ARTIFICIAL INTELLIGENCE AND HEALTH CARE: REVIEWING THE ALGORITHMIC ACCOUNTABILITY ACT IN LIGHT OF THE EUROPEAN ARTIFICIAL INTELLIGENCE ACT

Clelia Casciola*

INTRODUCTION

In 2015, British theoretical physicist Stephen Hawking commented: "Computers will overtake humans with AI . . . within the next 100 years. When that happens, we need to make sure the computers have goals aligned with ours."[1] Stephen Hawking's words suggest a science-fiction reality and a world in which robots possessing human-like features, such as the ability to think, would live alongside humans and even overtake them. Hawking's words highlight the relevance that computers play, and will continue to play, in our society. These words are interesting because they raise significant questions about Artificial Intelligence (AI) and new technologies in general. To what extent do we want to allow technological development? And should

* Clelia Casciola is a Juris Doctor Candidate, Class of 2023, at Vermont Law School. Clelia received her Bachelor of Arts degree in International Affairs, with a Minor in Philosophy, from John Cabot University, Rome (Italy).

1. Lisa Eadicicco, *In the Next 100 Years 'Computers Will Overtake Humans' and We Need to Be Prepared, Says Stephen Hawking*, INSIDER (May 13, 2015), https://www.businessinsider.com/stephen-hawking-on-artificial-intelligence-2015-5.

we control and regulate this technological advancement to ensure that it aligns with human goals?

In recent years, legislators and policymakers around the world have struggled with these questions. On the one hand, they recognize the positive effects AI can have on the economy; on the other hand, they recognize the negative effects that AI can have on humans if left unchecked.[2] For years, the European Union (EU) has been a strong advocate of AI development with respect to the legal and societal values that it upholds.[3] The recent Proposal on AI, the Artificial Intelligence Act,[4] is an attempt by the European Union and its members to deal with AI-related issues while ensuring research and development (R&D) of such technologies.[5] One of the main issues that the Proposal tries to prevent is algorithmic bias and discrimination that AI systems can produce.[6]

Similarly, the United States has attempted to pass legislation at the federal level to ensure that AI systems work in ways that neither harm nor discriminate against consumers.[7] For instance, the Algorithmic Accountability Act of 2019 specifically tackles the issue of algorithmic bias and discrimination.[8] Algorithmic bias and discrimination can occur in

---

2. *See* discussion *infra* Part I.A.

3. *See* Kelvin Chan, *EU Proposes Rules for Artificial Intelligence to Limit Risks*, AP NEWS (Feb. 19, 2020), https://apnews.com/article/artificial-intelligence-technology-business-europe-ursula-von-der-leyen-19ec99f8a970fe14a99a84d52017ec22 (presenting EU plans and projects for AI legislation with a focus on human rights and interests). *See generally Why Do We Need the Charter?*, EUR. COMM'N, https://ec.europa.eu/info/aid-development-cooperation-fundamental-rights/your-rights-eu/eu-charter-fundamental-rights/why-do-we-need-charter_en (last visited Dec. 4, 2022) (explaining that "pluralism, non-discrimination, tolerance, justice, solidarity and equality" are basic principles of the European Union and that the EU Charter of Fundamental Rights represents these values).

4. *Commission Proposal for a Regulation of the European Parliament and of the Council (Artificial Intelligence Act)*, COM (2021) 206 final (Apr. 21, 2021) [hereinafter *Artificial Intelligence Act*].

5. *See* discussion *infra* Part I.C. The European Union is an international organization that includes twenty-seven country members and that governs common economic, security, and social policies. *European Union*, ENCYC. BRITANNICA, https://www.britannica.com/topic/European-Union (last updated Dec. 4, 2022). All country members have representatives in EU institutional bodies, such as the European Commission. *The Commissioners*, EUR. COMM'N, https://ec.europa.eu/commission/commissioners/2019-2024_en (last visited Dec. 4, 2022). *See also European Parliament*, EUR. UNION, https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/european-parliament_en (last visited Dec. 4, 2022) (explaining that the EU Parliament is another EU institution and EU citizens directly elect members of the Parliament from their home countries).

6. *See* discussion *infra* Part I.C.

7. Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong. (2019); S. 1108, 116th Cong. (2019). In February 2022, U.S. legislators reintroduced the Bill as Algorithmic Accountability Act of 2022, H.R. 6580, 117th Cong. (2022); S. 3572, 117th Cong. (2022).

8. H.R. 2231. *See* discussion *infra* Part III.

different AI systems used in a variety of industries.[9] The health care industry is one. Studies have shown that in the health care industry, certain AI systems used in management programs can have discriminatory effects on patients.[10] However, as of today, Congress has not passed any legislation on this issue.

This Note argues that the U.S. Congress should enact a comprehensive legislation to prevent the use of AI systems built on algorithmic biases, specifically in the health care industry, by expanding on the Algorithmic Accountability Act of 2019 and by looking at the EU Artificial Intelligence Act as an example. Part I provides an overview on AI economic benefits, ethical concerns, and AI discrimination in the health care industry. It also presents the legal and policy landscape of AI in the European Union and the United States. Part II analyzes specific articles from the EU Artificial Intelligence Act that can affect AI systems in industries like health care. Part III analyzes the United States' attempt to enact legislation at the federal level by focusing on the 2019 Algorithmic Accountability Act. Part III also compares the United States' Bill to the European Union's Proposal in light of AI discrimination in health care. This section critically addresses the different arguments against the Algorithmic Accountability Act and describes solutions to those arguments based on the European Union's Proposal. Finally, Part III briefly addresses the Algorithmic Accountability Act of 2022.

I. BACKGROUND

Today, different industries develop and employ AI systems.[11] The widespread use of these technologies has raised questions about the positive

---

9. Christina Pazzanese, *Ethical Concerns Mount as AI Takes Bigger Decision-Making Role in More Industries*, HARV. GAZETTE (Oct. 26, 2020), https://news.harvard.edu/gazette/story/2020/10/ethical-concerns-mount-as-ai-takes-bigger-decision-making-role/.

10. *See* discussion *infra* Part I.B.

11. In the 1950s, John McCarthy defined AI as "the science and engineering of making intelligent machines." *AI in Law: Definition, Current Limitations and Future Potential*, LEGAL TECH. BLOG (Mar. 12, 2017), https://legal-tech-blog.de/ai-in-law-definition-current-limitations-and-future-potential; Christopher Manning, *Artificial Intelligence Definitions*, STAN. UNIV. HUMAN-CENTERED AI (Sept. 2020), https://hai.stanford.edu/sites/default/files/2020-09/AI-Definitions-HAI.pdf. John McCarthy was one of the pioneers in the AI field. *AI in Law: Definition, Current Limitations and Future Potential*, *supra* note 11. The Oxford Dictionary defines Artificial Intelligence as "[t]he theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages." *Artificial Intelligence*, OXFORD DICTIONARIES (2021). Black's Law Dictionary provides a different definition of AI: "[a] software used to make computers and robots work better than humans . . . . It is used to help make new products, robotics, human language understanding, and computer vision." *Artificial Intelligence*, BLACK'S LAW DICTIONARY (2nd ed. 1910). The European Commission defines an AI system as a

and negative effects that they have on the market and people. Companies in the health care industry employ AI-based programs, and this use is relevant because these AI systems can have significant effects on people's health.[12] Regulating AI systems generally, and specifically in the health care industry, raises questions not only on their economic benefits but also on related ethical concerns.

