



European data market: the rise of individuals to the “*Mount Olympus*” of artificial intelligence or the “oiling” of the human being?

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ABSTRACT: This article aims to contribute to the debate on the long-term consequences arising from the creation of a European data market, considering the limitless potential of artificial intelligence (AI). Encouraging mass data production to develop AI could compromise the effective protection of personal data, the preservation of European liberal democracies and human rights, the promotion of innovation and even European economic prosperity. Bearing in mind the EU’s “spiritual and moral heritage”, enshrined in the Preamble of the Charter of Fundamental Rights of the European Union (CFREU), it is essential to ensure that we are truly walking along a path that will lead us to a democratic future.

KEYWORDS: European data market — artificial intelligence — data protection — EU’s spiritual and moral heritage.

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1. Introduction

European institutions have demonstrated that they are fully aware of their democratic and human rights heritage. Faced with multiple threats, the European Union (EU) has been extraordinarily committed to defending European values. However, the world is changing very quickly. Artificial intelligence (AI) represents a widespread revolution and its benefits cannot be devalued. The EU must embrace technological evolution, but AI brings with it a significant degree of uncertainty that makes it difficult to guard against all emerging risks, despite regulatory caution.¹ One of these risks relates to the relationship between AI² (including quantum AI)³ and the free circulation of mass-produced data in the European market, which raises one question: what if malicious actors use AI to convert non-personal data into personal data?

Given AI's ability to identify patterns in complex data systems, as well as the need to draw lessons from what is happening in the European market of ideas, it seems vital to reflect on whether the data market can, in the long term, be compatible with the preservation of European values, economic prosperity, technological development, and innovation. Recalling the enormous importance of the Single Market in maintaining peace in Europe, it is necessary to analyse whether the European Data Strategy⁴ constitutes the right step towards the future, considering the values on which the Union is founded, as enshrined in Article 2 of the Treaty on European Union (TEU).⁵

¹ In her 2023 “State of the Union” address, the President of the European Commission, Ursula von der Leyen, expressed great confidence in the effectiveness of AI regulation. See European Commission, “2023 State of the Union Address by President von der Leyen”, last modified September 13, 2023, https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4426. However, in this respect, we agree with the perspective of the editorial team of the UNIO EU Law Journal: “*We do not fully share Madam President’s optimism regarding the possibility of defining minimum standards worldwide for the safe and ethical use of AI, but we hope with all our might that she is right*”. See Editorial Team, “Editorial of October 2023”, *The Official Blog of UNIO – EU Law Journal – Thinking and Debating Europe*, October 13, 2023, <https://officialblogofunio.com/2023/10/13/editorial-of-october-2023/#more-6060>.

² According to the European Commission’s proposed Artificial Intelligence Act (AIA), “*‘artificial intelligence system’ (AI system) means software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with*” [Article 3 (1)]. See 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, 21.4.2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206>.

³ Quantum AI will serve different purposes. For example: “*Inserting quantum processing units into the classical framework has the potential to boost the quality of the images generated. And how does this help us with classical machine learning? Well, traditional machine learning algorithms are as good as the data you feed them. If you try to train a classical face detection model with a small dataset of faces, this model won’t be very good. However, you can use quantum-enhanced generative models to enlarge this dataset with more images (both in terms of quantity and variety), which can significantly improve the detection model*”. See Tom Taulli, “Quantum computing: what does it mean for AI (Artificial Intelligence)?”, *Forbes*, August 14, 2020, accessed November 8, 2023, <https://www.forbes.com/sites/tomtaulli/2020/08/14/quantum-computing-what-does-it-mean-for-ai-artificial-intelligence/>.

⁴ European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A European strategy for data, COM (2020) 66 final, Brussels, 19.2.2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0066>.

⁵ Treaty on European Union (Consolidated version 2016), Brussels, *Official Journal of the European Union*,

2. The European data strategy: creating a European data market

The history of Europe in recent decades has proven the idea that the establishment of economic relations between States would foster peace was correct. As the famous Schumann Declaration states: “*The pooling of coal and steel production should immediately provide for the setting up of common foundations for economic development as a first step in the federation of Europe, and will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims. The solidarity in production thus established will make it plain that any war between France and Germany becomes not merely unthinkable, but materially impossible*”.⁶ From the European Coal and Steel Community (ECSC) and the European Economic Community (EEC) to the EU, the creation of a unified market has been an effective guarantee of the stability of peace between the “*peoples of Europe*”.⁷

The European Single Market was established on 1 January 1993, being one of the EU’s greatest achievements. According to the Treaty on the Functioning of the EU (TFEU),⁸ the Internal Market comprises an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the Treaties (Article 26, §2, TFEU). The Single Market includes the 27 EU Member States and Norway, Iceland, and Liechtenstein (through the European Economic Area), while Switzerland has partial access to the Single Market (through bilateral agreements).⁹

As the Council of the EU explains, the Single Market “*facilitates trade between businesses, stimulates growth and boosts innovation, while making citizens’ lives much easier. Today the EU continuously works on further developing the single market in new areas to find common solutions to challenges such as climate change, the energy crisis and digitalisation*”. In the EU, every person holding the nationality of a Member State is considered to be a European citizen and can decide where to live, work, do business, and retire.¹⁰

The Single Market has brought several clear advantages: i) availability of services and products at competitive price levels; ii) the possibility of making online purchases without geographical restrictions; iii) greater confidence in the safety of all products circulating on the market, as well as in their compliance with labour and environmental protection requirements; iv) greater promotion of the growth of small and midsize enterprises (SMEs) and expansion of commercial opportunities for companies, enabling their access to the market; and v) within the framework of the Single Market, Member States have a greater possibility of finding common solutions to collective problems, such as the energy crisis,

7.6.2016, C 202, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12016M/TXT>.

