

The Impact of Artificial Intelligence in the Fields of Life Insurance, in Vitro Fertilization and Euthanasia

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Abstract

Background: Artificial intelligence is part of the development of research in the fields in which the authors have their doctoral theses. Artificial intelligence plays a particularly important role in all areas covered by this research. Artificial intelligence can save time spent on establishing customer interactions and even organising life insurance businesses. All converge towards increasing operational efficiency and reducing costs. In terms of In Vitro Fertilization, artificial intelligence could be used to determine the ideal date for oocyte collection in In Vitro Fertilization procedures. Artificial intelligence can automate the assistance patients need in euthanasia, without the act of -"killing"- performed by another human being. Contemporary methods depend to a great extent on the moral considerations of the attending physicians, as well as on their relationship with patients. Methods: Artificial intelligence increasingly influences individuals' - daily lives and plays a particularly important role in digital modelling through its automatic decision-making possibilities. Due to the speed with which the desired activities are carried out, this unpredictable technology produces impressive, beneficial results. A study presented at the annual congress of the American Society for Reproductive Medicine, which took place between October 14 and 18, 2023, in New Orleans, exposed the new possibilities of integrating artificial intelligence into fertility treatments. The study could also be adapted to conditions in European Union countries. Researching studies and papers published in a field of interest is a method that yields outstanding results where no opinion has been adopted. Results and conclusions: From the analysis presented, it is clear that the alternative methods presented by the researchers are absolutely necessary, because no method fully corresponds to people's wishes and the possibility of choosing when an option cannot be accessed. In addition, ethical or religious issues can create different options. As for insurance, it conforms to people's wishes according to needs. However, it is certain that all research is in support of people, highlighting respect for people's fundamental rights in parallel with the fulfillment of the purpose they pursue.

Keywords: artificial intelligence, life protection, procedures, results, globalization.

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1. Introduction

In this paper, we will approach AI from a positive perspective, in the sense that it is a boon to all the fields we tackle. The degree of mathematical rigour that artificial intelligence should achieve is an issue that has long been debated and concerns many researchers. However, for other experts working in the field, what really matters now is the applicability of many algorithms and their effectiveness in solving real problems.

This work is based on the history of artificial intelligence from its beginnings, starting in the second half of the 20th century. The value of applications in this field is emphasised, without overshadowing the importance of the elementary principles underlying the algorithms and methods used.⁶

Without deviating from scientific rigour, the paper will also present speculations and disputes that artificial intelligence generates in our society.

2. A credible artificial intelligence

2.1. Artificial intelligence *versus* humans' intelligence

In computer science, artificial intelligence (AI) is the intelligence of machines, as opposed to natural intelligence in humans and animals. Informatica defines AI research as the study of "intelligent agents": any device that perceives its environment and performs actions that maximise the chance of successfully achieving its goals. Specifically, A. M. Kaplan and M. Haenlein define AI as "the ability of a system to correctly interpret external data, learn from such data, and use what it has learned to achieve specific goals and tasks through flexible adaptation". The term "artificial intelligence" is used colloquially to describe machines that mimic cognitive functions that humans associate with other human minds, such as "learning" and "problem solving". Artificial intelligence involves the development of algorithms and models that enable machines to perceive their environment, reason about their environment, and take appropriate actions to achieve specific goals. These algorithms use large volumes of data and advanced techniques, such as machine learning, deep learning, natural language processing and computer vision.⁷

Modern machine capabilities broadly classified as AI include understanding human speech, competing at the highest level of strategy game systems, such as chess and go, autonomous vehicles and intelligent routing in content distribution networks, and simulations military.⁸

Among the traditional problems or goals of AI research are reasoning, knowledge representation, planning, learning, natural language processing, perception

⁶ Josue Barnes, Matthew Brendel, Vianne R Gao, Suraj Rajendran et al., „A non-invasive artificial intelligence approach for the prediction of human blastocyst ploidy: a retrospective model development and validation study”, *The Lancet. Digital health*, 5(1), e28–e40. [https://doi.org/10.1016/S2589-7500\(22\)00213-8](https://doi.org/10.1016/S2589-7500(22)00213-8).

