact on fundamental rights, while art. 77 grants specific powers to the authorities in charge of protecting fundamental rights.

³⁸ Cf. Miguel L. LACRUZ MANTECÓN, *Robots y personas. Una aproximación jurídica a la subjetividad cibernética*, Madrid, Editorial Reus, 2020, 161–225; and cf. Aimee van WYNSBERGHE, “Responsible Robotics and Responsibility Attribution”, in Joachim VON BRAUN – Margaret S. ARCHER – Gregory M. REICHBERG – Marcelo SÁNCHEZ SORONDO (eds.), *Robotics, AI, and Humanity. Science, Ethics, and Policy*, Cham, Springer, 2021, 239–249.

In order to prevent possible harm, the Regulation obliges the implementation of Codes of Practice (cf. art. 56), codes of conduct and guidelines (cf. arts. 95-96), while allowing for the establishment of controlled testing sites for AI (cf. arts. 57-61).

Finally, Chapter XII of the *AI Act* (cf. arts. 99-101) lays down a system of sanctions and penalties.

3. THE CLASSICAL CONCEPT OF LEGAL PERSON GIVEN BY POPE INNOCENT IV

Technological advances have historically been linked to the development and progress of Law, which has developed its own legal institutes to facilitate the organisation of society at each conjunctural stage of history.

The transition from the Roman legal concept of “corporation” (*corpus*) to that of a “legal person” marked a significant paradigm shift. This development helped overcome the medieval societal model, paving the way for the political, social, and economic framework of modern States. It introduced legal entities such as the “State”, the “trading company”, the “association”, and the “foundation” —all entities with legal personality, based either on personal or patrimonial basis—³⁹. In this regard, ALFARO points out that:

the historical appearance (in Rome) of corporations (not the appearance of partnerships) breaks the two-way relationship between individuals and estates. Until the appearance of corporations (not the legal concept of legal person, which appeared much later) there are no assets other than those belonging to individuals and there are no individuals without assets. The emergence of corporations implies the emergence of ownerless estates, but does not imply the emergence of new individuals, or even of new subjects of law⁴⁰.

³⁹ Cf. Santiago BUENO SALINAS, *Las personas jurídicas en el derecho canónico*, Barcelona, Facultat de Teologia de Catalunya, 2014, 7-10.

⁴⁰ Jesús ALFARO ÁGUILA-REAL, “Introducción al Derecho de las personas jurídicas”, *Almacén de Derecho* 2019, Feb. 06, n. p. <<https://web.archive.org/web/20200904212344/https://almacendederecho.org/introduccion-al-derecho-de-las-personas-juridicas>> [accessed: 2024, Jul. 29].

The concept of “juridical personality” was designed in the 13th century by Sinibaldo FIESCHI (1195-1254) and positivised as Pope Innocent IV (1243-1254) to solve two problems undeveloped by GRATIAN’s Decree.

On the one hand, there was a contradiction between the canon and civil law of the time regarding the number of natural persons necessary to constitute the college of episcopal electors in charge of the cathedral councils, which made it advisable to separate the two rights. Therefore,

- 1) The Decree *Nullus in Ecclesia* (X. 1. 6. 1) —supposedly attributed to Pope Lucius— denied the classical principle whereby three persons were required to constitute a college —*tres faciunt collegium*—, two persons being sufficient.
- 2) The *Lex Neratius* (D. 50. 16. 85) followed the above-mentioned three-person principle.

On the other hand, the penalty of excommunication was increasingly used against cities —such as the independent cities of the Italian peninsula with respect to the pontifical authority—, associations and universities with doctrines contrary to Catholic doctrine⁴¹. To solve these conflicts, Sinibaldo prohibited the possibility of excommunicating collectivities and elaborated a new juridical concept, the legal personality⁴², by the expression *universitas fingatur una persona*⁴³ in his commentary on the Decree *Praesentium* (VI. 2, 10, 2).

⁴¹ Cf. BUENO SALINAS, *Las personas jurídicas*, 18-19. For a consultation of the classical texts quoted from the Decretals and the Digest, cf. Aemilius Ludovicus RICHTER (ed.), *Corpus Iuris Canonici*, vol. 2, Leipzig, Typis Bernh. Tauchnitz, 1839; and Manuel GÓMEZ MARÍN – Pascual GIL GÓMEZ (Eds.), *El Digesto del Emperador Justiniano*, Madrid, 1874.

⁴² Cf. BUENO SALINAS, *Las personas jurídicas*, 19-20.

⁴³ INNOCENTIUS PP. IV [Sinibaldus FLISCUS], *Commentaria super libros quinque Decretalium*, Francofurti ad Moenum, 1570, in X.2.20.57, n. 5. Specifically, the text of the axiom provides that: *Hodie licitum est omnibus collegiis per alium iurare, et hoc ideo, quia cum collegium in causa universitatis fingatur una persona...* (ib.). Also cf. BUENO SALINAS, *Las personas jurídicas*, 20, and nt. 13.

For FIESCHI, the legal person is not simply a legal fiction without any objective basis, but rather an abstraction that helps explain the legal nature of institutions such as the *universitates* (aggregates) of that era. These institutions were beginning to be distinguished grounded on either their personal or patrimonial basis. Instead of following a nominalist approach that would later evolve into the modern theory of legal fiction, Sinibaldo's perspective draws from the Roman technique of fiction, substantiated in a realistic and objective basis, which supports the constitutive capacity of the legal system⁴⁴.

