DO AI SYSTEMS HAVE POLITICS?
PREDICTIVE OPTIMISATION AS A MOVE AWAY FROM LIBERALISM, THE RULE OF LAW AND DEMOCRACY

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ABSTRACT
In predictive optimisation systems, machine learning is used to predict future outcomes of interest about individuals, and these predictions are used to make decisions about them. Despite being based on pseudoscience, not working and unfixably harmful, predictive optimisation systems are still used by private companies and by governments. As they are based on the assimilation of people to things, predictive optimisation systems have inherent political properties that cannot be altered by any technical design choice: the initial choice about whether or not to adopt them is therefore decisive, as Langdon Winner wrote about inherently political technologies. The adoption of predictive optimisation systems is incompatible with liberalism and the rule of law because it results in people not being recognised as self-determining subjects, not being equal before the law, not being able to predict which law will be applied to them, all being under surveillance as 'suspects' and being able or unable to exercise their rights in ways that depend not on their status as citizens, but on their contingent economic, social, emotional, health or religious status. Under the rule of law, these systems should simply be banned.

KEYWORDS
Ethics and politics of AI, technological determinism, technological solutionism, technological somnambulism, predictive optimisation systems, AI functionality fallacy

> "Let the jury consider their verdict," the King said, for about the twentieth time that day.
> "No, no!" said the Queen. "Sentence first—verdict afterwards."
> "Stuff and nonsense!" said Alice loudly. "The idea of having the sentence first!"
> Lewis Carroll

1. INTRODUCTION

Artifacts can have politics. Despite the enduring tendency to regard them as neutral objects, they can indeed embody specific arrangements of power and authority. As Langdon Winner wrote in *Do artifacts have politics?*, there are at least two ways in which infrastructures, machines or technical systems can have political qualities.

First, "the invention, design, or arrangement of a specific technical device or system" can be "a way of settling an issue in the affairs of a particular community": the extraordinarily low overpasses on Long Island, in New York, were so designed by Robert Moses to deny access to buses and thus to the poor people and racial minorities who did not own cars; the pneumatic moulding machines introduced by Cyrus McCormick in his late-nineteenth-century Chicago factory, though expensive and inefficient, were added to the foundry simply to destroy the union of skilled workers. In these cases, the distribution of power was determined, intentionally or not, by the initial setting and by the specific design features of the device or system.

Second, there are “inherently political technologies,” that “appear to require or to be strongly compatible with particular kinds of political relationships”: a ship at sea, Plato wrote, needs a single captain and an obedient crew; the organisation of a large factory, Engels observed, requires a centralised and authoritarian government, which will tend to spread to the rest of society as a model of speed and efficiency. Thus, not only do the “things we call ‘technologies’” give shape to forms of life; sometimes the choice of a particular technology entails the choice of a particular form of political life, which cannot be changed without abandoning that technology altogether.[1]

The adoption of technological devices or systems without considering how they will reshape human activities is, in Winner’s words, “technological somnambulism”[2]: it is like entering into a series of social contracts and only checking their terms after the signing.

If we are not to proceed like sleepwalkers, we should today be thinking critically about the form of social, economic and political order embodied, *inter alia*, in each system in the family of technologies called 'artificial intelligence'.[3] The following sections consider predictive optimisation systems – a subset of machine learning (ML) systems – and the arrangements of power and authority they embody.

2. FORECASTING THE PAST

In predictive optimisation systems, machine learning is used to predict future outcomes of interest about individuals, and these predictions are used to make decisions about them.[4] In areas such as pre-trial risk assessment, predictive policing, financial services, education, social services and recruitment, these systems are being trusted to make judgments and decisions that have a major impact on people's lives: students are being assessed on the basis of their predicted grade rather than on the basis of an exam and its marking; job applicants are being hired or rejected on the basis of a prediction of their future work productivity; and police are relying on automated statistics to predict who will commit a crime or where a crime will be committed, and act accordingly.[5]

More than a decade after these systems were first introduced, the myth of the objectivity of algorithmic decisions has been debunked; the biases they reproduce, the stereotypes they perpetuate,

[1] L. Winner, *Do Artifacts Have Politics?,* “Daedalus”, 109, n. 1 (1980), pp. 121–136, also in Idem, *The whale and the reactor. A search for limits in an age of high technology*, University of Chicago Press, Chicago and London 1986, pp. 19-39.

[2] L.Winner, *Technologies as Forms of Life*, in R.S. Cohen, M.W. Wartofsky (eds.), *Epistemology, Methodology, and the Social Sciences*, D. Reidel, Dordrecht 1983, 249–263, also in Winner, *The whale and the reactor*, pp. 3-18: 9.

[3] On the term 'artificial intelligence', which I cannot dwell on here, see P.R. Lewis, S. Marsh, J. Pitt, *AI vs «AI»: Synthetic Minds or Speech Acts*, “IEEE Technology and Society Magazine”, (2021), pp. 6-13, https://ieeexplore.ieee.org/document/9445758; M. Mitchell, *Why AI is Harder Than We Think*, (2021), https://arxiv.org/abs/2104.12871; I. van Rooij, O. Guest, F.G. Adolfi, R. de Haan, A. Kolokolova, P. Rich, *Reclaiming AI as a theoretical tool for cognitive science*, August 1, 2023, https://doi.org/10.31234/osf.io/4cbuv.

[4] A. Wang, S. Kapoor, S. Barocas, A. Narayanan, *Against Predictive Optimisation: On the Legitimacy of Decision-Making Algorithms that Optimize Predictive Accuracy*, October 4, 2022, pp. 1-29, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4238015.