⁷ Hsihui Chang, Yi-Ching Kao, Raj Mashruwala, Susan M. Sorensen, (2017). „Technical Inefficiency, Allocative Inefficiency, and Audit Pricing”. *Journal of Accounting, Auditing & Finance* 33(4): 580–600. doi:10.1177/0148558X17696760.

⁸ Woody Evans (2015). „Posthuman Rights: Dimensions of Transhuman Worlds”. *Revista Teknokultura*, Vol. 12(2), 373–384. doi: 10.5209/rev_TK.2015.v12.n2.49072.

and the ability to move and manipulate objects. General intelligence is among the long-term goals of the field. Approaches include statistical methods, computational intelligence, and traditional symbolic AI. The field of AI is based on computer science, information engineering, mathematics, psychology, linguistics, philosophy and many other fields.⁹

In the 21st century, AI techniques have experienced a renaissance following concurrent advances in computing power, the accumulation of large amounts of data, and theoretical understanding; and AI techniques have become an essential part of the technology industry, helping to solve many difficult problems in computer science, software engineering, and operations research.

2.2. Artificial intelligence in the EU and its implementation

The presence of unacceptable risks posed by the use of AI in certain ways will inevitably lead to prohibitions and general provisions of the Use Regulation of 2 February 2025. In the application of this Regulation, the intended use of prohibitions is essential to explain the risks that may cause disasters and to be reflected effectively in other processes, such as civil law. Furthermore, the most important infrastructure management system and policy consideration must be functional before 2 August 2026, the date of entry into force of the European legislative provision in the field. Thus, what refers to notified bodies but also to the governance structure must be applicable from 2 August 2025. In the first era of technological growth but also of the adoption of AI models with the clear aim of general use, the roles of AI model providers should be aligned with the general application from 2 August. The AI Office must take into account that classification policies and practices are updated and comply with new technological developments. In view of all this, Member States must establish and inform the Commission of the rules on sanctions, including administrative fines, and reconsider whether they are properly and effectively applicable on the date of entry into force of the decree in question¹⁰.

These harmonisation provisions set out in the Regulation should apply to all sectors and, subject to the new legal framework, existing Union legislation should not be affected, in particular the protection of personal data, the protection of consumers and, their fundamental rights which are already guaranteed, of operational workers, but also product safety, which complements the Regulation, the equivalent of any damages suffered by way of compensation, as provided for in Council Directive 85/374/EEC, remains in the same way and is fully valid.¹¹

Those providing physical or virtual components must bear in mind that AI systems designed to interact directly with individuals are designed, approved and developed in such a way that the individuals concerned communicate directly with an AI system, except when this is obvious for a well-founded reason, which a reasonably

⁹ Marcus Hutter (2012). „One Decade of Universal Artificial Intelligence”. *Theoretical Foundations of Artificial General Intelligence*, Vol. 4, pp. 67-88, <https://doi.org/10.48550/arXiv.1202.6153>.

¹⁰ Daron Acemoglu, *Opinion: The AI we should fear is already here*, in The Washington Post (2021), in <https://www.washingtonpost.com/opinions/2021/07/21/ai-we-should-fear-is-already-here/> accessed on 18.08.2024.

¹¹ Daniel J. Solove, *The digital person. Technology and Privacy in the Information Age*, New York University Press, 2004, p. 75.

prudent and attentive person, having regard to the circumstances and the level of use, can determine for himself. The obligation is not specific to artificial intelligence systems authorised by law to detect, prevent, investigate or prosecute criminal offences, subject to appropriate protection of the rights and freedoms of third parties, while such systems are publicly available to record a criminal offence.

Those who implement an emotion recognition system or a biometric classification system shall inform the natural persons thus exposed about its functioning and its use for the purposes of processing personal data as resulting from Regulations (EU) 2016/679 and (EU) 2018/1725 and Directive (EU) 2016/680, as the case may be. This obligation shall not apply to artificial intelligence systems created for biometric classification and emotion recognition, which are authorised by criminal law to detect, prevent or investigate criminal offences, subject to appropriate safeguards to preserve the rights and freedoms of those persons, being subject to Union law.¹²

At the end of January 2025, the Ministry of Digital Transformation of Ukraine introduced to the world the WINWIN AI Center of Excellence, an initiative hub dedicated to the development and integration of artificial intelligence (AI). This proposal is intended to transform the state, businesses and society, thereby strengthening Ukraine's global competitiveness. The centre will implement AI in key sectors, including defence, medicine, education and business.