⁶ European Union, “Schuman declaration May 1950”, accessed November 7, 2023, https://european-union.europa.eu/principles-countries-history/history-eu/1945-59/schuman-declaration-may-1950_en.

⁷ The expression “peoples of Europe” appears in the Preamble of the CFREU: “*The peoples of Europe, in creating an ever closer union among them, are resolved to share a peaceful future based on common values*”. See Charter of Fundamental Rights of the European Union, Brussels, *Official Journal of the European Union*, 26.10.2012, C326/391, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12012P/TXT>.

⁸ Consolidated version of the Treaty on the Functioning of the European Union, Brussels, *Official Journal of the European Union*, 26.10.2012, C 326, <https://eur-lex.europa.eu/legal-content/EN/TXT/%20HTML/?uri=CELEX:12012E/TXT&from=EN>.

⁹ European Council, “Infographic - 30th anniversary of the EU single market”, last modified February 10, 2023, <https://www.consilium.europa.eu/en/infographics/30-years-of-the-eu-single-market/>.

¹⁰ Regarding the paragraph, “Infographic - 30th anniversary”.

climate change and digitalisation, considering that it is easier to recover from crises together.¹¹

In 2020, the European Commission presented the European Data Strategy.¹² In its Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (COM/2020/66 final), the Commission recognises that digital technologies are transforming the economy and society through data processing. From its perspective, data-driven innovation will be of great benefit to citizens, bringing improvements in terms of health, well-being, environment, mobility, transparent governance, and efficient public services. Bulk data collection is a clear objective defined by the EU and the amount of data generated will be increasingly greater. As the Commission also clarifies in its Communication, the Union has the ambition to become a model of leadership in the data economy, on the assumption that it is supported by a solid legal framework on data protection, fundamental rights, security and cybersecurity.

2.1. Confidence in the effective safeguarding of personal data

The EU has been extraordinarily committed (and even brave) in defending privacy. European regulation in the field of personal data delved deeply into the problems, not only by not ignoring them, but also by showing insight in identifying them. As Carissa Véliz noted, regulation was key in forcing big technology companies to reveal what they were doing with our data.¹³ Considering the level of institutional concern about data, Europe is one of the best places in the world to live, even though privacy is under threat everywhere. As stated in Recitals 6 and 7 of the General Data Protection Regulation (GDPR): “*Rapid technological developments and globalisation have brought new challenges for the protection of personal data*”, which “*require a strong and more coherent data protection framework in the Union, backed by strong enforcement, given the importance of creating the trust that will allow the digital economy to develop across the internal market. Natural persons should have control of their own personal data. Legal and practical certainty for natural persons, economic operators and public authorities should be enhanced.*”¹⁴

By implementing very demanding rules on the protection of personal data, the EU seems convinced that personal data is effectively safeguarded. In the European Commission’s own words: “*The EU is creating a single market for data where data can flow within the EU and across sectors, for the benefit of all*”, “*European rules, in particular privacy and data protection, as well as competition law, are fully respected*” and “*the rules for access and use of data are fair, practical and clear*”.¹⁵ On this basis, the EU opens the doors of the data market, promotes the free movement of data, encourages individuals’ trust in sharing data and promotes the new concept of “*data altruism*”.¹⁶ These strategies are pursued

¹¹ “Infographic - 30th anniversary”.

¹² European Commission, A European strategy for data.

¹³ Carissa Véliz, *Privacy is power: why and how you should take back control of your data* (London: Penguin Random House, 2021), 157.

¹⁴ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), Brussels, *Official Journal of the European Union*, 4.5.2016, L119, <https://eur-lex.europa.eu/eli/reg/2016/679/oj>.

¹⁵ European Commission, A European strategy for data.

¹⁶ According to recital 16 of Article 2 of the Data Governance Act, “data altruism” “*means the voluntary sharing of data on the basis of the consent of data subjects to process personal data pertaining to them, or permissions of data holders to allow the use of their non-personal data without seeking or receiving a reward that goes beyond compensation related to the costs that they incur where they make their data available for objectives of general interest as provided for in*

through different regulations, such as the GDPR, the Data Governance Act, the Data Act,¹⁷ and the Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the EU.

This means that the EU considers that it is possible to achieve several goals simultaneously:

- promote the collection of large amounts of data, the free circulation of that data and its economic exploitation;
- effectively protect personal data, preventing the identification of data subjects;
- preserve European liberal democracies and human rights; and
- encourage technological development, economic prosperity and innovation.

From our perspective, the first objective is not as compatible with the others as it might seem at first glance. In fact, we think that, over time, the data market will make it impossible to effectively protect personal data, as the availability of large amounts of data will allow AI to identify data subjects on a massive scale. Furthermore, the data economy will shake the foundations of democracies and human rights and may not be as conducive to European economic prosperity and innovation as the short-term view suggests.