[5] M. Broussard, *More than a Glitch. Confronting Race, Gender, and Ability Bias in Tech*, The MIT Press, 2023.

and the harm and injustice they cause are well documented,[6] as the governments that use them themselves acknowledge.[7]

Because these systems work by automatically grouping individuals into classes based on regularities detected in the training data, and on the assumption that individuals in the same group behave in the same way, their use inevitably leads to discriminatory effects.[8] Rooted in the statistical nature of these systems, the feature of forgetting ‘margins’ is structural:[9] it is not accidental and is not due to single, technically modifiable biases. Since a person can end up on the margins of algorithmic models of normality by virtue of characteristics that are completely irrelevant to the decisions being made,[10] it comes as no surprise these automated decision-making systems often lead to harmful and absurd outcomes, with consequences that can reverberate for a long time, sometimes years, in the lives of the victims.[11]

A second myth, more persistent than the first, concerns the functionality of AI systems. When an 'artificial intelligence' system is given a particular task, it is assumed that the system is actually capable of doing it, even if the system is inadequate for the task or the task is not possible at all. To trust in the reliability of predictive optimisation systems is to commit the fallacy of AI functionality:[12] moving from the available data about a given individual to a specific prediction about that individual is tacitly assumed to be possible, as if by magic, when entrusted to an automated statistic, even if there is no scientific basis for such a move, because no causal link has been found between that data and the event or characteristic to be predicted. A “massively large and expensive computing infrastructure doing statistical analysis is” thus “discursively conferred the status of an enchanted object, closing” it “off to other forms of critique”.[13] Prediction is presented as being possible on the basis of old or new pseudosciences such as physiognomy,[14] affective computing[15] or psychography[16].

[6] C. O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*, Broadway Books, 2017; S. Umoja Noble, *Algorithms of oppression*, New York University Press, 2018; V. Eubanks, *Automating Inequality. How High-Tech Tools Profile, Police, and Punish the Poor*, St. Martin's Press, New York 2018.

[7] White House Office of Science and Technology Policy, *Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People*, October 2022, https://www.whitehouse.gov/ostp/ai-bill-of-rights.

[8] T. Numerico, *Big data e algoritmi. Prospettive critiche*, Carocci, Roma 2021.

[9] A. Birhane, E. Ruane, T. Laurent, M.S. Brown, J. Flowers, A. Ventresque, C.L. Dancy, *The Forgotten Margins of AI Ethics*, in *Conference on Fairness, Accountability, and Transparency (FAccT ’22)*, ACM, New York 2022, pp. 948–958, https://doi.org/10.1145/3531146.3533157.

[10] F. Pasquale, *New Laws of Robotics. Defending Human Expertise in the Age of AI*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, and London 2020, p. 132.

[11] A. Alkhatib, *To Live in Their Utopia: Why Algorithmic Systems Create Absurd Outcomes*, in *Conference on Human Factors in Computing Systems (CHI ’21), May 8–13, 2021, Yokohama, Japan*, ACM, New York 2021, https://ali-alkhatib.com/papers/chi/utopia/utopia.pdf.

[12] I.D. Raji, I.E. Kumar, A. Horowitz, A.D. Selbst, *The Fallacy of AI Functionality*, in *Conference on Fairness, Accountability, and Transparency (FAccT ’22), June 21–24, 2022, Seoul, Republic of Korea*, ACM, New York 2022, https://doi.org/10.1145/3531146.3533158.

[13] A. Campolo, K. Crawford, *Enchanted Determinism: Power without Responsibility in Artificial Intelligence*, “Engaging Science, Technology, and Society”, 6 (2020), pp. 1-19, https://pdfs.semanticscholar.org/28e4/f0d088c70e3821cf321ac3b5875c6c1452df.pdf.

[14] L. Stark, J. Hutson, *Physiognomic Artififlicial Intelligence*, “Fordham Intellectual Property, Media and Entertainment Law Journal”, 32, n. 4 (2022), pp. 922-978, https://ir.lawnet.fordham.edu/iplj/vol32/iss4/2.

[15] K. Crawford, *Atlas of AI. Power, Politics, and the Planetary Costs of Artificial Intelligence*, Yale University Press, New Haven and London 2021.

[16] A.G. Martínez, *The Noisy Fallacies of Psychographic Targeting*, “Wired”, March 19, 2018, https://www.wired.com/story/the-noisy-fallacies-of-psychographic-targeting/.

When predictive optimisation systems are scientifically tested, it is found that they simply do not work and that they have limitations that cannot be overcome by any technical fix.[17]

The abuse of the public's credulity seems so obvious to researchers that they have dubbed such systems 'AI snake oil'[18], in memory of the concoction of mineral oil, red pepper, beef fat, camphor, and turpentine that cowboy Clark Stanley sold to the gullible in the Wild West (with the warning to beware of imitations) as a thaumaturgical remedy for all ills.[19]

Since these systems do not work, i.e. they are not predictive, the problem of making them unbiased should seem irrelevant: at most, you would have an unbiased system that does not work.

The nonsense of decision making based on automated statistics has anyway been presented by tech companies as a problem of single and isolated biases, amendable by algorithmic fairness, i.e., by technical fulfilment. Fearing a blanket ban, Big Tech has financed, in an evident conflict of interest, a discourse on AI ethics,[20] as a regulatory capture,[21] with the aim of making a merely self-regulatory regime seem plausible.[22] The function of this discourse on AI ethics is to protect and legitimise a surveillance advertising business model. Since the framing of the discourse is determined by its function, AI ethics is peddled within the perspective of technological determinism and solutionism,[23] within the "logic of the *fait accompli*"[24]. No consideration is ever given to the possibility of not building certain systems at all, or not using them for certain purposes,[25] because "ethics discourses pre-empt questions regarding the rationale of AI development, positioning investment and implementation as inevitable and, provided ethical frameworks are adopted, laudable".[26]

AI ethics narratives tacitly assume that ML systems fulfil all non-moral requirements of ethics. That is, they assume that ML systems are endowed with the ability to act not only according to laws, but also according to representations of laws; with logical reasoning; with a genuine understanding of language; with the capacity to distinguish a causal connection from a mere correlation; and with the whole family of intuitions and reasoning procedures included in human common sense. Since ML systems do not possess any of these capabilities, which would instead be inherent in general artificial

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[17] Wang, Kapoor, Barocas, Narayanan, *Against Predictive Optimisation.* For a recent example, see A. Sankin, S. Mattu, *Predictive Policing Software Terrible at Predicting Crimes*, "The Markup", October 2, 2023, https://themarkup.org/prediction-bias/2023/10/02/predictive-policing-software-terrible-at-predicting-crimes.

[18] A. Narayanan, *How to recognize AI snake oil* (2019), https://www.cs.princeton.edu/~arvindn/talks/MIT-STS-AI-snakeoil.pdf.