The classification of *universitates* with legal personality that emerged in the 13th century has survived until the present day in canon law and has been extended to all legal systems⁴⁵:

- Aggregates of things —*universitates rerum*, with a “patrimonial basis”—, precedents of foundations and capital companies; and aggregates of persons —*universitates personarum*, with personal basis—.
- Among the *universitates personarum*, there are collegial or associative entities, where representation and decisions are democratically determined by the majority; and non-collegial entities, where the representation and decision-making authority are defined by law or a founding authority. Examples of personal collegial entities include cathedral councils, which elected diocesan bishops —a practice that later influenced local councils in electing mayors—; or guilds, groups of citizens, evolved into fellowships, fraternities, and confraternities (*confraternitates*), eventually giving rise to modern associations.
- Ecclesiastical and secular *Universitates*.

⁴⁴ Cf. BUENO SALINAS, *Las personas jurídicas*, 20 and 126-130; and Santiago PANIZO ORALLO, *Persona jurídica y ficción. Estudio de la obra de Sinibaldo de Fieschi (Inocencio IV)*, Pamplona, Universidad de Navarra, 1975, 428-429.

⁴⁵ Cf. BUENO SALINAS, *Las personas jurídicas*, 21.

Sinibaldo clarified principles concerning them, which have remained practically unchanged up to the present day, for example⁴⁶:

- The principle of incapacity to commit a crime applied to legal persons (*persona iuridica delinquere non potest*).
- The principle of legal incorporation of legal persons.
- Minimum number of natural persons constituting the legal person, especially in the case of legal persons on a personal basis.
- The principle of perpetuity or continuity with a single member on a collegial personal basis.

The contents of Pope Innocent IV's concept of juridical personality stemmed from Paul of Tarsus' own biblical conception of the Church as a body (*corpus*) of divine institution⁴⁷

⁴⁶ Cf. BUENO SALINAS, *Las personas jurídicas*, 21-22.

⁴⁷ Cf. BUENO SALINAS, *Las personas jurídicas*, 15-18. In this regard, the author points out: "Roman law did not, as is well known, have the concept of the legal person, because its individualistic conception of the subject of law prevented it, as did the necessary abstraction that the figure entails, in contrast to Roman pragmatism. If we have to look for an ultimate cause that triggered the process, it can only be found in Christianity, which offered for study the entity from which the initial theory of juridical personality started and towards which it converged: the Church. [...] For the ecclesiology of Paul of Tarsus, the union of Christians with Christ forms a single organism, a living unity, which takes on a visible aspect: the Church. This is no longer the material union of believers, but the faithful form reciprocally and with the head of the corpus, Christ, a complete personality. This is no mere allegory, but a direct spiritual reality... which will have a certain juridical expression. [...] For Christianity, Paul's conception is real, not allegorical [...] the use of the theory of fiction to explain the concrete juridical formulation of the personality of the *universitates* (in Latin, aggregates) [...] did not imply that the basis from which the idea of juridical personality arose, the Church, had ever been regarded as a fiction. On the contrary, the consideration of the Church as a reality was quite clear. Even Roman law echoed this universal reality: the Edict of Milan ordered the return of confiscated property to the Church, but not to its former possessors, considering Christians not as a heterogeneous union or association, but as a *corpus*. Such a revolutionary idea for the Roman world did not change the ancient conceptions of *collegia* and *universitates*, which were always considered as groupings of several natural persons under the authorisation of the State, since such

and served as the basis for the development of the concept up to the 20th century. His idea included the concept of “moral personality” and that of “international legal personality”, as well as the considerable increase in nuances surrounding the concept of legal personhood, with various developments in canon law and secular law.

Having sketched these outlines of the origin of legal personality and its relations with other similar concepts, a short historical leap can be made to the 19th and 20th centuries, which lead us to the development of modern theories on the legal person, among which BUENO basically distinguishes three⁴⁸:

- The theory of legal fiction: based on Sinibaldo FIESCHI’s conception but applied from a nominalist position, in which the legal person is understood as a *persona ficta*

associations were forbidden on principle (except for religious reasons). On the other hand, Roman law had not considered the *civitas*, like any other population grouping, as an independent legal entity with its own personality, even though it had a certain administrative unity. On this last point, for example, the text of Pomponius *Rerum mixtura*, in D.41.3.30, shows how little clarity Roman law had achieved. For this jurist, the people, the legion or a flock are *corpora plura non soluta*, many bodies not united, but placed under one name. Pomponius rightly doubted the possibility of usucaption in favour of these corpora, which have no union and whose theory is the absolute negation of juridical personality, which is always based on the consideration of unity. Germanic law [...] contributed a fundamental idea: the idea of the nation or people as a unit, which maintains close ties, and the notion of society as an entity of public and not merely private law. From the 11th century, with the revival of Western Europe after the Cluny reform and the Gregorian Reformation, the above-mentioned circumstances converged historically. The city was revived as a unifying entity of commercial activity, with privileges and even full independence, which awakened jurists’ interest in discovering its intimate legal nature. Roman law was rediscovered, with texts from the Digest on colleges, corporations and *universitates*, followed by the flourishing of the cultivation of law in the Universities of Studies. The Church becomes aware of its own entity, its own personality, at the same time as the popes become the sole legislators of a new, universal and common European order. [...] This complex series of historical circumstances [...] converged in the 12th century” (BUENO SALINAS, *Las personas jurídicas*, 15-17, trans. by LÓPEZ SEGOVIA).

⁴⁸ Cf. BUENO SALINAS, *Las personas jurídicas*, 126-130.

seu repraesentata, and not as an objective subject, and therefore falls into a contradiction: fictitious entities are false or non-existent, hence the fiction, which puts the whole theory of fiction into crisis, and when applied to its extremes, would imply the non-existence of any legal person, so that the only possible subject of law is the human person.

