

AI AND MIGRATION: ETHICAL CHALLENGES

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“(...) the concept of intrinsic human dignity requires that we recognise and respect the fact that the fundamental worth of a person cannot be measured by data alone”.

Pope Francis (Minerva Dialogues)

Abstract

Ethics and artificial intelligence (AI) are not concepts that should be separated, but rather we should focus on pursuing policies and strategies that put the human being at the centre. Technological innovations would be of invaluable help to humanity if they ensure the promotion of greater awareness and respect for the dignity of the human person; in particular, if the design of the algorithmic system leads us to look and listen without discrimination and to engage with the reality of the most vulnerable groups, such as migrants.

Keywords: Migration, Artificial Intelligence, Ethics, Algorithm, Human Rights.

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New Digital Reality

Technological innovation is an essential feature of the 21st century. We are part of an era in which words such as digital connectivity, automation, robotics, or augmented intelligence, among others, are already in everyday use.

In any aspect, our life is immersed in a new reality, a digital reality, in which it seems that the human being is being displaced by himself through technology. Any activity that until now was almost exclusively human, is being carried out by machines, machines that are designed by human minds to be the thinking mind of the human being. It seems nonsensical to create something that does what one can do, but it is to create something that is capable of surpassing human intelligence in time, capacity, and quantity, but control remains with the creator. But - and this is an important point to continue - can we really consider that control is and will remain with the human being, or will we lose it, if we have not already lost it?

Artificial intelligence (hereinafter AI) is what has brought about the current 4th industrial revolution, bringing with it great changes in very short periods of time. It is a constantly evolving technology, whose scope goes beyond the imaginable and is bringing about structural changes in the way we live and coexist. This new paradigm means that an era is being shaped in a different way than what we have known until now and that certain values, or reflections on them, are no longer so present.

What I mean by this, is that people have the capacity to direct their actions towards what is considered or marked as correct. This is not so in the case of machines¹, which can give immediate and complete answers, but without the faculty of self-reflection, and that is why all the alarm bells have been ringing for some time now, finding in the new technologies an absence of ethical principles, as well as of a solidary and integrating purpose and objective aimed at the achievement of the common good.

Risks or Opportunities for Humanity

In order to visualise the possibilities of both the risks and opportunities of AI, we must start with what is meant by AI, although it is not possible to speak of a definition or a closed concept, since over the years it has been evolving rapidly and constantly.

¹ The European Parliament states that any AI system works with machines.

An Italian neuroergonomics researcher in human-robot interaction, Giacinto Barresi², says that AI can be thought of as a system created to solve problems in order to serve the human being. The RAE defines it as the "Scientific discipline concerned with creating computer programs that perform operations comparable to those performed by the human mind, such as learning or logical reasoning"³. The US multinational technology company IBM says that,

In its simplest form, artificial intelligence is a field that combines computer science and robust data sets to enable problem solving. It also encompasses the subfields of machine learning and deep learning, which are often mentioned in conjunction with artificial intelligence. These disciplines are composed of AI algorithms that seek to create expert systems that make predictions or classifications based on input data⁴. (own translation)

The European Commission in 2018 considered the term AI to apply "to systems that manifest intelligent behaviour, as they are able to analyse their environment and take action - with a certain degree of autonomy - in order to achieve specific objectives"⁵. This concept has been changing and the proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules in the field of Artificial Intelligence (Artificial Intelligence Act) states that the definition of "AI system" in the legal framework is intended to be as technologically neutral as possible and to stand the test of time as well as possible, given the rapid technological and commercial developments, and is therefore considered to be,

3.1 (...) software that is developed using one or more of the techniques and strategies listed in Annex I and that can, for a given set of human-defined objectives, generate output information such as content, predictions, recommendations or decisions that influence the environments with which it interacts⁶.

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³ Real Academia Española, *Diccionario de la lengua española* (Madrid: 2014), <https://dle.rae.es>

⁴ IBM, ¿Qué es la inteligencia artificial? accessed 23 August 2013, <https://www.ibm.com/es-es/topics/artificial-intelligence>

⁵ European Commission, "Coordinated Plan on Artificial Intelligence", 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 Brussels, 1-22, COM, 2018, 795 final, accessed 14 July 2023, <https://ec.europa.eu/futurium/en/node/4971.html>, 1.