[19] C. Stanley, *The Life and Adventures of the American Cow-Boy, 1897*, https://archive.org/details/F596S822CowboyImages.

[20] M. Abdalla, M. Abdalla, *The Grey Hoodie Project: Big Tobacco, Big Tech, and the threat on academic integrity*, in *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society (AIES '21), May 19–21, 2021, Virtual Event,* ACM, 2021, https://arxiv.org/abs/2009.13676v4.

[21] M. Whittaker, *The steep cost of capture*, "Interactions", 28, n. 6 (2021), pp. 50-55: 51, https://interactions.acm.org/archive/view/november-december-2021/the-steep-cost-of-capture; A. Saltelli, D.J. Dankel, M. Di Fiore, N. Holland, M. Pigeon, *Science, the endless frontier of regulatory capture*, "Futures", 135 (2022), pp. 1-14, https://doi.org/10.1016/j.futures.2021.102860.

[22] R. Ochigame, *The Invention of "Ethical AI". How Big Tech Manipulates Academia to Avoid Regulation*, "The Intercept", (2019), https://theintercept.com/2019/12/20/mit-ethical-ai-artificial-intelligence/.

[23] E. Mozorov, *To Save Everything, Click Here: The Folly of Technological Solutionism,* Public Affairs, 2013.

[24] C. Tessier, *Éthique et IA: analyse et discussion*, in O. Boissier (ed.), *CNIA 2021: Conférence Nationale en Intelligence Artificielle*, 2021, pp. 22-29: 23, https://hal-emse.ccsd.cnrs.fr/emse-03278442.

[25] D. Greene, A.L. Hoffman, L. Stark, *Better, Nicer, Clearer, Fairer: A Critical Assessment of the Movement for Ethical Artificial Intelligence and Machine Learning*, in *10. Hawaii International Conference on System Sciences (HICSS)*, 2019, https://api.semanticscholar.org/CorpusID:86793130.

[26] A. James, A. Whelan, *'Ethical' artificial intelligence in the welfare state: Discourse and discrepancy in Australian social services*, "Critical Social Policy", 42, n. 1 (2022) pp. 22-42: 37, https://journals.sagepub.com/doi/abs/10.1177/0261018320985463.

intelligence (AGI), AI ethics narratives assume that AGI already exists today. But AGI does not exist and nobody has any idea how to implement it. The goal of moralising ML systems thus implies a false anthropomorphic, science fictional conception of computer systems as having AGI or, as if by magic, equivalent performance capabilities.[27]

In recent years, 'AI ethics' narratives (and their fungible variants, such as 'value alignment' or 'algorithmic fairness' or 'AI safety' narratives) have been widely recognised as mere 'ethics washing' and regulatory capture, i.e. as a tool of distraction, to avoid legal regulation, while continuing business as usual.[28]

For all decisions that significantly affect people's lives, the only rational governance of predictive optimisation systems is the same as for any other dangerous, non-functioning product: to ban their use and sale,[29] and to consider claims of the existence of such systems for commercial purposes as misleading advertising[30]. The US Federal Trade Commission reminds companies of the latter, specifically mentioning predictive optimisation systems:

> Are you exaggerating what your AI product can do? Or even claiming it can do something beyond the current capability of any AI or automated technology? For example, we're not yet living in the realm of science fiction, where computers can generally make trustworthy predictions of human behavior. Your performance claims would be deceptive if they lack scientific support or if they apply only to certain types of users or under certain conditions.[31]

And yet, despite being based on pseudoscience, not working and unfixably harmful, predictive optimisation systems are still used by private companies and by governments.[32] Having established that they do not do what they are supposed to do (i.e. they do not predict the future of single individuals), we need to ask what they actually do, and whether what they actually do provides a reason for their widespread use.

3. FORECLOSING THE FUTURE

If predictive optimisation systems do not predict the future, what do they do? And moreover, as we should be asking for any technology, who are they doing it to and who are they doing it for?[33]

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[27] D. Tafani, *What's wrong with "AI ethics" narratives*, "Bollettino telematico di filosofia politica", (2022), pp. 1-22, https://commentbfp.sp.unipi.it/daniela-tafani-what-s-wrong-with-ai-ethics-narratives.

[28] B. Wagner, *Ethics As An Escape From Regulation. From "Ethics-Washing" To Ethics-Shopping?*' in E. Bayamlioglu, I. Baraliuc , L.A.W. Janssens, M. Hildebrandt (eds.), *Being Profiled: Cogitas Ergo Sum*, Amsterdam University Press, Amsterdam 2018, https://www.degruyter.com/document/doi/10.1515/9789048550180-016/html; J. Metcalf, E. Moss, D. Boyd, *Owning Ethics: Corporate Logics, Silicon Valley, and the Institutionalization of Ethics*, "Social Research: An International Quarterly", 82, n. 2 (2019), pp. 449-476, https://datasociety.net/wp-content/uploads/2019/09/Owning-Ethics-PDF-version-2.pdf.

[29] Accountable Tech, AI Now Institute, EPIC, *Zero Trust AI Governance*, August 2023, https://accountabletech.org/research/zero-trust-ai-governance-framework/.

[30] On the "inappropriate AI-centrity" in the framing of governance issues, see M. Veale, K. Matus, R. Gorwa, *AI and Global Governance. Modalities, Rationales, Tensions*, "Annual Review of Law and Social Science", 19 (2023), pp. 1-30, https://doi.org/10.1146/annurev-lawsocsci-020223-040749.

[31] M. Atleson, *Keep your AI claims in check*, February 27, 2023, https://www.ftc.gov/business-guidance/blog/2023/02/keep-your-ai-claims-check.

[32] See, most recently, J. Cox, *The A.I. Surveillance Tool DHS Uses to Detect 'Sentiment and Emotion'*, August 24, 2023, "404 Media", https://www.404media.co/ai-surveillance-tool-dhs-cbp-sentiment-emotion-fivecast/; G. Riccio, *Jupiter's eye on Italy: the police have their first 'pre-crime' tool*, "Futuroprossimo", June 5, 2023, https://en.futuroprossimo.it/2023/06/locchio-di-giove-sullitalia-la-polizia-ha-il-suo-primo-strumento-pre-crimine/.