A. AI Economic Benefits and Ethical Concerns

AI influences a variety of industries, including health care, banking, retail, manufacturing, social media, self-driving cars, and robotics.[13] Given its wide industrial influence, AI presents many economic benefits, but it also creates serious ethical concerns.

From an economic perspective, AI has significant financial impacts on the economy, so regulating AI may hinder R&D and in turn negatively impact the market.[14] AI is "an engine of productivity and economic growth" as it promotes efficiency in the decision-making process and allows analysis of large amounts of data.[15] AI helps the creation of new products and services in different industries by "boosting consumer demand and generating new revenue streams" in different markets.[16] AI systems thus reduce the financial costs of certain activities, which without AI assistance may take more time and resources.[17]

A European research study shows that AI has great economic potential.[18] Between 2010 and 2015, AI patents have significantly increased bringing an

---

"software that . . . can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with." *Artificial Intelligence Act*, *supra* note 4, art. 3(1). The U.S. National Artificial Intelligence Act of 2020 defines AI as "a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments." *Artificial Intelligence (AI)*, U.S. DEP'T OF STATE, https://www.state.gov/artificial-intelligence/ (last visited Nov. 22, 2022).

12. *See* discussion *infra* Part I.B.

13. Pazzanese, *supra* note 9. AI systems allow for reduced prices in the strategic-making process in products development thanks to the ability to analyze large amount of data in a short time frame. *Id.* For example, according to some estimates, AI systems can minimize prices in industries like the pharmaceutical one in which it may cost even one billion dollars to develop a new pill. *Id.* However, alongside economic benefits, AI system can bring negative effects to the job market because, due to automation, certain categories of workers are disappearing. *Id.*

14. *See* Marcin Szczepański, *Economic Impacts of Artificial Intelligence (AI)*, EUR. PARLIAMENTARY RSCH. SERV., PE637.967, at Summary (July 2019) (providing economic and financial benefits of AI usage generally, and specifically in the European market).

15. *Id.*

16. *Id.*

17. *Id.* at 5.

18. *Id.* at 3.

average annual growth of 6%—which is higher than other patents.[19] AI is likely to enhance economic growth on two different fronts. AI will likely affect "capital-intensive" industries like manufacturing and transport, leading to more productivity in those industries thanks to investment in software, systems, and machines, making productivity more efficient.[20] Also, as a long-term effect, AI is likely to "boost consumer demand that would, in turn, generate more data."[21] This European study also estimated that 70% of companies would adopt at minimum one kind of AI by 2030, estimating also a consequent annual growth of 1.2% of world Gross Domestic Product (GDP).[22] For these reasons, AI's financial impacts on the global economy cannot be underestimated nor overlooked.

From an ethical perspective, ethicists have observed that AI systems' use creates serious ethical concerns, such as lack of algorithmic transparency, cyber security vulnerabilities, unfairness, bias, discrimination, lack of contestability, intellectual property issues, privacy, and data protection.[23] Specifically, algorithmic bias in automated decision-making systems, commonly used in health, employment, credit, criminal justice, and insurance, may result in serious discrimination against members of historically discriminated communities.[24] In the United States, the health care industry has experienced many economic benefits from AI, yet these

19. *Id.* at 2.

20. *Id.* at 3.

21. *Id.* at 4.

22. *Id.*

23. Rowena Rodrigues, *Legal and Human Rights Issues of AI: Gaps, Challenges and Vulnerabilities*, 4 J. RESPONSIBLE TECH., Dec. 2020, SCI. DIRECT, No. 100005, https://reader.elsevier.com/reader/sd/pii/S2666659620300056?token=A677BE00A743FC695524F914FE25A15E410FF2E8247E05447786EFE6B45D2BBFDC581C6EC02A33B14E4537ECD2BAC04B&originRegion=us-east-1&originCreation=20220310135229; *see also* BERND CARSTEN STAHL, ARTIFICIAL INTELLIGENCE FOR A BETTER FUTURE: AN ECOSYSTEM PERSPECTIVE ON THE ETHICS OF AI AND EMERGING DIGITAL TECHNOLOGIES 35–53 (Doris Schroeder & Konstantinos Iatridis eds., 2021) (discussing ethical and metaphysical issues arising from machine learning, specifically from AI and socio-technical systems that employ AI).

24. Rodrigues, *supra* note 23. Aside from health care, AI-based lending programs used for credit scoring may create discriminatory effects. *See* Shannen Balogh & Carter Johnson, *AI Can Help Reduce Inequity in Credit Access, but Banks Will Have to Trade Off Fairness for Accuracy—for Now*, INSIDER (June 30, 2021), https://www.businessinsider.com/ai-lending-risks-opportunities-credit-decisioning-data-inequity-2021-6 (arguing that AI systems could solve issues of discrimination in credit scoring, but also noting that certain cases have shown that credit scoring can produce intentional discrimination). The criminal system has also employed algorithmic-based predictive tools for pretrial release and sentencing that use variables such as socioeconomic background, education, and zip code that can discriminate against people of color. Will Douglas Heaven, *Predictive Policing Algorithms are Racist. They Need to Be Dismantled*, MIT TECH. REV. (July 17, 2020), https://www.technologyreview.com/2020/07/17/1005396/predictive-policing-algorithms-racist-dismantled-machine-learning-bias-criminal-justice/.

advantages have come with AI discriminatory practices. The next section will discuss the issue of algorithmic biases and discrimination.

B. Algorithmic Biases and AI Discrimination in Health Care

AI discriminatory practices do not result from voluntary discriminatory behavior. AI bias and discrimination result from flaws in algorithm designs and developments.[25] The different types of algorithm flaws show how AI discrimination in health care arises. There are three types of common design flaws: 1) faulty inputs, 2) faulty conclusions, and 3) failure to test.[26]

Machine-learning algorithms use large data, or "training data," with instructions of the output as the designer establishes.[27] The algorithm thus learns a model that applies to all other situations it confronts.[28] This data may contain "individual data points" that reflect problematic human biases or do not exhibit an adequately represented dataset (e.g., excluding historically discriminated groups of the society).[29] Thus, the algorithm will generate predictions and make decisions based on these "faulty inputs."[30]

Unlike faulty inputs, faulty conclusions result from those instances when data presenting human biases is inserted into a specific algorithm, which in turn will make specific decisions based on that data.[31] For instance, faulty conclusions may originate from algorithms that "attempt to find patterns in, and reach conclusions based on, certain types of physical presentations and mannerisms."[32] Such algorithms are present in recognition technology in hiring, which aims at "predicting social outcomes such as job performance."[33]

Algorithmic flaws may also result from failure to test. Even if the algorithm design did not present any bias influence, the algorithm still

---

25. *See* Rebecca Kelly Slaughter et al., *Algorithms and Economic Justice: A Taxonomy of Harms and a Path Forward for the Federal Trade Commission*, 23 YALE J. L. & TECH. 1, 7, 10, 15 (2021) (describing the three categories of algorithmic issues, faulty inputs, conclusions, and failure to test, resulting from the flaws in AI development and design).

26. *Id.*

27. Nicol Turner Lee et al., *Algorithmic Bias Detection and Mitigation: Best Practices and Policies to Reduce Consumer Harms*, BROOKINGS (May 22, 2019), https://www.brookings.edu/research/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/.

28. *Id.*

29. Slaughter et al., *supra* note 25, at 7–8. "Often skewed training data reflect historical and enduring patterns of prejudice or inequality, and when they do, these faulty inputs can create biased algorithms that exacerbate injustice." *Id.*

30. *Id.*

31. *Id.* at 10.

32. *Id.* at 11.