⁶ European Parliament, 'Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules in the field of Artificial Intelligence

However, in 2023, the amendments to the European Regulation stipulate that,

3.1 “Artificial intelligence system (AI system)”: means a machine-based system designed to operate with varying levels of autonomy and capable, for explicit or implicit purposes, of generating output information – such as predictions, recommendations or decisions – that influences real or virtual environments⁷.

With this last definition, what is clear is that beyond a specific concept, it is essential to establish a framework for the development and implementation of AI despite the knowledge that any regulation is "late" with respect to an AI that, it seems, is always "ahead of the curve". Therefore, the aim of regulating AI is not only for legal reasons, but also to ensure that AI in its design and application is human-centred, guaranteeing the protection of security and fundamental rights, among other things. One of the main problems in the use of AI is that it uses large volumes of data and there is an implicit risk when protection is not foreseen with regard to the processing of personal data. This is why, in the aforementioned 2023 modifications and amendments to the proposal for the European Regulation, an article was expressly added that speaks directly to the risks that AI systems can cause,

(58 bis) While risks related to AI systems may result from their design, they may also arise from their use. Implementers of a high-risk AI system therefore play a critical role in ensuring that fundamental rights are protected, complementing the provider's obligations when developing the AI system. Implementers are best placed to understand how the high-risk AI system will be used in practice and can therefore identify significant potential risks that were not foreseen in the development phase, due to a more precise knowledge of the context of use and the individuals or groups of individuals who might be affected, including marginalised and vulnerable groups⁸.

(Artificial Intelligence Law) and amending certain legislative acts of the Union', Brussels, 21 April 2021, COM (2021)206 final -2021/0106(COD), accessed 24 September 2023, <https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0008.02/DOC1&format=PDF>

⁷ European Parliament, "Amendments to the Regulation of the European Parliament and of the Council on harmonised rules in the field of Artificial Intelligence (Artificial Intelligence Law) and Amendments to certain legislative acts of the Union", COM (2021)0206 - C9-0146/2021 - 2021/0106(COD), Brussels, 14 June 2023, accessed on 14 July 2023, https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236_ES.html

⁸ European Parliament, "Amendments ...

In the application of AI, therefore, the human being must be present and mainly all those groups of people who find themselves in a situation of vulnerability. AI is a great achievement; it is the visible and real manifestation of the great potential of human beings. Digital disruption represents an opportunity to face the challenges of humanity; and, although the constant question is whether science is at the service of the human being or the human being at the service of science, the reality is that AI is already part of our daily lives, which implies the need to know - and want - to use technology as a tool for the common good. Pope Francis speaks to us in *Laudato si* of the vast possibilities of technological advances thanks to human talent,

102. Humanity has entered a new era in which technological might puts us at a crossroads. We are the inheritors of two centuries of enormous waves of change: the steam engine, the railway, the telegraph, electricity, the automobile, the aeroplane, chemical industries, modern medicine, information technology and, more recently, the digital revolution, robotics, biotechnologies and nanotechnologies. It is right to rejoice at these advances, and to be excited by the vast possibilities that these constant developments open up for us, because “science and technology are a marvellous product of God-given human creativity” [81]. The modification of nature for useful purposes has been a characteristic of humankind since its beginnings, and thus technology “expresses the tension of the human spirit towards the gradual overcoming of certain material constraints” [82]. Technology has remedied innumerable ills that have harmed and limited human beings. We cannot fail to appreciate and be grateful for technical progress, especially in medicine, engineering and communications.⁹

He also points out that the power that technology has over humanity has never been so great and this, together with a scarce human development in terms of responsibility, values and conscience, can be tremendously risky; however, technoscience can really produce valuable things if it is well oriented, that is, if it is seen as a great opportunity to improve the quality of life. It should not be considered that new technologies are bad, but rather that the intention and the use made of them is what can lead to a different assessment.

⁹ Pope Francis, Encyclical Letter *Laudato Si* on Care for the Common Home (24 May 2015), Vatican City, accessed 17 September 2023, https://www.vatican.va/content/francesco/es/encyclicals/documents/papa-francesco_20150524_encyclica-laudato-si.html

Focusing our Gaze and Listening

In this era of great and impressive advances, the human being has never been so close, in a matter of seconds we are connected and that is a great advantage. However, we increasingly put up more and more obstacles, walls, and separations, distancing ourselves from ourselves, from the needs of others, from despair, and from world problems. We do not look as a whole, but in an egocentric and individual way, and that is how the neighbour is displaced.