[33] C. Doctorow, *The Internet Con. How to Seize the Means of Computation*, Verso, 2023.

The answer to the first question is well known from classical antiquity: prophecies tend to be self-fulfilling, if one lends faith to the oracles that issue them.[34] Predictive optimisation systems produce what they're supposed to predict: if gender predicts lower pay and skin colour predicts the likelihood of being stopped by the police, then in the transition from prediction to decision such social profiling becomes self-fulfilling, legitimising the biases embedded in the initial statistical description.[35] "Algorithms" – as Elena Esposito writes – "see the future that will be there as a result of their intervention".[36]

Predictive optimisation systems are grounded in the tendency, characteristic of Western sciences, "to control, manipulate and formalise the world around us" and in "the deep quest for certainty, stability, order and predictability". Such a reductionist approach equates human beings with "stationary entities that can be captured in neat taxonomies", rather than "active, dynamic, historical, social, cultural, gendered, politicized, and contextualized organisms".[37]

Since the idea of automating ambiguity is ill-conceived,[38] what predictive optimisation systems achieve is a transition "from ambiguity to absurdity": a model of the past is projected into the real world, restricting future possibilities and forcing people to adapt to that model, even if they don't fit into the "algorithmic imaginations" of the system.[39]

By denying the constitutive uncertainty of the future and pretending that the future is already written and legible,[40] the burden of its uncertainty is shifted onto the most vulnerable. People subject to measurement and prediction do not decide, nor do they know, what choices were made about the training dataset – which is a cultural and political construct –[41] or what choices were made in the optimisation phase.[42] These decisions were made by others. In this sense, prediction is an extraction of discretionary power, that keeps those subject to it in an "unwelcome uncertainty".[43]

Now that we have seen what predictive optimisation systems do and who they do it to, we can look at who they do it for. Predictive products are at the heart of the surveillance advertising business model of the intellectual monopolies[44] – which have given rise to contemporary "technofeudalism" –

[34] M.C. Pievatolo, *Sulle spalle dei mercanti? Teledidattica e civiltà tecnologica*, "Bollettino telematico di filosofia politica", (2022), § 2.2, p. 18, https://commentbfp.sp.unipi.it/sulle-spalle-dei-mercanti-teledidattica-e-civilta-tecnologica; M. Luksch, *Prediction*, in N.B. Thylstrup, D. Agostinho, A. Ring, C. D'Ignazio, K. Veel (eds.), *Uncertain Archives. Critical Keywords for Big Data*, MIT Press, 2021, pp. 403-417.

[35] D. McQuillan, *Resisting AI. An Anti-fascist Approach to Artificial Intelligence*, Bristol University Press, Bristol 2022.

[36] E. Esposito, *Unpredictability*, in *Uncertain Archives. Critical Keywords for Big Data*, pp. 533-539: 535.

[37] A. Birhane, *Automating Ambiguity: Challenges and Pitfalls of Artificial Intelligence*, PhD thesis, 2022, pp. 32, 36, https://arxiv.org/pdf/2206.04179.pdf. On the birth of the Western reductionistic "devotion to breaking down things and energies and practices and perceptions into uniform parts and counting them", see A.W. Crosby, *The Measure of Reality. Quantification in Western Europe, 1250-1600*, Cambridge University Press, Cambridge 1996.

[38] Birhane, *Automating Ambiguity*, p. 30.

[39] Alkhatib, *To Live in Their Utopia*, p. 8.

[40] S.-H. Hong, *Predictions without futures*, "History and Theory", 61, n. 3 (2022), pp. 371-390, https://doi.org/10.1111/hith.12269; E. Esposito, *The Future of Prediction: From Statistical Uncertainty to Algorithmic Forecasts,* in Idem, *Artificial Communication*, The MIT Press, 2022, https://artificialcommunication.mitpress.mit.edu/pub/m8xpxiru.

[41] M. Pasquinelli, V. Joler, *The Nooscope manifested: AI as instrument of knowledge extractivism*, "AI & Society", 36 (2021), pp. 1263–1280, https://doi.org/10.1007/s00146-020-01097-6.

[42] L. Amoore, *Cloud Ethics. Algorithms and the Attributes of Ourseves and Others*, Duke University Press, Durham and London 2020, pp. 115-119.

[43] S.-H. Hong, *Prediction as extraction of discretion*, "Big Data & Society", 10, n. 1 (2023), https://doi.org/10.1177/20539517231171053.

[44] U. Pagano, *The Crisis of Intellectual Monopoly Capitalism*, "Cambridge Journal of Economics", 38 (2014), pp. 1409-1431, https://ssrn.com/abstract=2537972; C. Durand, C. Rikap, *Intellectual monopoly capitalism—challenge of our times*, "Social Europe", October 5, 2021, https://www.socialeurope.eu/intellectual-monopoly-capitalism-challenge-of-our-times.

[45] in a "commodity market that trades in human futures".[46] In addition to algorithms, ML systems require a massive computational infrastructure, and access to constantly updated data streams, which only Big Tech can afford. These systems, which are usually referred to as 'AI', are so deeply intertwined with Big Tech's surveillance business model that AI can be described as "a derivative of surveillance".[47]

Since ML systems are able to perform, with the brute force of automated statistics, certain limited and specific tasks that previously could only be performed by humans, large technology companies have seized the opportunity for an unlimited expansion of 'intelligent' products and services. If a ML system can translate what we write, why not argue that it can also understand it? If it can identify a person or correctly classify certain somatic features, why not argue that it can also recognise a thief, a terrorist or a good worker by their external features? Why not turn a statistical system into an oracle capable of predicting, thanks to the magic dust of 'artificial intelligence', the future crimes of any individual defendant or the future academic performance of any individual student?[48]

The practice of exaggerating the alleged performance of AI systems (*AI hype*) by presenting examples drawn from the future or science fiction, with a logical fallacy, exploits the human tendency to anthropomorphise technological objects. It is an act of persuasion, mostly for marketing purposes, and an exercise of power, since the decision of a machine learning system allows no explanation and no appeal.[49] Since ML systems are not transparent, the introduction of any human control can only serve to legitimise the use of systems that are actually out of control. The role of the human being can then only be to provide "human washed"[50] predictions or, in the case of proven absurdities or injustices, a scapegoat.[51]

The fact that predictive optimisation fails on its own terms, i.e. fails to achieve its stated goals,[52] is irrelevant to Big Tech, whose business model rests on selling the false promise of individual predictions based on algorithmic profiling.[53] Because these systems are not able to predict, but are definitely able to manipulate and control, excluding any alternative futures to those predicted, they work well enough to make people mistake control or manipulation for prediction:

Who among us can predict the future? Who would dare to? The answer to the first question is no one, really, and the answer to the second is everyone, especially every government and business on the planet. This is what

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[45] Y. Varoufakis, *Technofeudalism. What Killed Capitalism*, Vintage Publishing, 2023.