33. *Id.* at 12.

produces discrimination for the lack of proper and sufficient testing.[34] The common feature of these three algorithmic flaws is that they inherently tend to unintentionally produce discriminatory outcomes. For this reason, AI discrimination is often called *proxy discrimination*.[35]

In the 1970s, the health care industry began using AI systems to conduct diagnosis and recommend treatments.[36] The AI system would analyze a relevant set of information, gather information from medical experts, draw an inference, and recommend treatments.[37] Today, AI systems do not operate with small sets of information.[38] AI systems review and analyze a significant amount of personal data to make predictive judgments.[39] These predictive judgments are not only for medical treatments but also for the management of patients' needs.[40]

The health care and medical fields have experienced positive and negative outcomes from AI use. The introduction of highly efficient systems makes it possible to analyze data and deliberate on patients' diagnosis and administrative obligations, lowering the costs of performance of these activities.[41] Another purpose of AI usage in health care is to decrease health care costs, expanding health care availability to those people who traditionally could not afford it.[42] Despite these advantages, AI systems have, at times, produced discrimination due to biases present in their algorithms.

In 2019, a study uncovered a health risk management system causing discriminatory and unfair results and practices against members of economically disadvantaged groups.[43] The purpose of this health risk

---

34. *Id.* at 15.

35. Anya E.R. Prince & Daniel Schwarcz, *Proxy Discrimination in the Age of Artificial Intelligence*, 105 IOWA L. REV. 1257, 1263, 1267 (2020) (defining proxy discrimination as one that "occurs when a facially-neutral trait is utilized as a stand-in—or proxy—for a prohibited trait").

36. Cristal Nova, *Black Box Software: Artificial Intelligence in Health Care*, 30 ANNALS HEALTH L. ADVANCE DIRECTIVE 231, 234 (2021).

37. *Id.*

38. *Id.* at 234–35.

39. *Id.*

40. *Id.* at 238.

41. Tyler Dueno, *Racist Robots and the Lack of Legal Remedies in the Use of Artificial Intelligence in Healthcare*, 27 CONN. INS. L. J. 337, 339–40 (2020).

42. *Id.* at 340. AI application in health care can also have other benefits, such as reduction of "health outcomes caused by geographic barriers and racial disparities," but also increasing efficiency in health insurance administrative matters, which at time can cause harmful delays in treatment. *Id.* at 340–341.

43. Charlotte Jee, *A Biased Medical Algorithm Favored White People for Health-Care Programs*, MIT TECH. REV. (Oct. 25, 2019), https://www.technologyreview.com/2019/10/25/132184/a-biased-medical-algorithm-favored-white-people-for-healthcare-programs/. See Ziad Obermeyer et al., *Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations*, 366 SCIENCE 447 (2019) for the original study conducted by Ziad Obermeyer, Brian Powers, Christine Vogeli, and Sendhil Mullainathan.

management program was to identify patients in need of special medical attention based on an algorithm that would look at the "past health-care costs as a proxy for medical risks or conditions."[44] The system classified patients with higher past medical expenses as in need of special medical attention.[45] This conclusion resulted from the assumption that an unhealthy physical state was responsible for higher medical costs.[46] However, higher medical expenses primarily indicated the financial ability to receive expensive health care rather than unhealthy conditions.[47]

As a result of this algorithmic bias, economically disadvantaged people, despite suffering from severe medical conditions, were not categorized as in need because of the lack of high medical expenses in their medical records.[48] This AI system eventually privileged White Americans over Black ones.[49] Health care organizations extensively use this software, affecting approximately 200 million people in the United States annually.[50]

Although this study presented only one case of a health management system, it may not be an isolated case. Some experts have argued that during the COVID-19 pandemic, unregulated AI use can potentially "exaggerate the health disparities faced by minority populations already bearing the highest disease burden."[51] These experts correctly emphasize the idea that, although AI can help hospitals and other health care providers to navigate the pandemic (e.g., in deciding allocation of ICU beds and ventilators), these AI systems could be discriminatory against patients.[52] Although case studies of discriminatory AI systems during the pandemic are recent, we should not exclude the possibility that this discrimination took place and will continue to take place.[53]

AI systems can bring advantages in the health care industry, yet these should not justify the risks of an individual's rights violation.[54] The EU

---

44. Sharona Hoffman & Andy Podgurski, *Artificial Intelligence and Discrimination in Health Care*, 19 YALE J. HEALTH POL'Y, L., & ETHICS 1, 17 (2020).

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. Jee, *supra* note 43. As result of this discrimination, White patients would receive faster medical treatments for conditions like kidney problems or diabetes. *Id.* Thus, this type of discrimination can in fact have a significant impact on people's health and well-being.

50. Slaughter et al., *supra* note 25, at 17.

51. Eliane Röösli et al., *Bias at Warp Speed: How AI May Contribute to the Disparities Gap in the Time of Covid-19*, 28 J. AM. MED. INFORMATICS ASS'N 190, 190 (2021).

52. *Id.* at 191.

53. See Janet Delgado et al., *Bias in Algorithms of AI Systems Developed for Covid-19: A Scoping Review*, 19 J. BIOETHICAL INQUIRY 407 (2022) for a recent discussion on AI biases and discrimination during the COVID-19 pandemic.

54. *See* discussion *supra* Part I.A.

Artificial Intelligence Act is an attempt to tackle AI-related issues to protect citizens' rights.

C. AI Policies in the European Union

Discussions on an AI statutory scheme began in 2019 when Ursula von der Leyen became the European Commission's president.[55] In a 2020 interview, President von der Leyen reported that the European Commission "will be particularly careful where essential human rights and interests are at stake."[56] She also stated that "[a]rtificial intelligence must serve people, and therefore artificial intelligence must always comply with people's rights."[57]

This is not the first time the European Union has taken a strong stance on regulating new technologies.[58] For example, in 2018, the European Union enacted the General Data Protection Regulation (GDPR).[59] The GDPR is a privacy and security law that imposes obligations on any organizations, anywhere, if the specific organization targets and collects data related to EU citizens.[60]

---

55. Luciano Floridi, *The European Legislation on AI: A Brief Analysis of its Philosophical Approach*, 34 PHIL. & TECH. 215, 215 (2021); *see A Union That Strives for More: The First 100 Days*, EUR. COMM'N (Mar. 6, 2020), https://ec.europa.eu/commission/presscorner/detail/en/ip_20_403 (summarizing the European Commission's priorities regarding climate related policies, new technologies' policies and laws, and multilateral relationships with neighboring countries and regions).

56. Chan, *supra* note 3.

57. *Id.*

58. *See, e.g.*, *Data Protection in the EU*, EUR. COMM'N, https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en (last visited Dec. 5, 2022) (describing the General Data Protection Regulation that provides protection of EU citizens "with regard to the processing of personal data and on the free movement of such data"); *The Digital Markets Act: Ensuring Fair and Open Digital Markets*, EUR. COMM'N, https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en (last visited Dec. 5, 2022) (ensuring that online platforms work in compliance with EU laws and work in a fair way towards consumers and with regards to products); *The Digital Services Act: Ensuring a Safe and Accountable Online Environment*, EUR. COMM'N, https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_en (last visited Dec. 5, 2022) (aiming at protecting EU citizens' fundamental rights online, establishing transparency and accountability framework, and fostering "innovation, growth and competitiveness" in the EU market).

59. Ben Wolford, *What is GDPR, the EU's New Data Protection Law?*, GDPR.EU, https://gdpr.eu/what-is-gdpr/#:~:text=The%20General%20Data%20Protection%20Regulation,to%20people%20in%20the%20EU (last visited Dec. 5, 2022).