2.2. *The dangers of mass data production in the medium and long-term*

Firstly, the data economy promotes the collection of mass data, but the more data on the market, the greater the probability of identifying the data subjects. This risk is magnified by the agglomeration of several factors: e.g., availability of large amounts of information on social networks;¹⁸ permanent data collection through the Internet of Things; cybersecurity vulnerabilities; the ability of AI – including quantum AI –¹⁹ to find patterns in complex sets of data, enabling the conversion of

national law, where applicable, such as healthcare, combating climate change, improving mobility, facilitating the development, production and dissemination of official statistics, improving the provision of public services, public policy making or scientific research purposes in the general interest". See Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act), Brussels, *Official Journal of the European Union*, 3.6.2022, L152, <http://data.europa.eu/eli/reg/2022/868/oj>. In our view, the idea of "data altruism" is hardly understandable in a context where privacy is on the verge of extinction. Data altruism does not seem compatible with privacy literacy either. Individuals' natural perceptions of privacy are being technologically shaped, encouraging them to share as much information about themselves as possible, so that they become increasingly profitable for large technology companies. Therefore, in the long run, data altruism appears to be more advantageous to these large companies than for individuals. However, other authors applaud the idea of "data altruism" and argue that the EU should have gone even further in promoting such altruism. For example, Winfried Veil believes the EU ruined a good idea, stating that: "The EU dreams of a 'common European data space'. Data protection is and remains the elephant in this data room. So long as the anti-processing straitjacket of the GDPR is not loosened even a little for altruistic purposes, there will be little hope for data innovations from Europe. In any case, the EU's bureaucratic ideas threaten to stifle any altruism". See Winfried Veil, "Data altruism: how the EU is screwing up a good idea", *Algorithm Watch*, January 27, 2022, <https://algorithmwatch.org/en/eu-and-data-donations/>.

¹⁷ Proposal for a Regulation of the European Parliament and of the Council on harmonised rules on fair access to and use of data (Data Act), COM (2022) 68 final, Brussels, 23.2.2022, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022PC0068>.

¹⁸ Pierre-Luc Déziel, "Les limites du droit à la vie privée à l'ère de l'intelligence artificielle: groupes algorithmiques, contrôle individuel et cycle de traitement de l'information", *Les Cahiers de Propriété Intellectuelle*, v. 30, no. 3 (2018): 833-837, accessed November 9, 2023, <https://www.lespci.ca/s/3745>.

¹⁹ See, for example, Richard D. Taylor, "Quantum Artificial Intelligence: a 'precautionary' U.S. approach?", *Telecommunications Policy*, v. 44, no. 6, (2020), accessed November 7, 2023, <https://www>.

pseudonymised or anonymised data into personal data, creating detailed profiles about all individuals.

Alessandro Acquisti and Ralph Gross have already demonstrated how seemingly innocuous online self-disclosures can lead to privacy intrusions: “*Information about an individual’s place and date of birth can be exploited to predict his or her Social Security number (SSN). Using only publicly available information, we observed a correlation between individuals’ SSNs and their birth data and found that for younger cohorts the correlation allows statistical inference of private SSNs. The inferences are made possible by the public availability of the Social Security Administration’s Death Master File and the widespread accessibility of personal information from multiple sources, such as data brokers or profiles on social networking sites. Our results highlight the unexpected privacy consequences of the complex interactions among multiple data sources in modern information economies and quantify privacy risks associated with information revelation in public forums.*”²⁰

The possibility of reidentifying supposedly anonymous health data was also explained by Latanya Sweeney: “*Organizations often release and receive medical data with all explicit identifiers, such as name, address, telephone number, and Social Security number (SSN), removed on the assumption that patient confidentiality is maintained because the resulting data look anonymous. However, in most of these cases, the remaining data can be used to reidentify individuals by linking or matching the data to other data bases or by looking at unique characteristics found in the fields and records of the data base itself.*”²¹

By definition, an economy that is based on the economic exploitation of personal data has an insatiable appetite for data because, in the market, data has great economic value.²² However, if the data circulating on the market can be related to the holders of that data, privacy is extinguished, and the dignity of the human person is in serious danger. Personal data is not renewable. We cannot radically change our face without harming our physical and mental health. We cannot replace our fingerprint. We cannot modify our fears or idiosyncrasies. Therefore, what is at stake is the European “*spiritual and moral heritage*”, enshrined in the Preamble of the CFREU, considering that the Holocaust was also carried out through mass data collection.²³ As Ulrich Beck noted, “*what was ruled out as beforehand as utterly inconceivable is taking place*”.²⁴

[sciencedirect.com/science/article/abs/pii/S030859612030001X](https://www.sciencedirect.com/science/article/abs/pii/S030859612030001X); Yao Zhang and Qiang Ni, “Recent advances in quantum machine learning”, *Quantum Engineering*, v. 2, no. 1 (2020), accessed November 7, 2023, <https://doi.org/10.1002/que2.34>.

²⁰ Alessandro Acquisti and Ralph Gross, “Predicting Social Security numbers from public data”, *Proceedings of the National Academy of Sciences*, v. 106, no. 27 (2009): 10975, accessed November 9, 2023, <https://www.pnas.org/doi/pdf/10.1073/pnas.0904891106>.