[46] S. Zuboff, *Surveillance Capitalism or Democracy? The Death Match of Institutional Orders and the Politics of Knowledge in Our Information Civilization*, "Organization Theory", 3 (2022), pp. 1-79, https://doi.org/10.1177/26317877221129290.

[47] M. Whittaker, *A Message from Signal's New President*, September 6, 2022, https://signal.org/blog/announcing-signal-president/; *'Open Secrets': An Interview with Meredith Whittaker*, in T. Phan, J. Goldenfein, D. Kuch, M. Mann (eds.), *Economies of Virtue: The Circulation of 'Ethics' in AI*, Institute of Network Cultures, Amsterdam 2022, pp. 140-152: 145, https://networkcultures.org/blog/publication/economies-of-virtue-the-circulation-of-ethics-in-ai/; P.R. Kalluri, W. Agnew, M. Cheng, K. Owens, L. Soldaini, A. Birhane, *The Surveillance AI Pipeline*, 2023, https://doi.org/10.48550/arXiv.2309.15084.

[48] Wang, Kapoor, Barocas, Narayanan, *Against Predictive Optimisation.*

[49] G. Musa, *Echoes of myth and magic in the language of Artificial Intelligence*, "AI & SOCIETY", 35, n. 4 (2020), https://link.springer.com/article/10.1007/s00146-020-00966-4; J. Stilgoe, *Who's Driving Innovation? New Technologies and the Collaborative State*, Palgrave Macmillan, Cham 2020.

[50] H. Matsumi, D.J. Solove, *The Prediction Society: Algorithms and the Problems of Forecasting the Future*, January 24, 2024, GWU Legal Studies Research Paper No. 2023-58, https://ssrn.com/abstract=4453869.

[51] B. Green, *The flaws of policies requiring human oversight of government algorithms*, "Computer Law & Security Review", 45 (2022), https://www.sciencedirect.com/science/article/pii/S0267364922000292.

[52] Wang, Kapoor, Barocas, Narayanan, *Against Predictive Optimisation*.

[53] C. Doctorow, *How to Destroy Surveillance Capitalism*, "OneZero", (2020), https://onezero.medium.com/how-to-destroy-surveillance-capitalism-8135e6744d59.

that data of ours is used for. Algorithms analyze it for patterns of established behavior in order to extrapolate behaviors to come, a type of digital prophecy that's only slightly more accurate than analog methods like palm reading. Once you go digging into the actual technical mechanisms by which predictability is calculated, you come to understand that its science is, in fact, anti-scientific, and fatally misnamed: predictability is actually manipulation. A website that tells you that because you liked this book you might also like books by James Clapper or Michael Hayden isn't offering an educated guess as much as a mechanism of subtle coercion.[54]

As Edward Snowden revealed, predictive optimisation systems are useful not only to the companies that sell them and those that buy them, but also to governments. The latter could enforce anti-trust laws against monopolies, since such laws – as an antidote to concentrated unchecked private economic power competing with public power – are a necessary part of a functioning democracy.[55] And they could put an end to "the secret massive-scale extraction of human data", legally equating it with theft,[56] even when it comes disguised as electronic contracts.[57] In this way, they would protect people instead of scrambling to protect data,[58] and they would prevent private despotic powers instead of futilely trying to tame these autocrats by regulating them.[59]

Instead, governments have chosen to normalise surveillance and to make use of surveillance and predictive optimisation systems,[60] with a shift "from general agreement over the incompatibility of surveillance practices with democracy to greater acceptance of those practices when rebranded as tools to promote customisation, economic growth or public healt".[61] When used by governments, these systems provide an "upgrade" of state bureaucracy,[62] ensuring "rationalized unaccountability", apparent neutrality and objectivity, and moral distance from the consequences of the automated decisions.[63]

Such an alliance "between traditional government and the system of 'private' governance represented by the modern business corporation" results in a "managed democracy" or "antidemocracy", with "a double transmutation, of corporation and state", the former becoming more political and the latter more market-oriented.[64] When traditional state functions are carried out by private mechanisms, they take on the authoritarian character of 'private government' – according to

[54] E.J. Snowden, *Permanent record*, Macmillan, London 2019.
[55] T. Wu, *The Curse of Bigness. Antitrust in the New Gilded Age*, Columbia Global Reports, New York 2018.
[56] Zuboff, *Surveillance Capitalism or Democracy?*, pp. 54-56.
[57] B. M. Frischmann, E. Selinger, *Re-engineering humanity*, Cambridge University Press, Cambridge 2018, pp. 60-80.
[58] E.M. Renieris, *Beyond data: reclaiming human rights at the dawn of the metaverse*, The MIT Press, Cambridge, Massachusetts 2023.
[59] On the awareness in the United States at the time of the first anti-trust laws that "what was at stake in keeping markets open—and keeping them free from industrial monarchs—was freedom", see L.M. Khan, *Amazon's Antitrust Paradox*, "The Yale Law Journal", 126, n. 3 (2017), pp. 710-805: 740, https://www.yalelawjournal.org/pdf/e.710.Khan.805_zuvfyyeh.pdf .
[60] *Seizing the means of computation How popular movements can topple Big Tech monopolies. Interview with Cory Doctorow*, in N. Buxton (ed.), *State of Power 2023. Digital Power,* Transnational Institute, 2022, https://www.tni.org/en/publication/stateofpower2023.
[61] M. Padden, *The transformation of surveillance in the digitalisation discourse of the OECD: a brief genealogy*, "Internet Policy Review", 12, n. 3 (2023), https://doi.org/10.14763/2023.3.1720; W. Hartzog, E. Selinger, J. Gunawan, *Privacy Nicks: How the Law Normalizes Surveillance*, "Washington University Law Review", 101 (2024), http://dx.doi.org/10.2139/ssrn.4384541.
[62] McQuillan, *Resisting AI*, p. 60.
[63] M. Vesa, J. Tienari, *Artificial intelligence and rationalized unaccountability. Ideology of the elites?*, "Organization", 29, n. 6 (2022), pp. 1133–1145, https://doi.org/10.1177/1350508420963872.
[64] S.S. Wolin, *Democracy Incorporated. Managed Democracy and the Specter of Inverted Totalitarianism*, Princeton University Press, Princeton 2008, pp. xiii, 156, 238 f.