As the first centre of excellence established under the WINWIN Digital Innovation Development Strategy, the WINWIN AI CoE aims to unite experts, resources and innovations to promote AI and improve essential aspects of Ukrainian life. Initially, the center will focus on developing AI solutions for the government and defence sectors. By integrating AI into educational platforms, as well as creating tools for analysing state data, the initiative aims to improve public services for citizens.

The centre is committed to driving innovation in several ways. It will focus on developing AI products specifically designed for the public and defense sectors, ensuring that artificial intelligence contributes to national security and improved governance. In addition, it aims to advance scientific research based on artificial intelligence, encouraging technological progress in various disciplines, including the areas addressed in this paper.

The WINWIN AI Center of Excellence from Ukraine is a great opportunity to develop research in the field of AI application, not only for Ukraine but also for nearby countries such as Romania and the Republic of Moldova.

3. Artificial intelligence on the life insurance sector

Life insurance is a contract, called a life insurance policy, entered into between a contracting party and an insurer whereby, in exchange for an insurance premium paid by him, upon the death of the insured, the insurer undertakes to pay the designated beneficiary of a claim for insurance, called Sum Insured. The insured, who may be the

¹² Lilian Edwards & Michael Veale, (2017) „Slave to the Algorithm? Why a 'Right to an Explanation' Is Probably Not the Remedy You Are Looking For”, 16 *Duke Law & Technology Review* 18-84. Forbrukerradet, *Deceived by Design. How tech companies use dark patterns to discourage us from exercising our rights to privacy*, 2018, p. 6, <https://storage02.forbrukerradet.no/media/2018/06/2018-06-27-deceived-by-design-final.pdf>.

same as the contracting party, is the person whose life is the object of insurance, and the contractor is the one who pays the insurance premium related to the insurance policy.

The purpose of life insurance is to provide financial protection for the family, but it can also be used to protect property, to secure loan agreements, to make investments, for retirement or to cover bank loans.

There are several hundred types of insurance. They comprise two large groups:

A - punctual;

B - with savings.

Term insurance strictly provides death protection for a set period of time (up to a maximum of 75 years), which is why insurance premiums are generally low.

Savings insurance has a death protection component similar to term insurance and a savings component. For this reason, insurance premiums are higher than those for term insurance. Instead, the holder can access the money through various types of withdrawals or redemptions.

Unlimited term insurance covers the risk of death for a longer period than unlimited term insurance (up to a maximum of 95 years). The condition is that the premiums are paid until retirement. In case of death during the contract, the beneficiary receives the insured amount. If he reaches the age stipulated in the contract, he himself receives the insured amount, in addition to the investment benefits obtained by the insurer. The main advantages of this type of insurance are the guarantee of benefits for both death and survival. On the other hand, the premiums are higher than those for term insurance, they are inflexible and the value obtained in survival does not guarantee a real profit, but is a value indexed to inflation. It is a traditional product with guaranteed value. Digitalisation has brought numerous benefits to the insurance industry, transforming the way companies interact with customers and conduct business.

With the launch of ChatGPT, discussions about Artificial Intelligence and the role that it - and other emerging technologies - can play in society now and in the future have intensified. A key question is whether AI technologies can contribute to the development of health and life insurance.

In the insurance sector, Artificial Intelligence is increasingly being used to facilitate interactions with policyholders. Integrated into personal services and customer guidance, AI helps improve overall well-being by complementing daily medical services, as explained by a Member of the Board of Directors of SIGNAL IDUNA.