60. *Id.* This legislation stipulates that EU citizens have a right to the protection of their personal data. *Id.* Under the law, failure to comply with regulations will result in penalties, with fines ranging to a maximum of €20 million or 4% of global revenue. *Id.* This law also gives EU citizens the right to seek compensation for damages. *Id.*

Following the GDPR and von der Leyen's directives, the European Commission initially organized an independent research group, the High-Level Expert Group on Artificial Intelligence (AI HLEG), to provide policy advice on AI strategy to the European Commission.[61] In the *Ethics Guidelines for Trustworthy AI*, the Group identified a series of guidelines to consider when developing and using AI, based on "an approach founded on fundamental rights."[62]

These guidelines present key guidance, like the development and use of AI systems, that are consistent with "respect for human autonomy, prevention of harm, fairness and explicability."[63] The guidelines list seven key requirements for trustworthy AI: "(1) human agency and oversight, (2) technical robustness and safety, (3) privacy and data governance, (4) transparency, (5) diversity, non-discrimination and fairness, (6) environmental and societal well-being and (7) accountability."[64] The guidelines also recognize that trustworthy AI should "[f]oster research and innovation to help assess AI systems and to further the achievement of the requirements."[65]

Following the *Ethics Guidelines for Trustworthy AI*, the AI HLEG published another document expanding on the seven key elements mentioned above.[66] Specifically, on the requirement of non-discrimination and fairness, the report recognized that AI systems may "suffer from the inclusion of inadvertent historic bias, incompleteness, and bad governance models."[67]

---

61. Floridi, *supra* note 55, at 215.

62. High-Level Expert Grp. on A.I., *Ethics Guidelines for Trustworthy AI*, at 2 (Apr. 8, 2019), https://ec.europa.eu/futurium/en/ai-alliance-consultation.1.html (click "Download the Guidelines") [hereinafter *Ethics Guidelines for Trustworthy AI*]. The EU Charter for Fundamental Rights protects the rights of human dignity, private life, protection of data, and it protects against discrimination. Charter of Fundamental Rights of the European Union, 2012 O.J. (C 326/02) 396. Article 1 states that "[h]uman dignity is inviolable. It must be respected and protected." *Id.* art. 1. Article 21 states that "[a]ny discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited." *Id.* art. 21.

63. *Ethics Guidelines for Trustworthy AI*, *supra* note 62, at 2. The guidelines also pay close attention to situations involving vulnerable groups, acknowledging that AI can bring and pose both benefits and risks. *Id.*

64. *Id.*

65. *Id.* at 3.

66. High-Level Expert Grp. on A.I., *The Assessment List for Trustworthy Artificial Intelligence (ALTAI)*, at 3 (July 16, 2020), https://op.europa.eu/en/publication-detail/-/publication/73552fcd-f7c2-11ea-991b-01aa75ed71a1 (click "Download and languages") [hereinafter *The Assessment List for Trustworthy Artificial Intelligence*]. *See Ethics Guidelines for Trustworthy AI*, *supra* notes 62–64.

67. *The Assessment List for Trustworthy Artificial Intelligence*, *supra* note 66, at 16.

This, in turn, may create unintended prejudice and discrimination, "potentially exacerbating prejudice and marginalisation."[68]

In April 2021, the European Commission presented the Artificial Intelligence Act Proposal.[69] This Proposal is "one of the most influential regulatory steps taken so far internationally" in the field of AI.[70] Since this is a proposal, the statutory scheme is likely to experience amendments before becoming law. However, this fact does not bar a conclusion that, in its present form, the Proposal represents a first step in ensuring "ethically sound, legally acceptable, socially equitable, and environmentally sustainable" AI development in the European Union in support of the economy and society at large.[71] Unlike the European Union, the United States does not narrowly tailor its AI policies to ensure ethically and legally acceptable AI use. The following section presents an overview on AI policy and legislation in the United States.

D. AI Policies in the United States

In the tech industry, the United States has historically been a laissez-faire country.[72] This approach reflects a fear that government intervention in the private sector would hinder the R&D of new technologies.[73] In this respect, AI is no different. Nonetheless, the United States, like the European

---

68. *Id.* The guidelines recognize other types of discrimination in the intentional exploitation of consumer biases in unfair market competitions. *Id.* They also provide a list of questions that the stakeholder should ask to assess whether there is an unfair bias in an AI system. *Id.* at 16–17. This is a non-exhaustive list: "Did you consider diversity and representativeness of end-users and/or subjects in the data?" *Id.* at 16. "Did you assess and put in place processes to test and monitor for potential biases during the entire lifecycle of the AI system . . . ?" *Id.*

69. *A European Approach to Artificial Intelligence*, EUR. COMM'N, https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence (last updated Dec. 5, 2022). *See also* Thomas Burri & Fredrik von Bothmer, *The New EU Legislation on Artificial Intelligence: A Primer* (Apr. 21, 2021) (available on SSRN), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3831424 (providing a summary and highlights of the Commission's Proposal).

70. Floridi, *supra* note 55, at 216.

71. *Id.*

72. *See* Melissa Heikkilä, *Europe's Artificial Intelligence Blindspot: Race*, POLITICO (Mar. 16, 2021), https://www.politico.eu/article/europe-artificial-intelligence-blindspot-race-algorithmic-harm/ (describing the U.S. approach as a "laissez-faire" one); *see generally Laissez-Faire*, ENCYC. BRITANNICA, https://www.britannica.com/topic/laissez-faire (last visited Dec. 5, 2022) (explaining that laissez-faire is a doctrine based on the principle that there should be minimal state intervention in economic affairs of individuals and society).

73. *See generally* William Dunkelberg, *Why Deregulation is Important*, FORBES (Mar. 23, 2018), https://www.forbes.com/sites/williamdunkelberg/2018/03/23/why-deregulation-is-important/?sh=a5defc31c184 (arguing that deregulation has played and can play a significant role for economic growth for business, especially small businesses).

Union, recognizes the potential harms that AI may have on individuals and society at large.[74]

In 2019, the Trump Administration presented the Executive Order *Maintaining American Leadership in Artificial Intelligence*, which promoted sustained investment in AI R&D.[75] The Order highlights AI as a promising tool for economic growth, national security, and quality of life improvement.[76] Moreover, the United States can maintain a leading role in R&D of AI—"scientific, technological, and economic leadership"—under the guidance of the following principles.[77] First, the United States should continue promoting "scientific discovery, economic competitiveness, and national security."[78] Second, the United States should enable the creation of "new AI-related industries," the adoption of AI by already existing industries, and should ensure the training of future generations in AI use.[79] Third, the United States should increase "public trust and confidence in AI technologies and protect civil liberties, privacy, and American values in their application in order to fully realize the potential of AI technologies for the American people."[80] Fourth, the United States should continue to strive for international cooperation while seeking to promote its economic interests.[81]

A successive Executive Order by former President Trump is the *Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government*.[82] This Executive Order emphasizes the importance of AI development for the United States and the idea that AI use in agencies can bring benefit to administrative work.[83] The first review of these guidelines reveals that although civil liberties and rights are a concern, they appear to be secondary as the priority is economic development in the AI field. This approach is very different from the European one.

In June 2021, President Biden launched the National Artificial Intelligence Research Task Force under the National AI Initiative Act of 2020 (NAIIA).[84] Congress enacted this Act in 2020, establishing the

---

74. *Artificial Intelligence: The Consequences for Human Rights: Hearing Before the Tom Lantos Human Rights Comm.,* 115th Cong. 5–6 (2018) (statement of Hon. Randy Hultgren, co-chairman of the Commission).