²¹ Latanya Sweeney, “Weaving technology and policy together to maintain confidentiality”, *The Journal of Law, Medicine & Ethics*, v. 25, no. 2-3 (1997): 98, accessed November 9, 2023, <https://doi.org/10.1111/j.1748-720X.1997.tb01885.x>.

²² Some authors suggest a new approach to allow data owners to trade their data in digital data market scenarios, while keeping control over them. See Sabrina De Capitani di Vimercati *et al.*, “Empowering owners with control in digital data markets”, *2019 IEEE 12th International Conference on Cloud Computing (CLOUD)*, Milan, Italy, July 8-13 (2019): 321-328, <https://ieeexplore.ieee.org/document/8814508>.

²³ Olívia Andrea Mendoza Enríquez, “El derecho de protección de datos personales en los sistemas de inteligencia artificial”, *Revista IUS: Derecho e Inteligencia Artificial*, v. 15, no. 48 (2021): 191, accessed November 11, 2023, <https://revistaius.com/index.php/ius/article/view/743/802>. The Holocaust appears referred to in recital 158 of the GDPR: “*Member States should also be authorised to provide for the further processing of personal data for archiving purposes, for example with a view to providing specific information related to the political behaviour under former totalitarian state regimes, genocide, crimes against humanity, in particular the Holocaust, or war crimes*”.

²⁴ Ulrich Beck, *The metamorphosis of the world: how climate change is transforming our concept of the world*

Secondly, mass data collection will also lead to the availability of data in quantities unprecedented in history.²⁵ This data requires storage, which depends on the existence of data centres. In addition to the environmental implications resulting from the construction of these centres (e.g., deforestation, cooling with large energy costs),²⁶ they pose new threats. Before being collected, data has an immaterial existence, being preserved in its holders, which guarantees the effective security of that data. But, after being collected, it begins to exist autonomously without their owners, becoming a material good, which can be used by others in a legitimate, but also illegitimate way. The breach of Europeans' personal data is captivating to autocratic regimes. There are more autocracies than liberal democracies in the world,²⁷ demonstrating the need to protect them. Access to mass data circulating on the European data market (e.g., through hacking) would pose a serious risk of manipulation of European public opinion. In possession of this data, autocratic regimes are more likely to effectively interfere in democratic elections in foreign states through the spread of personalised disinformation, as each person would be exposed to the type of disinformation most suited to manipulating their vote.²⁸

The dissemination of personalised disinformation on social media has proven to be successful in promoting social and political division in Western societies.²⁹ When citizens are no longer able to distinguish between true and false information, the risk of electing autocratic leaders is real. It is therefore, essential to prevent the destruction of democracies and the disintegration of Europe. To this end, the EU must guarantee the effective protection of personal data.

Thirdly, the data market is promoted by mass data production, which means that the data economy is based on a *quantitative approach*. This logic is in line with the EU's strategy of exploring the potential of AI in building a technological future that is beneficial to individuals, companies, the environment, and democratic States.³⁰ Although AI emerged in the 1950s, it is only now revolutionising the world.³¹ This is because it can benefit, for the first time, from the availability of an unprecedented volume of data.³² Considering the fact that AI is powered by data,

(Cambridge, UK: Polity Press, 2016), xii.

²⁵ Shoshana Zuboff, *The age of surveillance capitalism: the fight for a human future at the new frontier of power* (London: Profile Books, 2019), 12-14.

²⁶ Steven Gonzalez Monserrate, "The cloud is material: on the environmental impacts of computation and data storage", *MIT Case Studies in Social and Ethical Responsibilities of Computing*, last modified January 27, 2022, <https://doi.org/10.21428/2c646de5.031d4553>; "The effects of data centers on the environment", last modified March 1, 2022, <https://www.grcooling.com/blog/the-effects-of-data-centers-on-the-environment/>.

²⁷ "Countries that are democracies and autocracies, World", *Our World on Data*, accessed November 8, 2023, <https://ourworldindata.org/grapher/democracies-autocracies-amb-row>.

²⁸ Filipe Altoe and H. Sofia Pinto, "Towards a personalized online fake news taxonomy", *Proceedings of the 31st ACM Conference on User Modeling, Adaptation and Personalization (UMAP '23)*, Association for Computing Machinery, New York, June 19 (2023): 96-105, <https://doi.org/10.1145/3565472.3592963>.

²⁹ See, for example, Claire Wardle and Hossein Derakhshan, *Information disorder: toward an interdisciplinary framework for research and policy making*, Council of Europe report DGI (2017) 09, Strasbourg: Council of Europe (2017): 20, <https://rm.coe.int/information-disorder-toward-an-interdisciplinary-framework-for-research/168076277c>.

³⁰ European Commission, "Excellence and trust in artificial intelligence", accessed November 8, 2023, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/excellence-an-d-trust-artificial-intelligence_en.

³¹ Arlindo Oliveira, *Inteligência Artificial* (Lisboa: Fundação Francisco Manuel dos Santos, 2019), 51-52.