- The theory of the real collective person: Based on the Germanic conception of legal subjectivity, which can be applied to collectivities such as the family and the nation, i.e. existing and real collective entities, with a will different from that of their members, manifested through specific organs. This legal position diminished with the Second World War, due to its link with totalitarian nationalism, but it resulted in an excessive accentuation of individual rights with a certain tendency to absolutise them.
- The theory of reality or legal form: headed by FERRARA, which synthesises the positions of the previous theories, unifying them in a concept of legal person that is based on the abstraction carried out through the recognition of objective law: personality is a legal form and not an entity in itself, that is, it would be a way of being of things, insofar as they are real concepts for the law, under a conception of reality that is different from the physical one⁴⁹.

These last two definitions are linked to the phenomenological school of Göttingen, represented by Adolf REINACH in its realist aspect applied to pure Law. In *A priori fundamentals of Civil Law*, the author stated in 1913 that “the positive law finds the legal concepts which enter into it; *in absolutely no way does it produce them*”⁵⁰, and defends the specific existence of the objects of Law:

The basic concepts of right have a being which is independent of the positive law, just as numbers have a being independent of

⁴⁹ Cf. Francesco FERRARA, *Teoría de las personas jurídicas*, Madrid, Editorial Reus, 1929, 126-133.

⁵⁰ Adolf REINACH, *The Apriori Foundations of the Civil Law*. Translated by John F. CROSBY, Berlin, De Gruyter, 2012, 4 (<https://doi.org/10.1515/9783110329803.1>).

mathematical science. The positive law can develop and transform them as it will: they are themselves found by it and not produced by it. And further: there are eternal laws governing these legal entities and structures, laws which are independent of our grasp of them, just as are the laws of mathematics. The positive law can incorporate them into its sphere, it can also deviate from them. But even when it enacts the very opposite of them, it cannot touch their own proper being⁵¹.

Such statements made it possible to apply the concept of legal person to new entities that burst onto the legal scene⁵². This leads to very interesting current definitions of “legal person”. On the one hand, according to FERNÁNDEZ SESSAREGO, this concept arises from the objective reality of the human person, to which an analogy of similarity is applied from the abstraction of the concept of the person as a subject of law to which duties and rights are attributed as subjective legal situations. “The concept of the subject of law always has as its correlate in reality the human being, all human beings without exception. Only the human being, in any of his four ‘ways of being’, is a subject of law. That is to say, individually or collectively considered. No other entity of nature is a subject of law”⁵³.

These four forms of being a person are: 1) the unborn human being —conceived or *nasciturus*—; 2) born human being —natural person—; 3) organisation of persons not registered or recognised by the State; and 4) organisation of persons,

⁵¹ REINACH, *The Apriori Foundations*, 5-6.

⁵² REINACH’s successor in thought, Edith STEIN, starting from the concept of “empathy”, developed a legal theory of the State and its legal personality, including the concepts of individual, family, community and people; cf. Edith STEIN, *On the Problem of Emphaty*. Translated by Waltraut STEIN, Washington, DC, ICS Publications, 1989; cf. ID., “Sentient Causality” and “Individual and Community”, in ID. *Philosophy of psychology and the Humanities*. Edited by Marianne SAWICKI. Translated by Mary Catharine BASEHEART and Marianne SAWICKI, Washington, DC, ICS Publications, 2000; and cf. ID., *An Investigation Concerning the State*. Edited and translated by Marianne SAWICKI, Washington, DC, ICS Publications, 2006.

⁵³ Carlos FERNÁNDEZ SESSAREGO, “¿Qué es ser «persona» para el Derecho?”, *Derecho – Pontificia Universidad Católica del Perú – Revista de la Facultad de Derecho* 54 (2001) 315 (289-333) (<https://doi.org/10.18800/derechopucp.200101.011>).

registered or recognised by the State, improperly designated—according to the author—as “juridical person”. Certainly, “only what is legally referred to as a ‘person’ is a subject of law”⁵⁴; but this approach to legal personality focuses on the personal basis and ignores the real or patrimonial basis, which is of greater interest for this research, excluding from the qualification of “person”, even *ficta*, any other type of legal entity.

Human beings are the only entities that, from the reality of life, deserve such a qualification. It goes without saying that we are talking about all human beings, without exception, and only human beings to the exclusion of any other entity of nature. The human being, because he/she is free and co-existential, is the creator, protagonist and addressee of law [...]: law is an existential requirement of the human being, insofar as he is free and co-existential. There can be no coexistence without rules of conduct. In this respect, it should not be lost sight of the fact that human beings, individually or collectively considered, are subjects of law⁵⁵.

Thus, we partially disagree with this law-philosophical approach, since essence precedes existence, and therefore, law, more than an existential consequence of the human being, is a requirement of his social being. However, in addition, from the theory of regional ontologies, the objects of law are perceived as having their own existence, regardless of whether they are perceived or not, which extends beyond the human being, even when they arise from a human legal act.

A balance of multiple variables is necessary. On the one hand, an overly law-philosophical focus on the theory of fiction leads to a nominalist approach to the concept of a legal person. This can result in an excessive reliance on legal positivism, where any entity deemed a legal person by the legal system is accepted as such, without regard for ethical or moral considerations. On the other hand, an overemphasis on the human person implicitly excludes legal entities with a personal basis from law-philosophical analysis and explicitly

⁵⁴ FERNÁNDEZ SESSAREGO, “¿Qué es ser «persona»?”, 315, trans. by LÓPEZ SEGOVIA.