Technological progress also needs to include another form of progress, one that is more human, more social, and more inclusive. Using AI to see the world in a better way. Machines "were built to improve us, to make our lives easier and even to replace us in certain functions. But human intelligence is not just a capacity for calculation"¹⁰, but something much broader; in it, there are factors, decisions, conceptions, motivations, reflections, sense, orientation. Therefore, important aspects such as emotional intelligence, reflective reasoning, an empathetic attitude, a social conscience should not be left aside, so that ethical values, principles of solidarity and fraternity are present.

The existing development and potentiality must be in accordance with the requirements of humanity. We live with terrible scenarios of misery, hunger, wars, terrorism, ecological crises, inequalities, and a long list more. Indifference and lack of commitment in the face of this reality make the wounds deeper and the solutions more and more a chimera. In these scenarios, there are people who ask to be seen and heard, groups whose voice is silenced and who live in abandonment far from the advantages of technological progress. We cannot close our ears to their call and of course, neither can we close our eyes. Pope Francis repeatedly asks that the human being be placed at the centre of technological development and that we use our intelligence to reflect on and understand the signs of the times.¹¹

The world in general requires a look and an attentive listening that looks towards a "we" and AI can be a great ally for this, if, as I mentioned before, it is planned and used in the pursuit of a better humanity. Machines are created and conditioned in such a way that there are no errors in their actions, this requires absolute and

¹⁰ EWTN Spain, (Marta Bertolaso): Vatican: Artificial Intelligence and the Catholic Church (2023), accessed 26 September 2023, <https://www.youtube.com/watch?v=BdG6F6tP4ZQ>

¹¹ EWTN Spain, Vatican: Artificial Intelligence ...

structured planning, but the question lies in the way in which the technological response is based and oriented towards the common good and social justice. To look and listen ethically to groups that live in situations of inequity, lack of protection, exclusion, and many other marginalization conditions. Therefore, it is possible to use progress to change the approach to painful realities such as the case of forced human displacement and a good start would be to look and listen hand in hand with AI,

(...) the reality of more than 300 million people who live in a place other than where they were born, the cultural, social and economic contributions and benefits they leave in both countries of origin and destination, while promoting political will, multi-sector collaboration, human sensitivity and international commitment to change the securitization approach that has characterized the migration issue to a collaborative, intelligent, productive and humane approach to migration management¹². (own translation)

Algoethics in Human Mobility

It is essential to be aware of the way in which technological development considers ethical implications in its application and thus avoid negative repercussions such as misinformation and transgressions of fundamental rights. Safety, security, protection, dignity, and non-discrimination are some of the principles that should not be lost in the design of algorithms.

AI depends on algorithms and the data used to configure them. The algorithm is trained through repetitive data processing that enables machines to recognize context, identify patterns and provide instructions. The power and richness of AI lie in the data¹³ and in the results obtained from them in the application of techniques and analysis technologies to maximize their value, such as Data Science, Big Data or Machine Learning¹⁴. Thus, the data allows the machine to learn to employ the instructions in either a supervised manner in which the algorithm is guided by prior knowledge and an

¹² Eunice Rendón, "Bioética y migración", Nexos, 2023, accessed 23 July 2023, <https://bioetica.nexos.com.mx/bioetica-y-migracion/>

¹³ Data are classified as structured which refers to specific information such as dates, statistics, numerical values; unstructured which means information that does not have a specific format such as photographs, videos, emails; and, semi-structured which does not have a traditional format such as HTML codes.

¹⁴ Among the subgroups of AI are *machine learning*, which requires human interaction and works with regression algorithms or decision trees; and a branch of this is *deep learning*, which basically automates the process itself through neural network programmes.

unsupervised manner in which there is no labelled data. With this in mind, the data with which AI systems are trained to make predictions must be analysed in a responsible, careful and thorough manner to avoid biases, as erroneous, unbalanced, inappropriate and discriminatory results may be obtained. Today, we are increasingly encountering news stories about the way in which algorithms identify, promote and perpetuate dehumanising stereotypes towards vulnerable groups, such as identifying and associating migrants with skin colour with characteristics of dangerousness or criminality. Indeed, algorithmic systems already make a reading in which human displacement is criminalised by country of origin, race, gender, and socio-economic status. In fact, human beings already naturally have cognitive and perceptive biases, they have prejudices that they nurture in the face of discourses that they believe to be true and that they endorse according to their convenience and interests. Therefore, biases in AI are often already consciously incorporated into data processing. The challenge is for AI to avoid human biases in the design of algorithms and not to develop its own biases.