³² Kai-Fu Lee, *AI Superpowers: China, Silicon Valley, and the new world order* (Boston: Houghton Mifflin Harcourt, 2018), 14.

there is a belief that the more data, the better AI becomes. However, we need to draw lessons as soon as possible from what is happening to the European marketplace of ideas. In the same way that the rapid production of large amounts of information is contaminating the marketplace of ideas with falsehoods, preventing the purge of disinformation,³³ the mass-produced data market will soon be flooded with false data. If the data that feeds AI is not quality data, the results will be compromised, affecting innovation in strategic sectors (e.g., healthcare). As Susana Aires de Sousa highlighted, the lack of data quality is invisible to the machine, and it multiplies this data in the process of producing results.³⁴

Finally, the idea that the data economy is a driver of European economic prosperity may also be fallacious. In fact, big technology companies are expanding by assimilating incalculable amounts of data, but they are not European. It is true that the EU has approved or is in the process of approving important regulation that aims to ensure the equitable distribution of data in order to guarantee the competitiveness of European companies (e.g., Digital Markets Act,³⁵ Data Act). Although we admit that this regulation will bring benefits to the European economy in the short run, we have many doubts about its effectiveness from a long run perspective. According to Kai-Fu Lee, “*The same push toward polarization playing out across the global economy will also exacerbate inequality within the AI superpowers. AI’s natural affinity for monopolies will bring winner-take-all economics to dozens more industries, and the technology’s skill biases will generate a bifurcated job market that squeezes out the middle class.*”³⁶

In a logic of mass data production, the AI revolution could lead to the bottleneck of the European business landscape to the benefit of the large technology companies that dominate AI. In other words, the humanitarian risk we are taking by creating a data market may also not be compensated if the data economy jeopardises European economic prosperity in the medium and long-term.³⁷

3. The promised “*Mount Olympus*” of artificial intelligence

The potential of AI to build a better world is unquestionable and its development requires data. If we want to climb the “*Mount Olympus*” of AI, we must neither approach it with euphoria nor with pessimism. Euphoria prevents us from seeing its dangers and invites us to use it hastily. Pessimism leads to inertia, depriving us of benefiting from its advantages. Therefore, the wisest course of action is to approach AI with prudent boldness. The EU is aware of the need to embrace technological transformation, as well as the urgency of implementing strict rules.³⁸

³³ Tim Wu, “Disinformation in the marketplace of ideas”, *Seton Hall Law Review*, v. 51, no. 1 (2020): 172, accessed November 8, 2023, <https://scholarship.shu.edu/cgi/viewcontent.cgi?article=1758&context=shlr>.

³⁴ Susana Aires de Sousa, «A IA no setor económico: uma reflexão entre o “bom, o mau e o vilão”», in *A inteligência artificial no Direito Penal*, v. II, ed. Anabela Miranda Rodrigues (Coimbra: Almedina, 2022), 186.

³⁵ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), Brussels, *Official Journal of the European Union*, 12.10.2022, L265, <http://data.europa.eu/eli/reg/2022/1925/oj>.

³⁶ Lee, *AI Superpowers*, 170.

³⁷ According to Carissa Véliz, it has not been proven that the data economy is more profitable, so we could be losing our privacy for no reason. See Véliz, *Privacy is power*, 146-147.

³⁸ European Commission, “Excellence and trust in artificial intelligence”.

However, AI involves a high degree of uncertainty that should not be overlooked, particularly because uncertainty is a scientifically relevant principle.³⁹ Its regulation is difficult, and the EU deserves great praise for having decided to follow this path. But regulating a living, complex technology carries a serious risk of failure. And if it fails, the preservation of humanity could be at stake. As the President of the European Commission, Ursula von der Leyen, recently stated: «Hundreds of leading AI developers, academics and experts warned us recently with the following words: “Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks such as pandemics and nuclear war”». ⁴⁰ This risk is increased by mass data collection. So, the question arises: why are we rapidly feeding, with mass data, an experimental technology that could lead to the extinction of the human species?

3.1. The data-driven artificial intelligence train: European Union, United States of America and China

According to the European Data Strategy, “The EU has everything to play for in the data economy of the future”, as it “has the technology, the know-how and a highly skilled workforce”. The European Commission highlights that “competitors such as China and the US are already innovating quickly and projecting their concepts of data access and use across the globe. In the US, the organisation of the data space is left to the private sector, with considerable concentration effects. China has a combination of government surveillance with a strong control of Big Tech companies over massive amounts of data without sufficient safeguards for individuals.” But, from the perspective of the European Commission, the EU must follow an alternative path. As stated in the European Data Strategy, “In order to release Europe’s potential we have to find our European way, balancing the flow and wide use of data, while preserving high privacy, security, safety and ethical standards.”⁴¹

In our view, the European Commission is right in considering that it should follow its own path, but the chosen direction may not be as different as it suggests. By taking the quantitative approach, the EU is promoting mass data collection. This strategy is identical to the one chosen by the United States and China. The only difference lies in the implementation of demanding rules aimed at protecting privacy. This means that by adopting a quantitative logic of data production, whoever has more data has a competitive advantage. From this point of view, European regulation on data protection tends to be a brake on the functioning of the data market, compared to the strategy of the United States and China. This does not mean that the problem lies with European regulation, quite the opposite.⁴²

The EU must ensure that its regulatory strategy is fully compatible with the objectives of effective protection of personal data, the preservation of European democracies and human rights, economic prosperity, and innovation in the long-

³⁹ The Editors of Encyclopaedia Britannica, “uncertainty principle”, *Britannica*, last modified June 22, 2023, <https://www.britannica.com/science/uncertainty-principle>.