⁵⁵ FERNÁNDEZ SESSAREGO, “¿Qué es ser «persona»?”, 328, trans. by LÓPEZ SEGOVIA.

excludes those with a patrimonial basis. Thus, a realistic and purist approach is needed, grounded in the internal logic of law. Under this framework, legal fiction has full meaning as long as there is an objective —realistic— legal basis. Furthermore, the ethical, axiological, and teleological levels must be respected to ensure the necessary connections for recognizing an entity —whether personal or patrimonial— as a subject of rights and obligations within a positive legal system, distinct from natural persons.

This was the starting point for the confraternities and third orders in the Middle Ages; and after the Council of Trent, following the crisis caused by Protestant individualism in the modern age, the first universal legislation on associations was born, formulated in the legislation of the *Codex Iuris Canonici* (= CIC) of 1917⁵⁶, on which the foundations of the pre-Council were laid⁵⁷.

More complex, however, is the legal gestation of the entities with a patrimonial basis, which come from the entities known as “censuses” and “benefices”, which derived in “pious foundations”, and other patrimonial entities, undoubtedly of more modern origin than the entities of a corporate nature⁵⁸.

⁵⁶ Cf. PIUS PP. X – BENEDICTUS PP. XV, *Codex Iuris Canonici. Pii X Pontificis Maximi iussu digestus Benedicti Papae XV auctoritate promulgatus*, 1917, May. 27). *Acta Apostolicae Sedis* (= AAS), 9/2 (1917) 3-521. <<http://www.vatican.va/archive/aas/documents/AAS-17-1925-ocr.pdf>> [accessed: 2024, Jul. 29].

⁵⁷ For more information about the associationism in the Church's history, cf. Antonio GARCÍA Y GARCÍA, “Significación del elemento asociativo en la historia del derecho de la Iglesia”, en Winfried AYMANS – Karl Theodor GERINGER – Heribert SCHMITZ (Eds.), *Das konsoziative Element in der Kirche. Akten des VI. Internationalen Kongresses für kanonisches Recht, München, 14-19 September 1987*, St. Ottilien, Eos, 1989, 27-34; Juan José ECHEBERRÍA SAGASTUME, *Asunción de los consejos evangélicos en las asociaciones de fieles y movimientos eclesiales. Investigación teológico-canónica*, Roma, Pontificia Università Gregoriana, 1998, 11-36; and Gulielmus ONCLIN, “Principia generalia de fidelium associationibus”, *Apollinaris* 36 (1963) 68-76.

⁵⁸ Thus, in Canon Law, a benefice is understood as “ecclesiastical preferments to which rank or public office is attached, otherwise described as ecclesiastical dignities or offices, such as bishoprics, deaneries, and the like; but in popular acceptance, it is almost invariably appropriated to rectories, vicarages, perpetual curacies, district churches, and endowed

However, for reasons of length, it is not possible to discuss the question of the entities of the Church, beyond the conceptual and legal impulse given in the 13th century by Pope Innocent IV, which has given rise to a whole range of typologies of subjectivities or legal entities that have survived to the present day, both in canon law and in state law⁵⁹.

4. AI AND LEGAL PERSONALITY

4.1. Possibility of applying legal personality to AIs

Nowadays, the regulation of legal persons in all legal systems is often complex, precise and dispersed, in equal proportion, and is intrinsically related to the area of liability, whether criminal or civil, direct or subsidiary:

In the current legal framework, robots cannot be held responsible for acts or omissions that cause harm to third parties. The framework for non-contractual civil liability is detailed in articles 1902 and following of the Civil Code. Given that robots can operate

chapelries" (s. v. "benefice", *The Law Dictionary* <<https://thelawdictionary.org/legal-system/>> [accessed: 2024, Jul. 29] (= TLD). In this respect, for a more in-depth consideration of the legal personality of the benefit as opposed to the possible legal personality of the ecclesiastical office (cf. BUENO SALINAS, *Las personas jurídicas*, 172-17). A "census" —in Spanish and Mexican law— is understood to be "A ground rent. The right which a person acquires to receive a certain annual pension, for the delivery which he makes to another of a determined sum of money or of an immovable thing". (s. v. "censo", TLD). And by pious foundations, those which are autonomous, that is to say, "aggregates of things (*universitates rerum*) destined for the purposes mentioned in can. 114, § 2 and erected as a juridic person by competent ecclesiastical authority" (canon [= can.] 1303 § 1. 1 CIC of 1983), and non-autonomous ones, which are "temporal goods given in some way to a public juridic person with the obligation for a long time, to be determined by particular law, of celebrating Masses and performing other specified ecclesiastical functions or of otherwise pursuing the purposes mentioned in can. 114, § 2, from the annual revenues" (can. 1303 § 1.2 CIC of 1983).