the logic that governs the relationship between employers and their workers in private companies – with arbitrary and unaccountable power over their subjects.[65]

Now that we have examined what predictive optimisation systems do, to whom they do it and for whom they do it, we can consider what form of political life they give rise to.

4. PREDICTIVE OPTIMISATION SYSTEMS AND THEIR POLITICS

Predictive optimisation systems are inherently conservative, and the decision to use such systems amounts to a political stance in favour of the *status quo*. It is, in fact, a decision to replicate the past by automating – and at the same time masking and reinforcing – inequalities, discrimination and power asymmetries.[66] Since "relatively stable patterns and established conventions and norms are charged with social, political, and power asymmetries that benefit or disadvantage groups and individuals depending on their position in society", when a ML system traces these patterns and takes them "as 'ground truth' from which to model the future, it brings forth a machine-determined world that resembles the past".[67]

A second political feature of predictive optimisation systems is that they are deeply intertwined with biological essentialism and determinism. It is no accident that physiognomy, race science and eugenics are associated with such systems: "it is not an anomaly but a symptom of something deeper". What they have in common is the "ideological premise of biology as destiny".[68] The classifications and labelling of personal data that underlie such systems naturalise and reify the existence of the same categories that are used to classify: assigning phenomena to a category "is in turn a means of reifying the existence of that category"; then, when the classifications are used as a basis for predicting social outcomes at the individual level, the same taxonomies "naturalize a particular ordering of the world", producing effects that seem to justify their original ordering.[69] The use of systems to identify good workers, liars or criminals by analysing their faces[70] – ignoring for the moment the fact that these systems do not work – cannot be dissociated from physiognomy and cannot be reconciled with laws protecting citizens from age, gender or racial discrimination, because such discrimination is inherent in the operation of such systems.

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[65] E. Anderson, *Private government. How employers rule our lives (and why we don't talk about it)*, Princeton University, Princeton 2017, pp. 44-45; Z. Teachout, *Break 'em up. Recovering our freedom from big ag, big tech, and big money*, All Points Books, New York 2020.

[66] Numerico, *Big data e algoritmi*, pp. 173-177. McQuillan, *Resisting AI*, p. 43.

[67] Birhane, *Automating Ambiguity*, p. 42.

[68] McQuillan, *Resisting AI*, pp. 64-71, 86-91. E. Torres, *Longtermism and Eugenics: A Primer*, Febrary 4, 2023, https://www.truthdig.com/articles/longtermism-and-eugenics-a-primer/.

[69] K. Crawford, *Atlas of AI. Power, Politics, and the Planetary Costs of Artificial Intelligence*, Yale University Press, New Haven and London 2021, pp. 133, 139.

[70] D. Harwell, *A face-scanning algorithm increasingly decides whether you deserve the job*, "Washington Post", November 6, 2019, https://www.washingtonpost.com/technology/2019/10/22/ai-hiring-face-scanning-algorithm-increasingly-decides-whether-you-deserve-job/; N. Lomas, *"Orwellian" AI lie detector project challenged in EU court*, "Tech Crunch", February 5, 2021, https://techcrunch.com/2021/02/05/orwellian-ai-lie-detector-project-challenged-in-eu-court/; S. Fussel, *An Algorithm That 'Predicts' Criminality Based on a Face Sparks a Furor*, "Wired", June 24, 2020, https://www.wired.com/story/algorithm-predicts-criminality-based-face-sparks-furor/.

Predictive optimisation mirrors the political logic of the neoliberal systems[71]: it is "desocialised and dehistoricised at its roots",[72] it reflects the supremacy of instrumental rationality and it is affected by the "solutionistic bias"[73] that turns every social or political issue into a technical one, since it "embeds the idea that the way to solve a problem is to find an objective to optimize on"[74]. The result of using predictive optimisation systems is that winners take all.[75] Correlatively, the tendency to produce a future in which today's weakest are crushed and punished is consistent with the tendency of neoliberalism to criminalize and further punish those who are already disempowered, poor and deprived of social safety nets, with the ritualised repetition of administrative violence that prevents criticism and preserves the status quo.[76]

The main political characteristic of predictive optimisation systems is their incompatibility with liberalism and the rule of law: their use is tantamount to reducing citizens to mere objects, incapable of self-determination; it annihilates the principle of the distribution of power – and specifically the unicity and individuality of the legal subject, the legal equality of individual subjects, the certainty and non-retroactivity of the law – and the principle of the differentiation of power, i.e., the functional differentiation of the legal system from religious, ethical and economic systems[77].

The use of predictive optimisation systems destroys the foundations of liberalism: not only is individual freedom not valued, it is denied tout court. Predictive optimisation assumes that people are incapable of self-determination, that they have no agency.[78] Claiming to be able to predict human behaviour as precisely as one can predict that the milk in the fridge will go bad is tantamount to treating people as things. It denies the distinction between persons and things, i.e. between one who has rights, and is therefore a subject of the legal system, and one on which rights are exercised, and is therefore an object. This feature of treating people as things is a constitutive characteristic of predictive optimisation systems: the political qualities of such systems are therefore inherent and cannot be altered by any technical design choice.[79] "The initial choice about whether or not to adopt" these systems is therefore "decisive", as Langdon Winner wrote about inherently political technologies: there are "no alternative physical designs or arrangements that would make a significant difference".[80]

The unicity and individuality of the legal subject, i.e. its capacity to be, in principle, a holder of rights, is lost as individuals are reduced to bundles of data. Predictive optimisation systems are based

[71] 'Neoliberalism' is understood here as it is defined in D. Colombo L. Gallino, E. Gargiulo, *Come il neoliberismo arrivò in Italia*, "Jacobin Italia", March 26, 2022, https://jacobinitalia.it/come-il-neoliberismo-arrivo-in-italia/, "as a universal ideology which affirms that any sector of society, any individual within it, and ultimately the whole of society as the sum of the two previous elements, can function better, cost less, have fewer problems, be more effective and efficient if it is governed at all times by the principles of economic and instrumental rationality". On the institutions and legal norms required to bring the neoliberal order into being, see Q. Slobodian, *Globalists. The End of Empire and the Birth of Neoliberalism*, Harvard University Press, Cambridge, Massachusetts 2018; K. Pistor, *The Code of Capital. How the Law Creates Wealth and Inequality*, Princeton University Press 2019. I am grateful to anonymous Reviewer 2 of an earlier version of this article for his comments on neoliberalism.