75. Exec. Order No. 13859, 84 Fed. Reg. 3967, 3967 (Feb. 11, 2019).

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. Exec. Order No. 13960, 85 Fed. Reg. 78939, 78939 (Dec. 3, 2020).

83. *Id.*

84. Press Release, White House, The Biden Admin. Launches the Nat'l A.I. Rsch. Res. Task Force (June 10, 2021), https://www.whitehouse.gov/ostp/news-updates/2021/06/10/the-biden-

Research Resource Task Force and creating the American AI Initiative.[85] Under its granted authority, the task force recommends establishing and sustaining the National AI Research Resource for "technical capabilities, governance, administration . . . as well as requirements for security, privacy, civil rights, and civil liberties."[86] In the same way as the Trump Administration, AI innovation and economic prosperity remain at the center of the U.S. approach to AI.[87]

Civil rights organizations, like the American Civil Liberties Union (ACLU), have encouraged the Biden Administration to not overlook how modern digital technologies, like AI, can "perpetuate inequity."[88] Recognizing the negative impacts of AI systems on individual rights, Congress and state legislatures have proposed and continue to introduce legislation on AI.

Alongside the NAIIA, members of Congress have introduced multiple bills.[89] Some of these bills broadly refer to AI as one of the main components of U.S. technological and economic competitiveness.[90] Other bills introduce AI expertise of federal agencies, and others focus on issues of bias in AI systems.[91] Members of Congress have attempted to introduce bills that, unlike the NAIIA, would specifically address AI-related issues, such as individual rights violations.[92] For example, in 2019, members of the House and Senate introduced the Algorithmic Accountability Act.[93]

---

administration-launches-the-national-artificial-intelligence-research-resource-task-force/ [hereinafter Press Release, White House].

85. LAURIE A. HARRIS, CONG. RSCH. SERV., R46795, ARTIFICIAL INTELLIGENCE: BACKGROUND, SELECTED ISSUES, AND POLICY CONSIDERATION 24 (2021). The American AI Initiative establishes a committee with representatives from the public and private sectors to provide advice on AI research, development, and security to the President and the AI Initiative Office. *Id.*

86. Press Release, White House, *supra* note 84.

87. *Id.*

88. Olga Akselrod, *How Artificial Intelligence Can Deepen Racial and Economic Inequities*, ACLU (July 13, 2021), https://www.aclu.org/news/privacy-technology/how-artificial-intelligence-can-deepen-racial-and-economic-inequities/.

89. *See infra* notes 90–92.

90. *See* HARRIS, *supra* note 85, at 23 n.124 (mentioning the Endless Frontier Act and the Strategic Competition Act of 2021, the STRATEGIC Act, and the Democracy Technology Partnership Act during the 117th Congress, which did not become laws).

91. *Id.* at 23. AI systems are automated decision systems that use AI. *Id.*

92. *See, e.g.*, FUTURE of Artificial Intelligence Act of 2017, H.R. 4625, 115th Cong. (2017) (authorizing the Department of Commerce to create a Federal Advisory Committee for AI development and implementation in different fields, ranging from workforce to international cooperation); Algorithmic Justice and Online Platform Transparency Act, H.R. 3611, 117th Cong. (2021) (preventing discrimination by prohibiting the online platform from using personal information in discriminatory ways and requiring transparency in the use of algorithms).

93. *See* discussion *infra* Part III.

As of today, Congress has not passed any narrowly-tailored legislation to address AI discrimination. Despite, or because of, the lack of a federal legislative framework addressing AI-related issues, states have proposed and enacted legislation addressing AI.[94]

One can reasonably infer that congressional and state bills purporting to regulate AI indicate the people's interest in protecting their legal rights from harmful AI practices. Further, this inference may support a conclusion that regulating AI development and use does not necessarily hinder economic and technological development.[95] The next section analyzes the relevant articles of the EU Proposal that would be applicable to AI systems subject to algorithmic biases.

II. EUROPEAN COMMISSION'S ARTIFICIAL INTELLIGENCE ACT

The European Commission drafted the Artificial Intelligence Act under the legal principle that the European Union can regulate products and services placed in the market.[96] The Proposal would prevent AI systems that could threaten and violate EU citizens' fundamental rights, such as the right to non-discrimination.[97] The Proposal articulates AI systems' regulations based on their nature and effects on consumers.[98] The Proposal sets the requirements that entities must follow to place and use products in the market, both ex-ante and post-market reviews. This section analyzes the relevant articles of the Proposal by considering algorithmic bias and AI discrimination, specifically in health care.

---

94. For example, in 2021 Colorado enacted a statute prohibiting insurers from using consumer data and information sources, and algorithm systems that unfairly discriminate based on race, color, national, or ethnic origin. *Legislation Related to Artificial Intelligence*, NAT'L CONF. OF STATE LEGIS., https://www.ncsl.org/research/telecommunications-and-information-technology/2020-legislation-related-to-artificial-intelligence.aspx (last updated Aug. 26, 2022). In 2020, California introduced the Automated Decision Systems Accountability Act. *Id.* The EU approach to legislation significantly influenced California in the past, such as in the enactment of the California Consumer Privacy Act of 2019, following the footsteps of the EU General Data Protection Regulation. Floridi, *supra* note 55, at 217.

95. The fact that the European Commission has been working to create legislation to regulate AI, while taking into consideration the economic benefits that AI brings to the European market, suggests that regulating AI is economically and financially feasible. Because the European Union is one of the largest economies in the world, regulating AI would likely have a significant impact on the market. *See EU Position in World Trade*, EUR. COMM'N, https://ec.europa.eu/trade/policy/eu-position-in-world-trade/#:~:text=The%20EU%20is%20the%20largest,of%20manufactured%20goods%20and%20services (last visited Dec. 5, 2022) (considering the European Union as a single economic entity).

96. *See* discussion *infra* Part II.A–B.

97. Charter of Fundamental Rights of the European Union, *supra* note 61, art. 21.

98. *See* discussion *infra* Part II.A–B.

A. Classification of AI Systems

The EU Proposal distinguishes between prohibited AI practices, low or minimal risk, and high-risk AI systems.[99] Depending on the AI systems and practices, the Proposal sets up mandatory requirements or possible codes of conduct.[100] First, under the Proposal, AI systems in health care are unlikely to fall within the definition of prohibited AI practices.[101] Article 5 categorically prohibits certain AI practices.[102] For example, the Article bans AI systems that distort a person's behavior and that are likely to cause "physical or psychological harm."[103] The Article also prohibits AI practices that take advantage of the "vulnerabilities" of certain groups "due to their age, physical or mental disability."[104] The Article bans AI systems used for "evaluation or classification of the trustworthiness" based on individuals' social behavior or personal characteristics and "the use of 'real-time' remote biometric identification systems."[105]

AI systems employed in health care are unlikely to fall within those definitions because health care AI systems, like the one in the 2019 U.S. study,[106] do not distort people's behavior and do not take advantage of people's disabilities in order to cause physical or psychological harm. Although the Proposal only defines real-time remote biometric identification systems, it is very likely that AI systems used in health care do not fall within this category of prohibited AI practices.

Second, the Proposal suggests that there are certain AI systems that do not fall within the prohibitory or high-risk categories.[107] These would be AI systems with limited or minimal risk.[108] Developers and providers would not need to meet the ex-ante and post-market testing and monitoring required for high-risk AI systems.[109] The Proposal suggests that developers and providers may follow a code of conduct. However, the Proposal does not frame a code

---

99. *Artificial Intelligence Act*, *supra* note 4, at 12–13 (providing explanation on the Proposal's risk-based approach, and contextualizing Articles 5, 6, and 7 in Title II).