⁴⁰ European Commission, “2023 State of the Union”.

⁴¹ Regarding the paragraph, see European Commission, A European strategy for data.

⁴² Many authors dispute this conclusion. See, for example, Cara Mannion, “Data imperialism: the GDPR’s disastrous impact on Africa’s e-commerce markets”, *Vanderbilt Law Review*, v. 53, no. 2 (2021): 685, accessed November 8, 2023, <https://scholarship.law.vanderbilt.edu/vjtl/vol53/iss2/6>. Crispin Niebel has a different perspective, arguing that the “General Data Protection Regulation might be positive not only for consumers and societal well-being but also for innovation in the digital age”. See Crispin Niebel, “The impact of the general data protection regulation on innovation and the global political economy”, *Computer Law & Security Review*, v. 40 (2021), accessed November 8, 2023, <https://doi.org/10.1016/j.clsr.2020.105523>.

term. This will most likely be achieved if the EU adopts a qualitative approach to data collection: data must be carefully selected and validated and must also be reduced to the minimum necessary to pursue the chosen objectives.

According to Sara Guidi, “the regulation of digital markets shall include, as a preliminary step of the legislative intervention, the outline of the kind of innovation that is intended to achieve.”⁴³ In setting the rules, the EU should use its voice in the future trajectory of innovation and the regulation of the data economy must be based on the assumption that the type of innovation to be developed depends on the choice of a certain vision about the complexity of “data worlds”.⁴⁴ In her own words: “data are little red bricks. They can be piled up one over another to improve existing constructions; combined with a set of wheels they will turn into cars; they can generate several new exciting games whose limit only lies in the fantasy of the kid playing with them. Posit, however, that multiple children decide to join and make their own bricks available to create a more intriguing construction. They will surely need rules. In designing those rules, what kind of construction should be selected as a goal?”⁴⁵

It is often heard that the AI train is moving at great speeds and that it is essential to ensure that this train is not missed. The fear of falling behind in terms of progress has led States to choose to rush on board. Bearing in mind the potential of AI, this decision is understandable. As Alexandre Veronese, Alessandra Silveira and Amanda Lemos pointed out: “Using highly specialized systems for agricultural, industrial or services activities will be imperative in order to compete in the global market. Countries that are not investing in these new super-specialized machines will become more dependent on those that are doing it.”⁴⁶

However, prudent investment in AI is one thing, and another thing is the race to develop AI in all areas at once. In our view, the articulation between the production of mass data and the development of AI may prove to be unwise.⁴⁷ The EU travels on this high-speed train, without knowing whether it is being driven by the United States or China. In fact, according to Kai-Fu Lee, the AI superpowers are the United States and China.⁴⁸ Although these two countries believe that the train’s last stop is global hegemony, the truth is that neither the United States, nor China, nor the EU, have a ticket informing the actual destination of an AI train, powered by bulk data collection. Therefore, the EU must get off the train as soon as possible to create a new railway line and a new AI train, based on the controlled production of quality data.

Scientific, technological and economic development depends on valid data. If the data is false, incomplete or incorrect, the results will be compromised.⁴⁹

⁴³ Sara Guidi, “Innovation commons for the data economy”, *Digital Society*, v. 31, no. 2 (2023): 28, accessed November 8, 2023, <https://doi.org/10.1007/s44206-023-00059-x>.

⁴⁴ Guidi, “Innovation commons”, 29.

⁴⁵ Guidi, “Innovation commons”, 12.

⁴⁶ Alexandre Veronese, Alessandra Silveira and Amanda Lemos, “Artificial intelligence, digital single market and the proposal of a right to fair and reasonable inferences: a legal issue between ethics and techniques”, *UNIO – EU Law Journal*, v. 5, no. 2 (2019): 77, accessed November 6, 2023, <https://doi.org/10.21814/unio.5.2.2294>.

⁴⁷ Leif-Nissen Lundbaek has proposed incorporating data protection into the design of AI from the beginning, an idea worth considering. See Leif-Nissen Lundbaek, “Künstliche Intelligenz und Privatsphäre – Dilemma oder Paradoxon?”, *Forbes*, December 24, 2020, accessed November 11, 2023, <https://www.forbes.at/artikel/kuenstliche-intelligenz-und-privatsphaere-dilemma-oder-paradoxon.html>.

⁴⁸ Lee, *AI Superpowers*, 168.