Another technology widely integrated by companies in the insurance sector is the chatbot. These chatbots are programmed to automatically answer questions from policyholders and patients, reducing waiting times by providing assistance around the clock. Equally important is telemedicine, which has quickly become a standard service, offering patients the ability to access medical care from the comfort of their homes.¹³

At GROUPAMA Insurance, they are also talking about the role of telemedicine, emphasising that in 2022 the #IntreabaMedic service was launched, a telemedicine platform that combines artificial intelligence with human interaction in the form of microconsultations. Offered by real licensed doctors, through the most accessible communication platforms like: Whatsapp, Facebook Messenger, Telegram or SMS This service can be included in Health Insurance - hospitalisation and surgical intervention

¹³ John R. Searle, (1980). "Minds, Brains, and Programs." *Behavioral and Brain Sciences* 3, no. 3: 417–24. <https://doi.org/10.1017/S0140525X00005756>.

and is valid throughout its validity period. Still, they remain open to new opportunities to continue integrating technology into the company's products and services in ways that best suit customers.

Brokers point out, however, that in this segment, regarding health plans, that AI cannot replace the interaction with the insurance broker.

In terms of life insurance, in the long term technology is expected to play an increasingly important role, including in this area of insurance, but the focus of this industry will definitely be on the customer, on personalising the offers for them and creating insurance products and services that most faithfully reflect the individual needs of our customers, as the CEO of AEGON Romania appreciates.¹⁴

At the same time, the interest of the younger generation in insurance services is expected to increase as young people realise that the world is in perpetual motion and change. For these young people, not only, traditional insurance communication channel companies are no longer enough, they prefer to find these services closer to them, in the places they frequent, for example: Current and future customers.

The period 2019-2024 was marked by several major events (the COVID-19 pandemic, the war in Ukraine and the conflict between Gaza and Israel) that imposed extensive changes in numerous sectors. These, combined with a series of challenges encountered at a global level such as: climate change, inflation, digitalisation, the energy and food crisis, population aging, reduction of the working population, etc., only help to create a favourable context for the insurance industry, as the world's need for protection and investment is constantly growing.

It is crucial for the insurance market to adapt to the technological demands that have emerged in recent years. Digitalisation in insurance brings several transformative opportunities. It enables the analysis of customer data, allowing companies to gain a better understanding of market needs and risks. Through the use of smart devices, insurers can more accurately assess health risks. Additionally, insurance services are shifting from being customer-initiated to insurer-initiated activities, making the process more proactive. The use of location services accelerates claim resolution, especially in the case of road accidents. Customer service is becoming available around the clock, ensuring continuous support. Moreover, IoT sensors are increasingly used as warning systems to reduce the frequency and severity of claims, enhancing risk prevention overall.¹⁵

4. The influence of artificial intelligence on in vitro fertilization

The artificial intelligence system aims to help doctors and patients. Thus, for healthcare professionals, an AI algorithm could speed up resource allocations by estimating the number of interventions to be performed on a given day, and for patients, this system helps plan treatments with greater clarity.

The increased demand for interventions such as in vitro fertilisation or oocyte

¹⁴ E. Turillazzi, A. Maiese, P. Frati, M. Scopetti & M. Di Paolo (2021), „Physician–Patient Relationship, Assisted Suicide and the Italian Constitutional Court”, *Journal of Bioethical Inquiry* 18 (4): 671-681.

¹⁵ Cristina Ungur, Gheorghe Cuciureanu (2017), „The insurance sector in the Republic of Moldova: market consolidation and digitalization trends”, *Intellectus*, 2017, no. 2, pp. 72-80. ISSN 1810-7079, available at: https://ibn.idsi.md/vizualizare_articol/52874, accessed on 19.04.2025.

cryopreservation has led to increased pressure on clinics and laboratories, which must have a good strategy for organising the activity. IVF cycles must follow well-defined milestones: which can lead to overcrowding on certain days. Artificial intelligence, by estimating the date of oocyte collection, can help to better manage the patient.¹⁶

A study by Israeli researchers specialising in in vitro fertilisation included data from 9,550 ovarian stimulation cycles performed between August 2018 and October 2022. Of these, 6,000 cycles were used to train the AI. Parameters such as oestrogen levels, ovarian follicle size and patient demographics were taken into account, with the AI algorithm producing a chart with the most likely date for optimal oocyte collection.