⁵⁹ Cf. BUENO SALINAS, *Las personas jurídicas*, 18-22. For a comprehensive summary of the history of the legal regulation of the right of association and legal personality in church bodies up to the CIC of 1917 including, cf. *ib.*, 13-182; y cf. Lluís MARTÍNEZ SISTACH, *El derecho de asociación en la Iglesia*, Barcelona, Herder, 1973, 173-212.

autonomously and learn on their own, their actions might occur without direct human oversight or control. If not regulated properly, it could become difficult to prove the cause-and-effect relationship of the harm caused by robots. As their autonomy increases, responsibility becomes diluted among the many actors involved with the robot, such as the programmer, manufacturer, operator, buyer, owner, user of the robot, etc. Traditional civil liability rules are insufficient to establish legal responsibility for damages caused by the robot, as they do not allow for the identification of the party responsible for compensation, nor do they require that party to repair the damage caused. Therefore, as robots become more intelligent and autonomous, there is a possibility of holding the robot itself accountable for acts or omissions where a specific human cannot be attributed as the cause, and holding humans accountable for acts or omissions by robots that cause damage that could have been avoided. Furthermore, research such as the Massachusetts Institute of Technology (MIT) test has evaluated the practical knowledge of computers against that of a typical 4-year-old child. In Spain, parents are responsible for the actions or lack of action of their children who are under fourteen years old, and children do not have to be listened to until they turn 12. This is a responsibility in *vigilando*. However, there is the possibility that, in the long term, artificial intelligence may surpass human intellectual capacity⁶⁰.

Some sectors, in order to solve this problem of liability and rejecting any possibility of equating these entities with natural persons, have even raised the possibility of equating robots with animals⁶¹; however, the characteristics of the latter cannot be extrapolated to the field of robotics, not even by analogy, as far as liability is concerned:

Some contend that rules of liability could be extended to robots in a way analogous to the rules which govern liability associated with animals. This would represent a perilous shift towards the recognition of robots as belong to the world of the living. It remains that existing legal frameworks which provide for natural and legal personality already have at their disposal viable legal solutions, not

⁶⁰ SANTOS GONZÁLEZ, "Regulación legal", 37-38, trans. by LÓPEZ SEGOVIA.

⁶¹ Cf. SANTOS GONZÁLEZ, "Regulación legal", 40.

least provisions on defective products, as well as rules about the liability for damages or injury caused by things in a person's care⁶².

SANTOS GONZÁLEZ adds that intelligent robots do not have a common genetic basis, nor are they able to experience natural feelings until now, although with the proliferation of their use "the Fourth Revolution will imply that the protection of human interests entails the need to protect the interests of robots"⁶³. Returning to the intention of n. 59.f of the aforementioned *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, nevertheless, the question arises: is it possible to apply the concept of legal person to intelligent robots and AIs in a specific way? And if so, is it possible that more complex autonomous robots and AIs can be held liable?

The Commission of the Bishops' Conferences of the European Union (COMECE) advises against applying the concept of legal person to robots and AIs as it would put such entities on the same level as natural persons and would clash with Art. 6 of the *Universal Declaration of Human Rights*⁶⁴, arguing that the concepts of autonomy or responsibility are not enough for these entities to be considered subjects of obligations and rights, as freedom is also required, which goes beyond mere autonomy⁶⁵. Nonetheless, when arguing about the concept of legal personhood, the Episcopal Commission does so from the argumentation on a personal basis:

Legal personality is assigned to a natural person [as the natural consequence of their being human] or to a legal person (in this case, even though a fiction, legal personality presupposes the existence of a natural person or persons acting behind the fiction). Legal personality for robots collapses the boundaries between hu-

⁶² COMECE, *Robotisation of Life. Ethics in view of new challenges*, 2019, Feb. 04. <<https://www.comece.eu/wp-content/uploads/sites/2/2022/04/20190204-Robotization-of-Life-Ethics-in-view-of-new-challenges.pdf>> [accessed: 2024, jul. 29], pto. B.2.

⁶³ SANTOS GONZÁLEZ, "Regulación legal", 42, trans. by LÓPEZ SEGOVIA.

⁶⁴ Cf. *Universal Declaration of Human Rights, adopted and proclaimed by the General Assembly of the United Nations in Paris on 10 December 1948, Resolution 2017 A (III)*. <<https://www.un.org/en/about-us/universal-declaration-of-human-rights>> [accessed: 2024, Jul. 29].

⁶⁵ Cf. COMECE, *Robotisation of Life*, pto. B.2.

mans and machines, between the living and the inert, the human and the inhuman⁶⁶.

Thus, the COMECE ignores the field of juridical persons with a “patrimonial basis”, which is also present in the canonical legal system, specifically in can. 115 §§ 1 and 3 *CIC* of 1983⁶⁷, which distinguishes as objects integrating the *universitas rerum*, goods or things of a material nature and of a spiritual nature, directed, in accordance with the norm of law and statutes, by one or more natural persons or by a college.

Therefore, following the theories of legal personality — above all FERRARA’S theory of reality or legal form and REINACH’S phenomenological theory of regional ontologies— nothing seems to prevent the most complex IAs from being considered legal persons. The concept of legal person is based on the abstraction of that of the natural person, applied to an existing objective reality, with a personal or “patrimonial basis”, which, in the latter case, may be a good or thing of a material or digital nature⁶⁸. According to SANTOS GONZÁLEZ, robots are

⁶⁶ COMECE, *Robotisation of Life*, pto. B.2.

⁶⁷ Cf. IOANNES PAULUS PP. II, *Codex Iuris Canonici. Auctoritate Ioannis Pauli PP. II promulgatus*, 1983, Jan. 25. AAS 75/2 (1983) 1-317. <<https://www.vatican.va/archive/aas/documents/AAS-75-1983-II-ocr.pdf>> [accessed: 2024, Jul. 29]. Consolidated text in English: <https://www.vatican.va/archive/cod-iuris-canonici/cic_index_en.html> [accessed: 2024, Jul. 29].