[72] P. Bourdieu, *The essence of neoliberalism*, "Le Monde diplomatique", December 1998, https://mondediplo.com/1998/12/08bourdieu.

[73] E. Morozov, *The True Threat of Artificial Intelligence*, "The New York Times", June 30, 2023, https://www.nytimes.com/2023/06/30/opinion/artificial-intelligence-danger.html.

[74] McQuillan, *Resisting AI*, p. 15.

[75] A. Giridharadas *Winners take all. The elite charade of changing the world*, Alfred A. Knopf, New York 2018.

[76] W. Davies, *The New Neoliberalism*, "New Left Review", 101 (2016), https://newleftreview.org/II/101/william-davies-the-new-neoliberalism; V. Eubanks, *Automating Inequality*.

[77] On the principles which are characteristic of the rule of law, see D. Zolo, *The Rule of Law: A Critical Reappraisal*, in P. Costa, D. Zolo (eds.), *The Rule of Law. History, Theory and Criticism*, Springer, Dordrecht 2007, pp. 3-71: 7.

[78] Matsumi, Solove, *The Prediction Society*.

[79] I thank Reviewer 1 of an earlier version of this article for his comments, which made me realise the need to make this crucial point explicit.

[80] Winner, *The whale and the reactor*, p. 38.

on a surveillance regime. They are an emanation of this regime and would not be possible without it. From digital to physical infrastructure,[81] from thermostats to televisions to cars,[82] everything is used to spy on and label individuals according to hundreds of thousands of variables (at least 650,000, according to a recent paper)[83] and collect this so-called "data", which is shared with governments and sold by data brokers.[84] Predictive optimisation implies a disassembling of the legal subjectivity, since "data extraction latches on always partial parts of ourselves (any kind of contingent behavior that can be extracted) to then reassemble those parts following ever-changing criteria".[85]

The legal equality of individuals - whereby all individuals are equal before the law and the legal consequences of legally equivalent acts are the same – is denied when using predictive optimisation systems, as their output is derived from a model that classifies individuals into different groups on the basis of labels that do not relate to the case in question.

Even legal certainty, which excludes the retroactivity of the law and implies the possibility, in principle, of predicting which decisions affecting us will be taken in the future by the powers of the state, is being cancelled out by the application of predictive optimisation systems to areas such as justice, education or social services.[86] As Alexander Campolo and Katia Schwerzmann write, because "the principles of prediction or classification are implicit, we can never know what parts of our behaviors, characteristics, or identities might have caused us to be associated with a certain output category or label".[87] Although police and citizens might share a common understanding of the definition of 'crime', 'reasonable suspicion' and 'criminal', the use of predictive policing systems leads to people being stopped by the police for reasons they do not know in advance and which cannot be explained to them at all, since any possible spurious correlation can result in the response of 'suspicious'. In another sense, the category of 'suspects', i.e. people to be closely watched, always encompasses the entire citizenry, just as it does in totalitarian states, as Hannah Arendt observed. There, too, with the aim of total domination, "each and every person" is "reduced to a neverchanging identity of reactions, so that each of these bundles of reactions can be exchanged at random for any other".[88]

Because the data used to classify individuals refer to every sphere or aspect of people's lives (religious, professional, health, sexual, economic, political, demographic, legal), the use of predictive optimisation systems makes the functional differentiation of the legal systems from religious, ethical and economic systems collapse. In the totalitarian logic of "total integration", according to which all personal data can and should be considered in any kind of prediction (e.g. "all data is insurance

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[81] Teachout, *Break 'em up*, p. 59.

[82] J. Caltrider, M. Rykov, Z. MacDonald, *It's Official: Cars Are the Worst Product Category We Have Ever Reviewed for Privacy*, September 6, 2023, https://foundation.mozilla.org/en/privacynotincluded/articles/its-official-cars-are-the-worst-product-category-we-have-ever-reviewed-for-privacy/.

[83] J. Keegan, J. Eastwood, *From "Heavy Purchasers" of Pregnancy Tests to the Depression-Prone: We Found 650,000 Ways Advertisers Label You*, "The Mark Up", June 8, 2023, https://themarkup.org/privacy/2023/06/08/from-heavy-purchasers-of-pregnancy-tests-to-the-depression-prone-we-found-650000-ways-advertisers-label-you.

[84] C, Véliz, *Privacy is power. Why and How You Should Take Back Control of Your Data*, Bantam Press, 2020, p. 59; *Readout of White House Roundtable on Protecting Americans from Harmful Data Broker Practices*, August 16, 2023, https://is.gd/osBb7b.

[85] A. Campolo, K. Schwerzmann, *From rules to examples: Machine learning's type of authority*, "Big Data & Society", (2023), pp. 1-13, https://doi.org/10.1177/20539517231188725. See also K. Geddes, *The Death of the Legal Subject*, "Vanderbilt Journal of Entertainment and Technology Law", 25, n. 1 (2023), pp. 1-52, https://scholarship.law.vanderbilt.edu/jetlaw/vol25/iss1/1/.

[86] W. Reijers, L. Orgad, P. de Filippi, *The rise of cybernetic citizenship*, "Citizenship Studies", 27, n. 2 (2023), pp. 210-229, https://doi.org/10.1080/13621025.2022.2077567; S. Greenstein, *Preserving the rule of law in the era of artificial intelligence (AI)*, "Artificial Intelligence and Law", 30 (2022), pp. 291–323, https://doi.org/10.1007/s10506-021-09294-4.