100. *Id.* arts. 9–15, 69.

101. *See infra* notes 102–105.

102. *Id.* art. 5(1)(a).

103. *Id.*

104. *Id.* art. 5(1)(b).

105. *Id.* art. 5(1)(c)–(d). The Proposal has specific narrow exceptions for biometric identification systems. *Id.*

106. *See* discussion *supra* Part I.B. *See supra* notes 43–50.

107. Mauritz Kop, *EU Artificial Intelligence Act: The European Approach to AI*, TRANSATLANTIC ANTITRUST & IPR DEVS. STAN. L. SCH. 3 (Oct. 1, 2021), https://law.stanford.edu/publications/eu-artificial-intelligence-act-the-european-approach-to-ai/.

108. *Id.*

109. *Artificial Intelligence Act*, *supra* note 4, at 13–14 (contextualizing Articles 6 and 7 in Title III).

of conduct and instead authorizes the European Commission and member states to "encourage and facilitate the drawing up of codes."[110] The decision to leave discretion may allow the European Commission to avoid hindering R&D of AI systems that do not pose significant risks to consumers. The European Commission may also help start-ups, which are more likely to suffer from the financial costs connected to the Proposal's rules. Hence, the European Commission's approach seems to be quite flexible. But the lack of precise guidance has also been a source of criticism.[111]

Third, the Proposal defines a high-risk AI system as one "intended to be used as a safety component of a product, or is itself a product" and "required to undergo a third-party conformity assessment."[112] Article 7 authorizes the European Commission to identify high-risk systems when the "AI systems pose a risk of harm to the health and safety, or a risk of adverse impact on fundamental rights, that is, in respect of its severity and probability."[113] To make this determination, the European Commission may use the following factors: the purpose of AI, the extent of its use, the actual and potential harm on consumers, and the relations between the adverse impact and the practical and legal feasibility of preventing these impacts.[114]

High-risk AI systems are present in different sectors. One example includes AI employed in infrastructures like transportation, which may expose people to risk.[115] The education sector may employ high-risk AI systems, especially those employed to determine access to education or professional courses, like scoring exams.[116] Public and private entities may

---

110. *Id.* art. 69(1). Article 69 gives minimal guidance stating that these codes of conduct must "foster the voluntary application" of AI system requirements. *Id.*

111. Kop, *supra* note 107, at 5.

112. *Artificial Intelligence Act*, *supra* note 4, art. 6(1)(a)–(b). *See also* Kop, *supra* note 107, at 5 (noting that the Proposal does not give a precise definition of high-risk systems and arguing that if the legislature does not give sufficient guidelines on how to definite this category, then societal views and courts—eventually the EU Court of Justice—will provide such definitions).

113. *Artificial Intelligence Act*, *supra* note 4, art. 7(1)(b).

114. *Id.* art. 7(2)(a)–(e). Other factors that the European Commission can consider are:

> (f) the extent to which potentially harmed or adversely impacted persons are in a vulnerable position in relation to the user of an AI system, in particular due to an imbalance of power, knowledge, economic or social circumstances, or age; (g) the extent to which the outcome produced with an AI system is easily reversible, whereby outcomes having an impact on the health or safety of persons shall not be considered as easily reversible; (h) the extent to which existing Union legislation provides for: (i) effective measures of redress in relation to the risks posed by an AI system, with the exclusion of claims for damages; (ii) effective measures to prevent or substantially minimise those risks.

Id. art. 7(2)(f)–(h).

115. Kop, *supra* note 107, at 3.

116. *Id.* at 4. An example of this may be the recent case in the United Kingdom in which the government used algorithm-based systems to determine access to universities "favoring students from

employ high-risk systems for management or recruitment procedures.[117] Public and private entities may also use high-risk AI systems in performing services like credit scoring.[118] Other areas that employ these systems are law enforcement, surveillance systems, border control, and administration of justice.[119]

Although the EU Proposal does not list the industries and types of products that fall within the high-risk definition, health care's AI systems may be high-risk under the Proposal. The health care industry employs AI systems for management of patients' information and treatments.[120] Because the medical and health staff may rely on AI systems' predictions for decisions on medical treatments and needs, their use is similar and comparable to AI use in other industries, such as recruitment and management of workers in companies. Similar to public and private entities that perform credit scoring, the AI systems in the health care industry evaluate patients based on factors placed in the algorithms.

Some of the risks associated with AI systems in health care may fall within the list of factors that the Commission must use when determining whether an AI system is high-risk. For instance, relevant factors include the adverse impact on fundamental rights and the extent of AI use.[121] AI discrimination resulting from the extensive use of a health care AI management system is likely to adversely impact the EU right of non-discrimination. Although the study from 2019 on AI discrimination in health care was specific to the United States,[122] it suggests the adverse impacts that algorithmic biases may have on the population at large when employed.

When drafting the Proposal, the European Commission did not have the health care industry in mind because the European Medical Devices Regulation would cover AI systems employed in the health care field.[123] However, because of proxy discrimination in health care management

---

private schools and affluent areas." Sam Shead, *How a Computer Algorithm Caused a Grading Crisis in British Schools*, CNBC (Aug. 21, 2020), https://www.cnbc.com/2020/08/21/computer-algorithm-caused-a-grading-crisis-in-british-schools.html.

117. Kop, *supra* note 107, at 4.

118. *Id.*

119. *Id.*

120. Nova, *supra* note 36, at 234–35.

121. *Artificial Intelligence Act*, *supra* note 4, art. 7(2)(b)–(c).

122. *See* discussion *supra* Part I.B. *See supra* notes 43–50.

123. *See* Hannah van Kolfschooten, *Conspicuous by Its Absence: Health in the European Commission's Artificial Intelligence Act*, BMJ OP. (July 30, 2021), https://blogs.bmj.com/bmj/2021/07/30/conspicuous-by-its-absence-health-in-the-european-commissions-artificial-intelligence-act/ (arguing that the European Commission's assumption that "*all* AI applications used in the context of health are covered by the MDR" is incorrect because the MDR only covers devises and software used for medical treatment, so, software, like administrative systems, or other devices, like fitness and health apps, are not covered).

systems, a similar situation may occur even in a European context due to the extensive use of AI in health care.[124] According to *The European AI Landscape* report, health care is one of the most popular fields employing AI in many European countries.[125]

If health care AI systems fall within the definition of high-risk, then before placing these systems in the market, the European Commission implements a process under which developing companies need to test the AI system and meet the set requirements. The next section analyzes these requirements.

B. Review Process of High-Risk AI Systems

Under the EU Proposal, high-risk AI systems must undergo a defined process before entering the market—ex-ante review. Once the European Artificial Intelligence Board has determined that the products may enter the market, companies must then perform post-market assessments and monitoring.[126]

Article 9 sets the risk management system that stays in place both during the development of the AI system and while the system is in the market.[127] The Article defines this as a "continuous iterative process run throughout the entire lifecycle of a high-risk AI system, requiring regular systematic updating."[128] As part of the risk management system, the AI developer will identify and analyze "known and foreseeable risks" and evaluate other possible risks based on the analysis of data "gathered from the post-market monitoring."[129] Article 9 requires testing of the high-risk systems to identify "the most appropriate risk management measures" and to ensure that the systems work according to the intended purpose.[130]

Because Article 10 requires prior assessing of the data necessary to develop the AI system, the Proposal aims at examining the data "in view of possible biases" and at identifying gaps and shortcomings to prevent AI biases and discrimination.[131] Although the Article does not define what would count as gaps and shortcomings, these could be determined based on

---

124. *Id.*

125. *See The European AI Landscape*, at 9–10, 14, 23–24 (Jan. 2018), https://ec.europa.eu/jrc/communities/sites/jrccties/files/reportontheeuropeanailandscapeworkshop.pdf (finding that several countries, such as Sweden, Germany, France, Finland, and Denmark, are investing funds in AI, including in health care, among other industries).