The size of the primordial follicle was what influenced the algorithm the most because it is the most used when we want to trigger ovulation, explained Rohi Hourvitz of FertilAI, an Israeli company focused on developing technologies to improve fertility treatments that has funded this study.¹⁷

The results of the study seem to bring a new perspective in the field of assisted human reproduction. However, it is essential to continue research and fully validate the effectiveness and reliability of these AI algorithms before they are implemented in medical practice.

The European Commission (EC) has proposed a new legislative framework for systems that use Artificial Intelligence (AI), creating initiatives to promote innovation in the field. This proposal represents the first regulation at the European level of a specific technology (AI) and have different rules for different risks, transparency requirements and more on the EUs digital measures. It is about the EU AI Act published on 08-06-2023 and updated on 16-06-2024.

Recognising the benefits brought by AI, the EC intends to ensure that technologies of this type used in the European market respect the fundamental rights of the individual. The EC is particularly concerned with the protection against ethical risks and the protection of personal data, including the risk of bias inherent in datasets used by AI technologies.

The European Commission's regulatory plan for AI divides systems into four risk categories: minimal, limited, high, and unacceptable, each with specific implications for their use. The regulations apply to both users and suppliers of AI technologies within the EU/EEA, as well as to entities outside the region if their AI outputs affect the EU/EEA market. High-risk AI systems will require stringent compliance measures, including human oversight, functional testing, registration, certification, monitoring, data retention, and reporting obligations. The legislative framework is expected to be finalised within about a year, followed by a 24-month transition period to allow AI companies to adapt to the new rules.

The decision to use medically assisted reproduction (IVF) can be influenced by factors such as the child's race, ethnicity, gender, ability to monitor pregnancy progress, health status, donor anonymity, knowledge of biological parents, procedure requirements, and waiting times.

To measure how much these criteria influence decisions, respondents rated each

¹⁶ Woody Evans (2015). *op. cit.*, p. 378.

¹⁷ D. Tran, S. Cooke, P. J. Illingworth, D. K. Gardner, „Deep learning as a predictive tool for fetal heart pregnancy following time-lapse incubation and blastocyst transfer”, *Human Reproduction*, Volume 34, Issue 6, June 2019, pp. 1011–1018, <https://doi.org/10.1093/humrep/dez064>.

factor on a 5-point scale. -"Don't know"- answers were excluded from calculations. The weighted average scores showed that ethnicity (2.87) and race (2.59) are the most influential criteria, while gender was less important (2.19).

Other important factors include parents' ability to monitor pregnancy and child health (3.12), the father's role and anonymity as a donor (around 2.6), and knowledge and acceptance of biological parents (2.43). The child's status from surrogacy had the lowest importance (2.37).

Children inherit many traits from their biological parents, including physical characteristics and predispositions to certain diseases. These hereditary factors indicate possibilities, not certainties.

Artificial intelligence is used to help precisely analyse hereditary traits, potential combinations, and likely health conditions.

5. The implication of artificial intelligence in solving the problem of euthanasia

Euthanasia and medically assisted suicide are legal in several countries: Switzerland, Italy, Luxembourg, Albania, Uruguay, Japan, Belgium, the Netherlands and Australia. In two US states, Oregon and Washington, the law does not allow euthanasia (lethal injection administered by a doctor), but based on it, some patients can ask their doctor for drugs to end their own life.

Laws and regulations regarding euthanasia vary widely across countries around the world. Romania has not legalised euthanasia or assisted suicide, and there are no specific laws or regulations that allow these procedures in all situations. However, there have been discussions about euthanasia and end-of-life care, reflecting broader debates about healthcare ethics and patients' rights. Individuals and advocacy groups have called for the legalisation of euthanasia or the implementation of policies to improve end-of-life care, including access to palliative care services. The legal framework in Romania focuses primarily on providing palliative care to patients with chronic illnesses, with the aim of reducing suffering and improving the quality of life of people approaching the end of their lives. Palliative care focuses on holistic support, pain management, and meeting the physical, emotional, and spiritual needs of patients and their families.