In society, the negative impact of biases accentuates and perpetuates social stereotypes regarding migration that lead to increasing inequality and marginalisation. Xenophobia, racism and therefore discriminatory and exclusionary practices are fostered, which impacts on the public administrative and political state sector, relying on the development of migration policies, mainly in detentions and deportations, based on criteria and decisions elaborated by AI applications, not always guaranteeing a fair and lawful action. Algorithms are being allowed to make human decisions with serious consequences for people's lives and integrity, for example, the use at borders of devices that collect people's biometric data, personal data, fingerprints, facial photographs, with the supposed intention of speeding up asylum applications; predicting flows of migrants and refugees in order to implement security and control measures for their benefit; or, as an aid in the fight against terrorism. However, in doing so, one has to be very cautious, as fundamental rights can easily be violated. Consequently, both in the collection and use of data, special care must be taken to comply with ethical criteria and established legal regulations, especially when it comes to the use of personal data, and to promote the establishment of strategies and approaches that are more inclusive, supportive, and comprehensive.

In addition to a legal concern to regulate a technological progress that is developing by leaps and bounds, the Church has also long been interested in AI, analysing its great benefits and risks, concerned with raising awareness of its ethical use and in favour of the common good. In January 2023, the Pontifical Academy for Life, and the RenAIssance Foundation¹⁵ organised the event "Ethics of AI: an Abrahamic commitment to the Call of Rome", in which Pope Francis called for vigilance and work to prevent the discriminatory use of AI tools,

(...) does not take root at the expense of the most fragile and excluded. Let us always remember that the way we treat the last and least among our brothers and sisters reveals the value we place on human beings. We can take the example of asylum applications: it is not acceptable that the decision on the life and destiny of a human being be entrusted to an algorithm¹⁶.

At this event, the signing of the document "Rome Call for the Ethics of AI"¹⁷ was extended to representatives of Catholicism, Judaism and Islam, which had been approved by Pope Francis and first signed in 2020 by the Pontifical Academy for Life, Microsoft, IBM, the Food and Agriculture Organization of the United Nations (FAO) and the Italian government, to promote what they called "algorithethics". This term implies that an ethical approach must be incorporated into the design of algorithms, so that AI is framed within a framework of fundamental values, in accordance with the principles of Transparency; Inclusion; Accountability; Fairness; Trustworthiness; and Security and Privacy.

Following this point, in March 2023 at the "Minerva Dialogues", a meeting with AI developers organised by the Vatican's Dicastery for Culture and Education, the Pontiff again stressed the need for ethical and responsible action to ensure human-centred technology and human dignity, recalling that "the fundamental value of a person

¹⁵ The RenAIssance Foundation was created in April 2021 by Pope Francis, with the aim of supporting anthropological and ethical reflection on the impact of new technologies on human life.

¹⁶ Pope Francis, Discourse to the participants in the "Rome Call" meeting, RenAIssance Foundation, (10 January 2023) in Vatican City, accessed 15 July 2023, <https://www.vatican.va/content/francesco/es/speeches/2023/january/documents/20230110-incontro-romecall.html>

¹⁷ Pontifical Academy of Life, "Rome Call for AI Ethics" (2020) in Rome, accessed 19 August 2023, https://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pont-acd_life_doc_20202228_rome-call-for-ai-ethics_en.pdf

cannot be measured by a set of data" that can be "contaminated by social prejudices and preconceived ideas"¹⁸.

Also, the Vatican's Dicastery for Culture and Education linked with the Markkula Center for Applied Ethics, in collaboration with the Institute for Ethical Technology and Culture ITEC and Santa Clara University, have published in June 2023 the book "Ethics in the Age of Disruptive Technologies: An Operational Roadmap", which gives ethical concepts and frameworks for the use of AI, mentioning in its introduction the intention to promote an inclusive dialogue between the technological sector and the human community with a view to building a better world¹⁹.