126. *Artificial Intelligence Act*, *supra* note 4, arts. 9, 10, 56.

127. *Id.* art. 9.

128. *Id.* art. 9(2).

129. *Id.* art. 9(2)(a),(d).

130. *Id.* art. 9(5).

131. *Id.* art. 10(2)(e)–(g).

the AI intended purpose. The Article states that developers would conduct training, validation, and testing of data by looking at "specific geographical, behavioural or functional setting" of the AI system.[132]

The Proposal also presents post-market review and assessment. Article 61 establishes the post-market monitoring to ensure that the high-risk AI system performs in compliance with the Proposal's requirements.[133] Where there is a "serious incident or any malfunctioning" representing a breach of a fundamental right, the provider and developer of the AI system must report these findings to the European Artificial Intelligence Board.[134]

Another significant introduction of the Proposal is human oversight. Article 14 states that developers should design and develop high-risk AI systems "in such a way . . . that they can be effectively overseen by natural persons during the period in which the AI system is in use."[135] The purpose behind the human oversight requirement is to ensure detection of risks to health, safety, or fundamental rights that may be otherwise overlooked during the application of other requirements.[136] The concern is that overreliance on output produced by a high-risk system may overlook flaws.[137] Because the Proposal specifically refers to "automation bias," which is the output that a high-risk AI system creates,[138] this fact reflects the European Commission's concern over AI systems presenting flaws that in turn creates algorithmic biases.[139]

The process set in the Proposal can prevent algorithmic flaws, such as inputs, conclusions, and failure to test because the ex-ante review can detect any algorithmic bias before placing the product in the market.[140] This process would have been able to detect the flawed algorithm in the 2019 U.S. study because the ex-ante review would have theoretically discovered that the data in the algorithm training for medical treatment had flaws.[141] The algorithms placed certain patients in need of more medical treatments despite being

---

132. *Id.* art. 10(4).

133. *Id.* art. 61(1)–(2).

134. *Id.* art. 62(1). AI providers perform this market surveillance also in compliance with other EU laws, such as the Data Protection Regulation. *Id.* art. 63(6). National authority of single member states must report to the European Commission on relevant market surveillance activities related to high-risk AI systems. *Id.* art. 63(2).

135. *Id.* art. 14(1).

136. *Id.* art. 14(2).

137. *Id.* art. 14(4)(b).

138. *Id.*

139. These threaten the right of non-discrimination under the EU Charter of Fundamental Rights. Charter of Fundamental Rights of the European Union, *supra* note 62.

140. *See* discussion *supra* Part I.B. *See* Slaughter et al., *supra* note 25, at 16–18.

141. *See* discussion *supra* Part I.B.

healthier than other patients, whom the algorithm had disregarded.[142] Probably because of the lack of proper testing prior to using the AI system, the algorithm worked against its intended purpose. Thus, the AI system caused proxy discrimination against specific patients, members of a minority group.[143]

The development and monitoring processes of AI systems further the European Commission's legislative intent because these ensure that developers and providers of AI systems respect core principles of AI-trustworthiness.[144] Notably, "diversity, non-discrimination and fairness" are key principles that the European Commission recognizes.[145] High-risk AI systems that are likely to cause algorithmic biases and proxy discrimination in industries like health care would be subject to the EU Proposal.

In the same way, in the United States there have been attempts to introduce AI legislation. Nonetheless, Congress has been resistant to consider those proposals for legislation. The next section analyzes the 2019 Algorithmic Accountability Act and its potential legislative benefits on AI systems in the health care industry.

III. UNITED STATES' 2019 ALGORITHMIC ACCOUNTABILITY ACT

The 2019 study on the discriminatory health management system shows that AI discrimination is a very significant issue in the health care industry in the United States.[146] The Algorithmic Accountability Act of 2019 is an attempt to enact comprehensive legislation aimed, like the EU Proposal, at controlling and preventing AI discrimination.[147]

In 2019, two senators and one house representative sponsored the Algorithmic Accountability Act.[148] Proponents referred the Bill to the Senate Commerce Committee and to the House Energy and Commerce Committee, the two committees that dealt with legislative proposals on privacy.[149] The

142. *Id.*

143. *Id.*

144. *See Ethics Guidelines for Trustworthy AI*, *supra* note 62, at 2.

145. *Id.*

146. *See* discussion *supra* Part I.B. *See supra* notes 43–49.

147. Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong. (2019); S. 1108, 116th Cong. (2019). *See* discussion *infra* Part III.A–B.

148. Mark MacCarthy, *An Examination of the Algorithmic Accountability Act of 2019*, at 2 (Transatlantic Working Grp., Oct. 24, 2019), https://cdn.annenbergpublicpolicycenter.org/wp-content/uploads/2020/05/Algorithmic_Accountability_TWG_MacCarthy_Oct_2019.pdf. Senators Cory Booker (New Jersey) and Ron Wyden (Oregon) sponsored the Bill in the Senate; Representative Yvette Clarke (New York) sponsored the Bill in the House. *Id.*

149. *Id.* The fact that these two committees are in charge of reviewing the proposed Bill is not surprising because of the close relationship between privacy in data, AI systems, and commerce.

Bill opens with the delegation of authority to the Federal Trade Commission (FTC) "to require entities that use, store, or share personal information to conduct automated decision system impact assessments and data protection impact assessments."[150] The Bill presents similarities with the EU Proposal, especially in its high-risk automated decision systems framework.[151] The next section analyzes relevant sections of the Bill and compares them to the EU Proposal in light of AI bias and discrimination in health care.

A. Classification of High-Risk Automated Decision Systems

The Algorithmic Accountability Act presents differences from the EU Artificial Intelligence Act in terms of language and classifications. The first difference between the U.S. Bill and the EU Proposal is that the Bill does not present a definition of AI but defines automated decision system. Section 2 of the Bill defines automated decision system as "a computational process, including one derived from machine learning, statistics, or other data processing or artificial intelligence techniques, that makes a decision or facilitates human decision making, that impacts consumers."[152] Because the U.S. National Artificial Intelligence Act of 2020 defines AI as a "machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions,"[153] this definition could expand on the Bill's definition of automated decision system. Because both the EU Proposal and U.S. Bill focus on AI systems' ability to make predictions, recommendations, or decisions, their definitions are not so different.[154]

Despite the similarity in definitions, unlike the EU Proposal, the U.S. Bill does not distinguish between prohibited, low-risk, and high-risk AI practices but just provides a definition of high-risk automated decision system.[155] Section 2(7) defines a high-risk automated decision system as one posing significant risks to consumers' security and privacy or as one contributing to unfair practices.[156] This type of systems also facilitates human decision-making and monitors public spaces.[157] Similarly to the EU Proposal that authorizes the European Commission, under Section 2(7)(E), the FTC

150. H.R. 2231.

151. *See id.* § 2(7) (providing the definition of high-risk automated decision systems).

152. *Id.* § 2(1).

153. *Artificial Intelligence (AI)*, *supra* note 11.