⁶⁸ ALFARO says: “Law has a concept that makes it possible to explain the legal regime of legal persons without resorting to metaphors (*rectius*, analogy). This concept is that of assets. A legal person is an estate. A legal person is not an individual. It is not even a grouping or association of individuals. If it were, we could not say that a foundation has legal personality, or that a company whose partners are all legal persons has legal personality, or that an estate has legal personality, or that an estate has legal personality” (ALFARO ÁGUILA-REAL, “Introducción al Derecho”, n. p., trans. by LÓPEZ SEGOVIA). He further clarifies: “A patrimony does not include only assets. Nor even only actives. A patrimony is a bundle of goods and rights, of claims and debts (see, below, what will be said about art. 38 CC). Its composition, which includes debts and claims, is what differentiates an estate from the ownership of an asset or an aggregate of assets. [...] the differences between the ownership of a good and the ownership of a patrimony are of the greatest importance for the systematic arrangement of the Law of Things. [...] Ownership serves individuals to develop their personality —to induce them to work—, to

remarkably similar to existing legal persons and could have access to many of their possibilities, for example⁶⁹:

- Legal persons are distinct from their owners, representatives or managers, with independent capacity and existence in the exercise of obligations and rights.
- They can contract, which certain programmes already do without human intervention.
- They can cause damage and be civilly and criminally liable.
- They can be sanctioned.
- They can be owned and constituted by others.
- They have access to property, including intellectual and industrial property.
- It would start to become a legal person when the law determines.
- In the long term it would be feasible for an AI to be sued or to be able to sue, in a manner analogous to that of legal persons today.

There seems to be nothing to prevent AIs from being considered as legal persons, even within the canonical legal system, since the exception of the superior management of one or more natural persons or of a college could be maintained. This solution, canonically foreseen for patrimonial legal persons, can easily be extrapolated to a possible legal person constituted on the objective basis of an AI, as it would always have a superior natural or legal person, who would be subsidiarily liable, both in civil and criminal law, as the case may be⁷⁰.

save and to protect themselves against vital risks. For the achievement of these ends, the right of ownership includes the right to 'govern' your patrimony and the right to receive all the fruits of that patrimony. [...] one error of the fiction thesis is to consider that the legal person is a fictitious individual. It is not. It is a patrimony governed by rules" (*ib.*, trans. by LÓPEZ SEGOVIA).

⁶⁹ Cf. SANTOS GONZÁLEZ, "Regulación legal", 40-41.

⁷⁰ ALFARO stresses this argumentation "because it does not include legal persons in the law of persons—which is reserved for human individuals—but in property law. This avoids the invincible temptation for those who rely on the doctrine of fiction to extend to legal persons the status of individuals, which immediately forces a very costly elaboration and

For the sake of greater precision in the application of the concept of legal person to AIs, it is therefore appropriate to include the “electronic” and “digital” connotation in the concept of “patrimonial basis”, by analogy with the canonical order when it considers certain “spiritual” goods or things as patrimony (cf. can. 115 §§ 1 and 3 *CIC* of 1983). It would be sufficient to maintain the control, supervision or monitoring of autonomous robots and AIs by one or more natural persons, which responds to the current reality of AIs, machines, despite their usefulness and sophistication. However, the gradual increase in the intelligence and autonomy of AIs raises the possibility of considering that in the medium term they will be subjects of law and not just machines⁷¹. This supervision and subsidiary dependence on natural persons should be considered as a *sine qua non* for legal personality. Yet, the differences between AIs and current legal persons make it advisable to create a new specific legal form for the former⁷²:

- Today’s legal entities lack corporeality. This would be a clear difference between intelligent robots and AIs, as the latter can be entirely digital in nature.
- In the field of representation, it could be the case that a contract could be signed electronically on the basis

delimitation of exceptions [...]. On the basis of this general statement, it can be said that the Law of the Legal Person, as part of Property Law, is connected with the Law of Things and with the Law of Contracts” (ALFARO ÁGUILA-REAL, “Introducción al Derecho”, n. p.). Also cf. ID., “Los atributos de la personalidad jurídica”, *Almacén de Derecho*, 2019, Feb. 14. <<https://almacendederecho.org/los-atributos-de-la-personalidad-juridica/>> [accessed: 2024, Jul. 29], where he argues about the legal aspects contained in the legal personality: nationality, domicile, name, and the stability that corresponds to its patrimonial character. At last, in a similar way, cf. LACRUZ MANTECÓN, *Robots y personas*, 79-93; cf. Emilio SUÑÉ LLINÁS, *Derecho e Inteligencia Artificial. De la robótica a lo posthumano*, Ciudad de México, Tirant lo Blanc, 2020, 116-118; and cf. Joanna J. BRYSON – Mihailis E. DIAMANTIS – Thomas D. GRANT, “Of, for, and by the people: the legal lacuna of synthetic persons”, *Artificial Intelligence and Law* 25 (2017) 273-291 (<https://www.doi.org/10.1007/s10506-017-9214-9>).

⁷¹ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 42.

⁷² Cf. SANTOS GONZÁLEZ, “Regulación legal”, 41-42.

of a logical decision in which no natural person has to participate.

- With regard to legal capacity, legal persons configure their obligations and rights outside the parameters of mental immaturity of natural persons, so that they must act through representative natural persons; however, these parameters could be applicable to AIs, by means of appropriate tests of maturity and intelligence.
- Similarly, the capacity to interact with the environment also makes them different from legal persons, who require their representatives. This is verified by the possibility of damage in the interaction.
- It could even be the case that an intelligent robot or an AI represents a legal person.
- The author points out, but we disagree, that in the case of a legal person human control and supervision are always required, which could be dispensed with in the case of intelligent robots and AIs, as the possibilities for owner responsibility and control would be oriented towards risk management.