In view of the above, it is not surprising that the theme of the World Day of Peace on 1 January 2024 is "Artificial Intelligence and Peace", which is intended to emphasise,

(...) the need to be vigilant and to work to ensure that the production and use of these devices do not give rise to a logic of violence and discrimination, at the expense of the most fragile and excluded: injustice and inequalities fuel conflicts and antagonisms. The urgency of orienting the conception and use of artificial intelligence in a responsible manner, so that it is at the service of humanity and the protection of our common home, requires that ethical reflection be extended to the field of education and law.

The protection of the dignity of the person and the concern for a fraternity that is effectively open to the whole human family are indispensable conditions if technological development is to contribute to promoting justice and peace in the world²⁰.

In short, ethical awareness must be a joint task involving all sectors, so that the responsibility to always prioritise humanity is not

¹⁸ Pope Francis, Discourse to the participants in the "Minerva Dialogues" organised by the Dicastery for Culture and Education (27 March 2023) in Vatican City, accessed on 24 August 2023, <https://www.vatican.va/content/francesco/es/speeches/2023/march/documents/20230327-minerva-dialogues.html>

¹⁹ José Roger Flahaux, Brian Patrick Green, Ann Gregg Skeet Markkula Center for Applied Ethics, Santa Clara University, Santa Clara, CA, *Ethics in the Age of Disruptive Technologies: An Operational Roadmap*, The ITEC Handbook, 2023, accessed 27 September 2023, <https://www.scu.edu/media/ethics-center/itec/Ethics-in-the-Age-of-Disruptive-Technologies:An-Operational-Roadmap---ITEC-Handbook-June-2023.pdf>

²⁰ Press Office of the Holy See, Comunicato del Dicastero per il Servizio dello Sviluppo Umano Integrale, "Messaggio per la Giornata Mondiale della Pace 2024" (8 August 2023) in Rome, accessed 15 August 2023, <https://press.vatican.va/content/salastampa/it/bollettino/pubblico/2023/08/08/0555/01215.html>

overlooked in the design and application of AI. The conceptualisation and use of machines must not run counter to the common good; on the contrary, they can and must contribute to a fraternal and harmonious universal coexistence. It is the human being's responsibility to demand systems that respect the intrinsic rights of each person, especially the most disadvantaged.

Conclusion

There is no doubt that the capabilities of human beings are infinite, and this is continually demonstrated in technological advances. Creating machines that surpass the human mind is a way to showcase their skills and power. Its intention is to make life easier and reduce the margin of human error in all areas where machines are present. However, the power really lies in knowing how to use these potentialities for the benefit of the other and not merely for economic and individualistic gain.

Science must recognise ethical benchmarks aimed at the common good, solidarity and fraternity. In 2020, Pope Francis invited us to pray that the progress of robotics and AI will always be at the service of humanity, emphasising that if technological progress increases inequalities, it is not real progress.

The algorithm learns and replicates what it is taught - even if the machines are self-learning - so it is important to keep in mind that autonomous operating systems, however intelligent they are made, have no ethical responsibility because they have no reflective conscience. The fact that AI systems outperform humans does not mean that they are more intelligent, but rather that their ability lies in their efficiency, capacity and agility; thus, algorithmics must be an indispensable human commitment and responsibility in the design and use of AI that ensures the protection of the fundamental rights of every person. An ethical vision makes the intrinsic dignity of each person the key criterion.

To avoid or minimise the risks that AI systems can cause, it is important to ensure that they are fed with accurate and relevant information so that they are used appropriately and not to the detriment of people in vulnerable situations, such as human mobility, as biases about migrants show systematic biases in the results generated by AI systems. These prejudices attack the human being, his person, his dignity; but looking at it and listening to it, makes us aware of a process of enlargement of the "I" to a "we", which gives glimpses

of hope in a forgotten and hurt humanity. For this reason, it is essential that AI also serves to make the world aware of what migration means, of the importance of eliminating discriminatory and exclusionary labels that make the weakest and most vulnerable a "threat", and to propose an algorithcs that shows a different, inclusive, supportive, and integrating panorama. In conclusion, that digital technologies put the human being at the centre.