[87] Campolo, Schwerzmann, *From rules to examples*, p. 11.

[88] H. Arendt, *The Origins of Totalitarianism* (1958^2), World Publishing Company, Cleveland 1962, pp. 430, 438.

data"),[89] decisions will be based on correlations between "audience segments" such as being prone to depression, "affluent Millennials" or "heavy purchasers" of pregnancy test kits, attending places of worship, having an interest in brain tumours or supporting death penalty.[90] The possibility of exercising rights thus depends from shifting and inscrutable status conditions, in a new, opaque and dynamic form of *ancien régime.*[91] With such a collapse of the spheres of justice,[92] it is not surprising that the winners take all.

Empowering predictive optimisation systems to define individuals, groups, social practices and political events is anti-democratic: what is and what is not a family, a dangerous gathering or a trustworthy migrant at the border is indeed not decided by the people, but determined, instead, by the mechanisms of the system, on whose probabilistic output depends who will be considered as such and treated accordingly.[93]

Considering all this, one cannot but agree with those who observe that the use of ML systems for decision-making purposes in areas relevant to people's lives is tantamount to the creation, through administrative decisions, of "almost human rights-free zones".[94] The development, sale and use of predictive optimisation systems is exploiting a "legal bubble",[95] ie, it is taking place in violation of legally protected rights, betting on a subsequent legal rescue in the name of the inevitability of technological innovation[96].

5. CONCLUSION

Predictive optimisation systems have inherent political properties that cannot be altered by any technical design choice.

The adoption of predictive optimisation systems is a departure from liberalism, the rule of law and democracy, as it results in people being treated as things, not being recognised as subjects capable of self-determination, not being equal before the law, not being able to predict which law will be applied to them, all being under surveillance as 'suspects' and being able or unable to exercise their rights in ways that depend not on their status as citizens, but on their contingent economic, social, emotional, health or religious status.

Under the rule of law, these systems should simply be banned. Requiring only a risk impact assessment – as in the European Artificial Intelligence Act –[97] is like being satisfied with asking

[89] J. Sadowski, *Total life insurance: Logics of anticipatory control and actuarial governance in insurance technology*, "Social Studies of Science" (2023), pp. 1-26, https://doi.org/10.1177/03063127231186437, pp. 9-10.

[90] Keegan, Eastwood, *From "Heavy Purchasers" of Pregnancy Tests to the Depression-Prone*.

[91] I owe the idea of a 'dynamic ancien régime' to Maria Chiara Pievatolo, to whom I am grateful for having reviewed an earlier version of this article.

[92] Pasquale, *New Laws of Robotics*, pp. 139-140.

[93] C. Doctorow, *Science fiction as a weapon against the metaverse: "We are not free and we do not know it"*, "The Limited Times", June 21, 2023, https://newsrnd.com/life/2023-06-21-cory-doctorow--science-fiction-as-a-weapon-against-the-metaverse--%22we-are-not-free-and-we-do-not-know-it%22.S1-HjSLluh.html; L. Amoore, *Cloud Ethics. Algorithms and the Attributes of Ourselves and Others*, Duke University Press, Durham and London 2020, p. 4; S. Rosengrün, *Why AI is a Threat to the Rule of Law*, "Digital Society", 1 (2022), pp. 1-15, https://doi.org/10.1007/s44206-022-00011-5.

[94] P. Alston, *The Digital Welfare State – Report of the Special Rapporteur on Extreme Poverty and Human Rights*, UNGA A/74/493, October 11, 2019, https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/74/493&Lang=E.

[95] M. Giraudo, 'Legal Bubbles', *Encyclopedia of Law and Economics*, Springer, 2022, https://www.researchgate.net/publication/357702553.

[96] M. Giraudo, E. Fosch-Villaronga, G. Malgieri, *Competing Legal Futures*, "German Law Journal", forthcoming, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4499785.

[97] Artificial Intelligence Act, P9_TA(2024)0138, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=EP:P9_TA(2024)0138.

whether a despot is benevolent or malevolent: freedom, understood as the absence of domination,[98] is lost whatever the answer. Under the AI ACT's harm approach to fundamental rights impact assessments, fundamental rights can be violated with impunity as long as there is no foreseeable harm. As Mireille Hildebrandt points out, "protecting a right is protecting against the violation of the right" and "harm is NOT a condition for the violation of a fundamental right".[99]

Perhaps as a result of the "lobbying ghost in the machine" of regulation,[100] the AI Act reduces technology policy to "a technocratic exercise of calculating risks", as if technological change reflected "the inevitable unfolding of scientific progress, rather than human choice".[101]

Actually, in the face of any technological system, it is still up to us to ask, as Joseph Weizenbaum suggested, "whether such systems can be used by anybody except by governments and very large corporations and whether such organizations will not use them mainly for antihuman purposes".[102]

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[98] P. Pettit, *Just Freedom. A Moral Compass for a Complex World*, W.W. Norton & Company, New York and London 2014.

[99] M. Hildebrandt, *Why the risk to a right is not about harm but about violation*, ERA Annual DP Conference 2024, https://www.linkedin.com/posts/mireillehildebrandt_the-risk-approach-to-fundamental-rights-activity-7176848543209422848-Hh9e.

[100] Corporate Europe Observatory, *The lobbying ghost in the machine. Big Tech's covert defanging of Europe's AI Act*, February 23, 2023, https://corporateeurope.org/en/2023/02/lobbying-ghost-machine.

[101] P. van Zwanenberg, *The Unravelling of Technocratic Orthodoxy? Contemporary knowledge politics in technology regulation*, in I. Scoones, A. Stirling (eds.), *The Politics of Uncertainty. Challenges of Transformation*, Routledge, London 2020, pp. 58-72: 59.

[102] J. Weizenbaum, *On the Impact of the Computer on Society*, "Science", 176, n. 4035 (1972), pp. 609-614, https://www.jstor.org/stable/1734465; J. Stilgoe, *We need a Weizenbaum test for AI*, "Science", 381, n. 6658 (2023), https://www.science.org/doi/full/10.1126/science.adk0176.