⁴⁹ See Daniel A. McFarland and H. Richard McFarland, “Big Data and the danger of being precisely inaccurate”, *Big Data & Society*, v. 2, no. 2 (2015), accessed November 7, 2023, <https://doi.org/10.1177>

Making large amounts of data available increases insecurity in terms of data protection.⁵⁰ Data can be manipulated for unpredictable purposes, such as the destruction of social, economic relationships and even alliances between States. The free movement of mass-collected data is highly prone to letting poor quality data enter the market. AI could open the door to the future where medicine has been facing a wall (e.g., scientific discoveries in healthcare), but its universal development based on the “*everything, now and fast*” strategy seems dangerous for humanity.⁵¹ As Maria Inês Costa recently underlined, “*the risks are vast because the use of AI extends to all kinds of sectors in our society*”.⁵²

For this reason, from our point view, the EU must follow a truly alternative path, based on a qualitative data model. This change of direction is difficult, and many may think that it is not justified on the surface. But perhaps it is important to recall the moral of one of the most told children’s stories of all time.⁵³ In the old story *The Three Little Pigs*, each of the pigs builds a house to protect themselves from the big bad wolf. The first little pig quickly built a house out of straw. The second little pig made a house out of sticks in a short time. While the two brothers were singing and dancing, the third little pig worked hard to build a brick house. Apparently, all his effort was not justified because his brothers had their houses built with much less work. But when the big bad wolf came, they fled to their homes. And just by blowing, the big bad wolf destroyed the straw house of the first little pig, who had to take shelter in his brother’s stick house. When the wolf got there, he started snorting again and the second house was destroyed too. They ran to the third brother’s brick house, who welcomed them, with joy, because he had a safe house, where the big bad wolf could not harm them.

If AI turns into a big bad wolf, it is essential to ensure that there is a safe house somewhere in the world to protect humanity. Such a house should be built in Europe. The “*old continent*” must prove that its long age is not synonymous with decay, but with wisdom. This way, European wisdom will benefit all human beings, which is in line with its spirit of human solidarity.

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⁵⁰ Sarah Spiekermann, Alessandro Acquisti, Rainer Böhme and Kai-Lung Hui expressed concern over privacy protection in the context of the data market. See Sarah Spiekermann et al., “The challenges of personal data markets and privacy”, *Electron Markets*, v. 25, no. 2 (2015): 161–167, accessed November 8, 2023, <https://doi.org/10.1007/s12525-015-0191-0>.

⁵¹ Mo Gawdat, an AI expert and ex-chief business officer at Google X, stated that “*The risks are so bad, in fact, that when considering all the other threats to humanity, you should hold off from having kids if you are yet to become a parent*”. In his view: “*Economic, geopolitical, global warming, climate change, the whole idea of AI, this is a perfect storm, the depth of uncertainty...it has never been more intense. If you really loved your kids would you really want to expose them to all this?*”. See Sarah Palmer, “‘Hold off from having kids if you are yet to become a parent,’ warns AI expert Mo Gawdat”, *Euronews.next*, last modified June 20, 2023, <https://www.euronews.com/next/2023/06/20/hold-off-from-having-kids-if-you-are-yet-to-become-a-parent-warns-ai-expert-mo-gawdat>.

⁵² See Maria Inês Costa, “EU’s policies to AI: are there blindspots regarding accountability and democratic governance?”, *The Official Blog of UNIO – EU Law Journal – Thinking and Debating Europe*, October 27, 2023, accessed November 11, 2023, <https://officialblogofunio.com/2023/10/27/eus-policies-to-ai-are-there-blindspots-regarding-accountability-and-democratic-governance/#more-6083>.

⁵³ As José Saramago wrote: “*What if children’s stories became mandatory reading for adults? Could they really learn what they have been teaching for so long?*” (translated by The José Saramago Foundation, “The biggest flower in the world”, accessed November 9, 2023, <https://www.josesaramago.org/en/livro/a-maior-flor-do-mundo/>). See José Saramago, *A maior flor do mundo* (Porto: Porto Editora, 2015).

3.2. *The risk of “oiling” human beings*

It is often said that data is the new oil.⁵⁴ This comparison must be analysed carefully. Oil is a non-renewable natural resource, and its economic exploitation has largely contributed to the destruction of the planet, threatening human life on Earth. These consequences were not noticeable in the short and medium-term, but they became visible in the long-term. When global warming was not yet visible, scientists’ warnings were ignored in the name of progress.⁵⁵ And even now, it has been very difficult to reverse course to save the planet. This finding shows that when adopting a new economic model, it is essential to foresee its risks. Economic prosperity and progress are legitimate and desirable goals, but it is necessary to ensure that an uncontrollable “*monster*” is not created.

As Alessandra Silveira and Pedro Froufe emphasised: “*the importance and attention given to the effectiveness of the fundamental right to the protection of personal data is justified not only by the pressure of the technological times we are experiencing and by the gradual emergence of a homo digitalis*”, “*increasingly more present in all of us*”. As the authors explained: “*The protection of personal data acquired legal-constitutional centrality not only because the Digital Single Market has become a primary public interest to pursue – and the desired movement of people, goods, services, and capital implies an increase in the cross-border flow of data. Nor has it been only because the finalization of the Digital Single Market requires a stable legal environment that stimulates innovation, combats market fragmentation, and allows competitiveness on fair and balanced terms. This legal-constitutional role is also not just a matter of the certainly impressive estimate that the value of the data economy will rise to EUR 739 billion by 2020, corresponding to 4% of total EU GDP (i.e. more than twice the current value) and the number of professionals in the data sector will increase from 6 million in 2016 to more than 10 million by 2020.14 Then why? Well, the protection of personal data has become the fundamental identity issue of our times so that the project of humanism does not become irrelevant*”.⁵⁶