Therefore, it is emphasised that the role of natural persons superior to robots and AIs should not be that of legal representatives either, but rather that of supervisors or superiors. This leads to the following question: is a responsible electronic personality possible?

WENG's team reflects on the distinction of three levels of existence: 1) first existence or biological existence; 2) second existence or non-biological existence; and 3) third existence, constituted by entities similar to living beings in behaviour and appearance, mentioning the proposals of ASARO⁷³ —with whom he disagrees— about a legal status for robots as “quasi-persons” or “corporations”⁷⁴, while NAGENBORG and others

⁷³ Cf. Peter M. ASARO, “Robots and Responsibility from a Legal Perspective”, Paper presented at the IEEE ICRA'07 Workshop on Roboethics, Rome, 2007, Jan. 20. <<https://peterasaro.org/writing/ASARO%20Legal%20Perspective.pdf>> [accessed: 2024, Jul. 29].

⁷⁴ Cf. Yüeh-Hsuan WENG – Chien-Hsun CHEN – Chuen-Tsai SUN, “Safety Intelligence and Legal Machine Language: Do we need the Three Laws of Robotics?”, *Service Robot Applications. InTech* (2008, Aug. 1) 207 (195-214) (<http://dx.doi.org/10.5772/6057>).

propose maintaining the responsibility of the owners for the actions of their robots⁷⁵.

It is therefore difficult to link the legal concepts of AIs with those of “person”, “legal”, and “subject of rights and obligations”. SANTOS GONZÁLEZ disagrees with the possibility of applying the concept of “electronic” to the legal personality of intelligent robots and AIs, since AIs of a digital and non-electronic nature would be excluded this application, so she opts for the terminology that is beginning to be used in the United States, “artificial person”⁷⁶, without ruling out the possibility of considering two branches of this concept, “electronic” for robotic entities and “digital” for AIs:

A less legally confusing expression that would avoid any kind of extensive or restrictive interpretation of rights and duties with other legal statuses that I propose is simply artificially intelligent robot. Consideration of legal personality would allow robots to earn money, pay taxes, own assets and sue or be sued in court independently of their creators. Their creators could, as entrepreneurs, have rights or duties with respect to the robot and those with whom the robot interacts. However, robots are assimilated to things in that they are machines. The “electronic person” could be a combination of both legal conditions⁷⁷.

ALFARO ÁGUILA-REAL points out that the statutes of legal persons, especially those with a patrimonial basis, regulate their capacity to intervene in legal transactions⁷⁸. Following this line of reasoning, the programming of intelligent robots

⁷⁵ Cf. Michael NAGENBORG – Rafael CAPURRO – Jutta WEBER – Christoph PINGEL, “Ethical regulations on robotics in Europe”, *AI & Society* 22/3 (2007) 349-366 (<https://doi.org/10.1007/s00146-007-0153-y>).

⁷⁶ Cf. David J. GUNKEL, *Person, Thing, Robot: A Moral and Legal Ontology for the 21st Century and Beyond*, Cambridge, MA – London, The MIT Press, 2023, 101-131; cf. LACRUZ MANTECÓN, *Robots y personas*, 73-121; cf. Wolfgang M. SCHRÖDER, “Robots and Rights: Reviewing Recent Positions in Legal Philosophy and Ethics”, in VON BRAUN – ARCHER – REICHBERG – SÁNCHEZ SORONDO (eds.), *Robotics*, 191-193 and cf. SANTOS GONZÁLEZ, “Regulación legal”, 43. Against these positions cf. SUÑE LLINÁS, *Derecho e Inteligencia Artificial*, 117-118.

⁷⁷ SANTOS GONZÁLEZ, “Regulación legal”, 43-44, trans. by LÓPEZ SEGOVIA.

⁷⁸ Cf. ALFARO ÁGUILA-REAL, “Introducción al Derecho”, n. p.

and AIs, carried out in accordance with legal standards, would be the basis for considering them as “artificial persons”.

However, new levels of obligations and rights would have to be configured, both for these artificial persons and for their owners, as they would continue to be property. This would imply, on the one hand, the obligation of the robot or AI to perform the activities for which they were programmed and acquired, and, on the other hand, the obligation of the owner to maintain, care for and monitor them, leading to new levels of mutual co-responsibility⁷⁹, and, in the very long term, to new forms of slavery and to the next level of revolution: that of the AIs claiming their freedom and independence from humans.

These aspects of artificial personality lead to the alternatives that the EU presents in the remainder of art. 59 (a-e) of the above-mentioned *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, about insurance, liability and compensation funds, benefits of manufacturers, programmers, owners and users conditional on contribution to such applicable funds, registration and enrolment of robots, etc., all of which will be discussed in the next section of this study.

However, while the EU’s *AI Act* has made significant progress in terms of oversight and supervision (cf. arts 14, 72, 83 *et al.*), further progress is needed in the area of liability, both civil and criminal, to minimise risks and damage to third parties.

4.2 Towards a “Register of Artificial Persons”

The EU’s *AI Act* also includes aspects related to the registration of AI systems, manufacturers, distributors, in particular when such systems involve certain risks (cf. arts. 12, 19, 71 *et al.*, as well as Annexes VIII and IX). Notwithstanding these developments, the regulation of a specific legal personality for such systems is a pending issue.