Euthanasia is assisted suicide, usually with the help of doctors, especially for patients with incurable diseases to quickly end their suffering. In typical cases of euthanasia autonomy, patients' decisions may be considered subjectively reasonable. However, human existence involves social interactions, and the death of patients also affects their loved ones, attending physicians, the legal system, and public perception. For example, the Croatian Study found that the general public was largely against the idea of euthanasia.¹⁸

Although it is impossible to eliminate social connections, unless a person lives in complete isolation, it is possible to increase their autonomy by lessening the associated impact. One of the solutions in this direction is AI-assisted euthanasia.

Artificial intelligence (AI) can automate the assistance patients need in

¹⁸ Álvaro Ramis (2021). *Libertad y muerte digna en Chile* [Internet]. BioBioChile. Available in: <https://www.biobiochile.cl/noticias/opinion/tu-voz/2021/01/19/libertad-y-muerte-digna-en-chile-estar-a-favor-de-la-vida-o-de-la-conciencia.shtml>.

euthanasia without the act of "killing" done by another human. Contemporary methods depend very much on the moral considerations of the attending physicians as well as their relationship with those patients.¹⁹

Philip Nitschke, a euthanasia advocate, often referred to as "Dr. Death" believes that a doctor should not be involved in assisted suicide. Thus, he wants to create the necessary tools to help patients fulfill their intended behaviour. It started rather simply, as he connected a laptop to the syringe to let his patients make the final decision in their own lives. He recently invented the Sarco Bridge to make the procedure even easier and is now finalising this product. The Sarco Bridge asks the user a few short questions before activation through a four-digit code, serving as documents to hand over to the authority. When activated, the pod releases nitrogen gas to cause the user to pass out and die quickly by asphyxiation. Nitschke believes that giving patients more autonomy in the decision of their death means giving them dignity in their final moments. But beyond this simple automation, euthanasia advocates are also working to use AI to determine the mental capacity of patients requesting human psychiatrist-assisted suicide. This can further reduce the subjective involvement of third parties. However, it is undoubtedly a highly questionable endeavour because of the conflicts between the implications.²⁰

However, subjective factors like emotions and ethics are crucial and cannot be fully removed from such sensitive decisions. Instead, responsibly incorporating this subjectivity – using structured approaches like the Bayesian Mindsponge Framework – can help navigate the complex psychosocial aspects more effectively.

6. Ethical and religious-moral aspects regarding medically assisted reproduction and individual freedom

The application of medically assisted human reproduction techniques raises a series of problems, both scientific and especially ethical, social or religious.

Today's technological development in the scientific and medical fields has opened up new perspectives regarding the application of medical biotechnologies to humans.

This possibility that humans can create human life in vitro by manipulating reproductive cells, to keep cryopreserved embryos for a period of time, to genetically test embryos before they are implanted, to use them for research purposes, with the possibility that they can subsequently be destroyed, causes, as expected, a whole series of ethical, religious-moral and legal controversies, on the one hand regarding the status of the human embryo (is it a being or not) and on the other hand regarding the status of the child born through these methods, especially when IVF was performed with the biological material of a third-party donor²¹.

It is known that when in vitro fertilisation is performed, some of the embryos

¹⁹ Idem.

²⁰ Yelson Alejandro Picón-Jaimes, Ivan David Lozada-Martinez, Javier Esteban Orozco-Chinome, Lina María Montaña-Gómez, María Paz Bolaño-Romero, Luis Rafael Moscote-Salazar, Tariq Janjua, Sabrina Rahman, (2022), „Euthanasia and assisted suicide: An in-depth review of relevant historical aspects”, *Annals of medicine and surgery*, London, 75(), March, DOI: 10.1016/j.amsu.2022.103380.

²¹ Nelu Gheorghită, „The problem of infertility and medically assisted reproduction in the Republic of Moldova. Medical, ethical and legislative aspects”, in *Vector european* no. 1/2023, p. 24, DOI: <https://doi.org/10.52507/2345-1106.2023-1.04>.

created for implantation are lost at different stages of development. Moreover, taking into account the fact that the success rate of the procedure is very low, more embryos are implanted in the uterus of the expectant mother to increase the chances of success. Since there is a possibility that a larger number of embryos will be successfully implanted, multiple pregnancies may occur. Hence the need to perform an embryo reduction, that is, to eliminate some of the embryos to increase the chances of survival of one or two embryos. But this embryo reduction procedure is nothing more than an abortion, a killing.