In the long-term, mass data collection will have consequences for humans. Personal data is not renewable and, therefore, there will be a point at which human beings may be left empty of unknowable data. In this data-deserted condition, human beings are technological objects, and their human dignity is no longer protected. Just as the economic exploitation of oil puts life on the planet at risk, the economic exploitation of data will undermine the meaning of being human.⁵⁷ Therefore, although the data market seems to be working well on the surface, it is still young. It is essential to reassess the consequences of the data economy at this early stage, to ensure that it does not lead to the “*oiling*” of human beings, which would destroy them.⁵⁸

⁵⁴ “The world’s most valuable resource is no longer oil, but data”, *The Economist*, May 6, 2017, accessed November 8, 2023, <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>; Kiran Bhageshpur, “Data is the new oil – and that’s a good thing”, *Forbes*, November 15, 2019, accessed November 8, 2023, <https://www.forbes.com/sites/forbestechcouncil/2019/11/15/data-is-the-new-oil-and-thats-a-good-thing/>.

⁵⁵ Adam Levy, “Scientists warned about climate change in 1965. Nothing was done”, *Knowable Magazine*, May 30, 2023, accessed November 8, 2023, <https://knowablemagazine.org/article/food-environment/2023/scientists-warned-climate-change-1965-podcast>.

⁵⁶ See Alessandra Silveira and Pedro Froufe, “From the internal market to the citizenship of rights: the protection of personal data as the jus-fundamental identity question of our times”, *UNIO – EU Law Journal*, v. 4, no. 2 (2018): 3 and 6, accessed November 9, 2023, <https://doi.org/10.21814/unio.4.2.2>.

⁵⁷ Giuseppe Lissa, “Quali prospettive per l’umano nell’era dell’intelligenza artificiale?”, in *Bioetica, diritti e intelligenza artificiale*, ed. Andrea Patroni Griffi (Milano: Mimesis Edizione, 2023), 69-70.

⁵⁸ Despite this, we are aware that the probability of reassessing the current economic trajectory is low,

In fact, Shoshana Zuboff has been very critical about this economic model of surveillance and has already defended its prohibition. In her own words: “*we can outlaw human futures markets and thus eliminate the financial incentives that sustain the surveillance dividend. This is not a radical prospect. For example, societies outlaw markets that trade in human organs, babies and slaves. In each case, we recognize that such markets are both morally repugnant and produce predictably violent consequences. Human futures markets can be shown to produce equally predictable outcomes that challenge human freedom and undermine democracy. Like subprime mortgages and fossil fuel investments, surveillance assets will become the new toxic assets*”.⁵⁹

4. Conclusion

Mass data collection is incompatible with the effective protection of personal data, the preservation of European liberal democracies and human rights, innovation and even with European economic prosperity, as it jeopardises the survival and competitiveness of the European business sector in the long-run. European companies are being used by largest technology companies to reach us, in the same way that we are used as data sources. Over time, the data economy will be increasingly advantageous to technology giants (non-European), which will be increasingly more powerful because of our data. These big companies rely on quantitative data collection models to develop AI, a strategy that will be dangerous for humanity. Europe should take a different path. To develop AI, the EU should consider adopting a qualitative rather than a quantitative data model.

In fact, the medium and long-term consequences of the creation of a European data market should be re-evaluated. The data market is certainly not the only possible economic model, just as the economic exploitation of oil was not the only possible driver of progress in the past (and even in the future). It is essential to open space for new economic visions, which would probably be in practice if the economic exploitation of data had not been allowed in the first place.

AI can be a remarkable tool for building a better world, but it will only be safer for humans if it is not powered by mass-produced data. In a data market, data protection regulation will become ineffective. Besides, it will only be a matter of time before false data is maliciously put into circulation for the most unpredictable purposes. We must anticipate what is happening to the marketplace of ideas, already polluted with falsehoods. False data can destroy, for example, individual relationships, the presumption of innocence in criminal proceedings, companies’ reputations and even alliances between states, pitting one against the other.

For all these reasons, we have serious doubts about whether the creation of a European data market is the right strategy to guarantee a democratic future for Europe. We fear that it is not. This view may be wrong (and it would be easier if it were, given what is at stake), but if it is right, the consequences of not having

considering that there is a human tendency to neglect warnings when problems are not yet visible. After all, it was also for this reason that the Titanic sank. See Michael S. Sweeney, “Despite the warning ‘Iceberg, Right Ahead!’ the Titanic was doomed”, *National Geographic*, April 11, 2022, accessed November 6, 2022, <https://www.nationalgeographic.co.uk/history-and-civilisation/2022/04/despite-the-warning-iceberg-right-ahead-the-titanic-was-doomed>.

⁵⁹ See Shoshana Zuboff, “You are now remotely controlled”, *The New York Times*, January 24, 2020, accessed November 8, 2023, <https://www.nytimes.com/2020/01/24/opinion/sunday/surveillance-capitalism.html>.

learnt all the lessons of 20th century history could be devastating. In fact, we must not forget that the Holocaust took place in Europe.⁶⁰ And there is a question that seems to echo: what would the “*Fathers of Europe*” make of the creation of a data market?

⁶⁰ Carissa Véliz has also drawn attention to the need to avoid repeating the tragedies of the last century. See Véliz, *Privacy is power*, 133-139.