Returning to SANTOS GONZÁLEZ, the first step that can allow the traceability of legal liability for damages arising from the actions of intelligent robots and AIs, and ultimately allow

⁷⁹ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 44-45.

the eventual legal personality of these entities, implying the birth of civil and criminal liability in this area of subjectivity, is the creation of a Register of “Artificial Persons” at EU level, which can be centralised or decentralised in each of the Member States⁸⁰. This has been proposed by the EU:

ensuring that the link between a robot and its fund would be made visible by an individual registration number appearing in a specific Union register, which would allow anyone interacting with the robot to be informed about the nature of the fund, the limits of its liability in case of damage to property, the names and the functions of the contributors and all other relevant details⁸¹.

The identification of autonomous robots and AIs becomes an essential requirement for the entry of these entities into legal sphere, in order to be able to derive or demand the corresponding legal liability. It is therefore necessary for this Register, which will have to be administrative in nature, to be endowed with registry publicity, with substantive civil effects. Like all existing registers, it would be an instrument of control and legal security, enabling the authorities to exchange information on autonomous robots and AIs in legal transactions, as is the case for natural and legal persons⁸².

However, such a registration, as foreseen in the Italian legal proposal, would require a previous registration: that of manufacturers and suppliers, to which SANTOS GONZÁLEZ adds that of representatives of intelligent robots, although such representation would be one of the specific requirements of the Register of robots and AIs, as it is considered necessary to maintain the subordinate relationship of these entities with respect to their owners⁸³. According to SANTOS and ALFARO, other essential requirements would be⁸⁴:

⁸⁰ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 46.

⁸¹ *European Parliament resolution P8_TA(2017)0051 of 16 February 2017*, art. 59 (e).

⁸² Cf. SANTOS GONZÁLEZ, “Regulación legal”, 46.

⁸³ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 46.

⁸⁴ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 47-48; and ALFARO ÁGUILA-REAL, “Los atributos”, n. p.

- Name and identification number.
- Nationality.
- Typology.
- Sector of application.
- Function and activity, which may be linked to other legal areas and competent authorities.
- Manufacturer's technical data and corresponding standard.
- Manufacturer's certificate on evaluation of capabilities, software version and technology used, maintenance and revisions required, quality tests and trials, descriptive report of the system, date of creation, entity that carries out the revisions and identification of the technicians, etc.
- Encrypted copy of the source code, provided by the manufacturer.
- Geographical location of the activity or address of the AI's headquarters if it is of a digital nature.
- Owner —owner, legal representative, etc.— and contact details.
- Possible patrimonial endowment.

The first effect of the registration would be the assignment of a registration number that would allow the identification and nationality of the robot or AI, a prerequisite for obtaining a licence to operate, and its geographical location. Santos González points out that this identification would also allow⁸⁵:

- Ensure human control over robots/AIs.
- Prevent their illegal use.
- Protect data obtained by robots/AIs.
- Track and record robot/AI behaviour and activities.
- Control their responses to ethical dilemmas.

Registration also requires other legal instruments, such as the implementation of a system of mandatory technical inspections to certify the proper functioning of the robot/AI or to detect defects or failures affecting safety. This should make it possible to verify the history of the robot/AI. Similarly,

⁸⁵ Cf. SANTOS GONZÁLEZ, "Regulación legal", 47.

registration would be a prerequisite for taking out technical insurance⁸⁶.

Subsequently, according to Santos González, starting from the registry regulation, the scope of rights and obligations with which these entities could be endowed could also be thoroughly regulated, in which uncontrolled transit without supervision or control by a natural person —as is the case with autonomous vehicles— should be regulated, as well as the levels of safety under which the activity of the robot/AI should take place, according to⁸⁷:

- Its capacity and level of internet connection.
- Its interconnection capacity with other robots/AIs.
- Limits of its programming.
- Its video surveillance capacity.
- Its data collection and the nature of the data.
- Capacity for learning, evolution and self-development.
- Capacity for recycling.

And not forgetting the legal framework for public authorities to exercise their police powers —inspection, control and sanction— in cases of safety breaches in the activity of robots and AIs⁸⁸.

A new legal discipline has thus been born: the law of robots and AIs —Robot Law— which responds to these new challenges and, at the same time, raises new legal concerns, on the one hand, related to the erosion of fundamental values of the person, in terms of dignity, autonomy, privacy, non-discrimination, equality, etc.; and, on the other, related to safety and civil and criminal liability, in the face of the activity of these new technological entities⁸⁹.

⁸⁶ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 47-48.

⁸⁷ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 47-48.

⁸⁸ Cf. SANTOS GONZÁLEZ, “Regulación legal”, 48.

⁸⁹ Cf. Moisés BARRIO ANDRÉS, “Robótica, inteligencia artificial y Derecho”, *Análisis del Real Instituto Elcano* 103 (2018, Sep. 07) 6-7. <<https://www.realinstitutoelcano.org/analisis/robotica-inteligencia-artificial-y-derecho/>> [accessed: 2024, Jul. 29].

5. CONCLUSIONS

Technological developments in the field of AI have had as a direct consequence the emanation and implementation of the EU's *AI Act*, which has strongly regulated the field of responsibility, surveillance, control and supervision of these systems. However, the legal regulation of the legal personality of these systems remains an unresolved issue.

The classical concept developed by Sinibaldo FIESCHI and its immediate canonical and secular development, which has survived to the present day, makes it possible to apply this concept to IAs from an patrimonial based conceptualisation. And, in this sense, a modulation of this concept of specific legal personality is possible, giving rise to the concept of artificial, electronic or digital person, depending on the characteristics of the AI system in question.

As a direct consequence of the above, it is necessary, above all, to design a public registry system that facilitates the identification, human supervision, monitoring and control of these systems as well as the derivation of liability, civil or criminal, in the event of risks or damage to third parties.