Because there is no certainty of the success of an implantation, many more embryos are created through the in vitro method than necessary, the remaining embryos being used most often in research. Most countries do not accept the deliberate creation of embryos for research purposes, respecting the provisions of art.18 paragraph 2 of the Oviedo Convention of April 4, 1997 on human rights and bioethics²². However, some countries, for example England, have managed to circumvent this provision and, taking advantage of the fact that the status of the embryo is not well defined, varying between people and thing, have introduced a notion of pre-embryo (in fact the human embryo up to the 14th day) and thus allowed research on pre-embryos.²³

Other ethical issues arise in connection with the harvesting and use of human embryos, such as the situation of supernumerary embryos that are cryopreserved and deposited in "human embryo banks". Of these, between 25 and 40% die once they are thawed. Although, from a Christian point of view, embryos carry the life of the human being from fertilisation, they are currently used in research, like animal embryos; others are even used in the industry to obtain cosmetic products.

Personal freedom, as a fundamental human right, is inextricably linked to criminal law. It is therefore necessary to carry out an analysis that limits the possible interferences between personal freedom and other fundamental rights and freedoms, to the application of the legal limits of personal freedom. There are no absolute rights, but other freedoms or fundamental rights are also affected by the internal exercise of the law, the inviolability of correspondence and intimate family and private life. Therefore, they will be analysed together.

Violations of human rights also lead to consequences of violations of human freedoms. The limit is very strict, as it is constitutionally legislated in art. 53. Of course, it is of a general nature and cannot cover all specific situations that may arise in social reality. The main thing is to respect the limits thus established in comparison with the beneficiaries of the limitation of the possibility of restriction, the competence and foreseeability of the restriction, the possible reasons, the necessity in a democratic society of proportionality of the situation that determines it by non-discriminatory application and, in particular, the necessity of the immateriality of the existence of the right or freedom. Only by respecting these conditions can the individual be free, even in a democracy, because liberal democracy is based on freedom and equality, having as its

²² "The creation of human embryos for research purposes is prohibited" according to art. 18(2) of the European Convention of 4 April 1997 for the protection of human rights and dignity of the human being with regard to the applications of biology and medicine (Convention on human rights and biomedicine), published in the Official Gazette no. 103 of 28 February 2001, <https://legislatie.just.ro/Public/DetaliiDocument/27007> (reference dated 02.12.2024).

²³ Taken from Ierotheos Vlachos, *Bioetică și bioteologie*, Ed. Christiana, Bucharest, 2013, p. 229.

goal freedom and equality as a means of achieving the goals of society. It is not true that the abuse of human rights always ultimately leads to immorality and corruption, that is, to a form of immorality that requires the adoption of urgent procedures for the eradication of this form of corruption as a path that can lead to the destruction, and degradation of society.

7. Conclusions

Why is Artificial Intelligence (AI) becoming actively involved in such diverse and critical fields of human life? The answer lies in the pervasive digitalisation that AI enables, which deeply penetrates people's daily lives and concerns. AI's undeniable utility comes alongside significant risks, especially those related to computer crime.

European institutions are continuously working to establish legal frameworks acceptable to Member States, aiming to balance AI's vast potential with necessary safeguards. AI impacts even the most intimate aspects of private life - areas where traditional solutions have often failed to meet people's deepest needs.

For example, in life insurance, a sector not directly related to vital human issues, AI plays a decisive role in customer decision-making and operational efficiency. In a more critical domain like In Vitro Fertilization (IVF), AI enables optimising conditions to create new life with the best possible outcomes.

Similarly, the sensitive issue of euthanasia, which involves profound ethical questions, has also been influenced by AI applications. While technology can provide tools to assist in such decisions, the core question remains: should an individual have full control over the choice between life and death?

In Romania and the Republic of Moldova, legislative progress on IVF and euthanasia is underway, driven by research from two of the doctoral students who authored this article. They have submitted proposals to the respective Parliaments, advocating for the regulation of these areas with comprehensive justifications grounded in their research.

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