154. *See Artificial Intelligence Act*, *supra* note 11 (providing the definition of AI in Article 3(1) of the EU Proposal).

155. H.R. 2231 § 2(7).

156. *Id.* § 2(7)(i)–(ii).

157. *Id.* § 2(7)(B), (D).

has the authority to determine what constitutes high-risk.[158] Hence, because both the European Commission and FTC can impose regulations on the AI developers and providers, they may perform similar tasks.

Regarding possible dangers, the Bill explicitly states that a high-risk system is one that "poses a significant risk . . . of resulting in or contributing to inaccurate, unfair, biased, or discriminatory decisions impacting consumers."[159] Unlike the EU Proposal that lacks a specific definition of high-risk AI systems, the U.S. Bill includes the discriminatory element in its definition.

The Bill's language reflects the legislative intent behind the Proposal because the purpose of the Bill is to prevent and stop algorithmic biases.[160] This intent is strongly visible in the section that requires companies to study the algorithms they use, determine whether there is any bias in the systems, and fix any discrimination or bias found.[161] Because the Bill's press release provides examples of the industries that the Bill would cover, the health care industry may fall within the statutory language. In fact, the press release describes cases of proxy discrimination in which AI reproduced housing discrimination in advertisements on online platforms and other situations in which private companies decided to stop using certain programs because of AI reproduced biases.[162]

Similar to the EU Proposal, this Bill could potentially cover algorithms employed in the health care industry. Because the Bill states that the "covered entity" is "any person, partnership, or corporation over which the [FTC] has jurisdiction,"[163] if the FTC has jurisdiction over companies in the health care field, then those companies would fall under the Bill. Under the Federal Trade Commission Act (FTCA), 15 U.S.C. § 45(a)(2), the FTC has jurisdiction over most fields of commerce, with few exceptions such as insurance companies, banks, non-profits, transportation and communications

158. *Id.* § 2(7)(E).

159. *Id.* § 2(7)(A)(ii).

160. Press Release, Wyden, Booker, Clarke Introduce Bill Requiring Cos. to Target Bias in Corp. Algorithms (Apr. 10, 2019), https://www.wyden.senate.gov/news/press-releases/wyden-booker-clarke-introduce-bill-requiring-companies-to-target-bias-in-corporate-algorithms-.

161. *Id.*

162. *Id.* The press release specifically refers to the Department of Housing and Urban Development charging Facebook for violating the Fair Housing Act for allowing advertisers to discriminate on the basis of race, religion, and disability status. *Id.* It also described the Amazon case, in which the company decided to stop using a recruiting tool because it was discriminatory and biased against women. *Id.*

163. Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong. § 2(5) (2019).

common carriers.[164] Because of this very broad definition, companies that develop and/or use AI programs technically fall under the FTC jurisdiction.

The idea to give specific authority to the FTC to regulate algorithmic systems may be an advantage because it would avoid creating another agency and allow use of the current bureaucratic apparatus. At the same time, because the FTC does not specialize in AI, it would be wise to create an agency that would deal specifically with AI and its related issues, such as proxy discrimination in algorithmic systems.[165] This type of argument contrasts with the fact that the FTC indeed has the necessary apparatus to deal with negative impacts of algorithmic systems because of the FTC's present authority and role. As the FTC reports in its recent guidelines *Aiming for Truth, Fairness, and Equity in Your Company's Use of AI*, this agency recognizes that the introduction of certain AI in the market can represent a challenge because of the difficulty of recognizing and controlling negative outcomes—referring to proxy discrimination.[166] Yet, the FTC can prevent the use of algorithms with a tendency to discriminate because under Section 5 of the FTCA, the agency can declare unlawful "unfair or deceptive acts or practices."[167] Because the FTC also writes in its guidelines that the sale or use of racially biased algorithms could be "unfair or deceptive practices,"[168] then this conclusion is not too farfetched.

Even though the FTC views algorithmic biases as being within the categories of prohibited practices, the FTCA does not provide for a system that would specifically oversee the process in which companies can develop, use, or sell such algorithms. The current language in the FTCA does not mention AI systems or related issues. Although the FTC can interpret the Act's language broadly in determining its authority to enforce its regulatory powers over AI, a direct congressional authorization would leave no room for doubts on what the FTC can and cannot do. This means that Congress

---

164. 15 U.S.C. § 45(a)(2). *See also What the FTC Does*, FED. TRADE COMM'N, https://www.ftc.gov/news-events/media-resources/what-ftc-does (last visited Dec. 6, 2022) (providing an overview of the types of activities that the FTC is in charge of under Congress's statutory delegation).

165. For instance, the Environment Protection Agency (EPA) could be an example of an agency that employs experts and scientists to deal with specific environmental issues. *See generally Our Mission and What We Do*, U.S. EPA, https://www.epa.gov/aboutepa/our-mission-and-what-we-do (last updated June 13, 2022) (stating that the EPA bases its mission and work on "best available scientific information"). Likewise, a new agency would specifically deal with AI technological development and have jurisdiction over any sector and industry that employs AI. However, an issue related to this argument is that the new agency could potentially have very broad jurisdiction.

166. Elisa Jillson, *Aiming for Truth, Fairness, and Equity in Your Company's Use of AI*, FED. TRADE COMM'N (Apr. 19, 2021), https://www.ftc.gov/news-events/blogs/business-blog/2021/04/aiming-truth-fairness-equity-your-companys-use-ai.

167. 15 U.S.C. § 45(a)(1).

168. Jillson, *supra* note 166.

would have to amend the current FTCA or enact a new piece of legislation. The Algorithmic Accountability Act represents an opportunity to provide specificity on the role that the FTC can play in regulating AI systems and would also provide oversight of the type of assessments that the FTC can impose on companies under its jurisdiction. The next section looks at automated decision system assessments under the Bill.

B. Automated Decision System Assessments

Under the Bill, Section 2(2) provides a definition of the automated decision system assessment that companies would have to follow. The Bill states that an automated decision impact assessment is "a study evaluating an automated decision system and the automated decision system's development process, including the *design* and *training* data of the automated decision system."[169] This assessment reviews "impacts on accuracy, fairness, bias, discrimination, privacy, and security."[170] Because the language of the Bill refers to the development process of automated decision systems, specifically to design and training data, this type of assessment would identify algorithmic flaws like inputs, conclusions, and failures to test in the same way Articles 9, 10, and 14 of the EU Proposal do.[171]

Similar to the EU Proposal's review process, the Bill's automated decision system assessment could have potentially detected the flawed algorithm in the 2019 U.S. study of the biased health care management system.[172] When enforcing Section 2(2)(C), implementing automated decision system assessments, the developer of the health management system at issue would have discovered that the AI system could not serve the intended purpose. By performing data training, this assessment would have shown that the system categorized patients based on their ability to afford medical and health treatment, thus discriminating against people of color. Under the Bill, that company would have performed tests to detect this type of proxy discrimination.

Under such analysis, the EU Proposal and the Bill are not very different because both legislative Proposals would enforce regulations on AI developers and users to detect and prevent algorithmic biases against consumers. The EU Proposal reflects the EU market system and the relationship between the European Commission and the member states; these

---

169. Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong. § 2(2) (2019) (emphasis added).

170. *Id.*

171. *Compare id. with Artificial Intelligence Act*, *supra* note 4, arts. 9, 10, 14.

172. *See* discussion *supra* Part I.B. *See supra* notes 43–49.

states would have to enforce the new Proposal in the same way as the EU General Data Protection Regulation has been enforced.[173]

Likewise, the U.S. Bill would give authority to the FTC to promulgate regulations requiring companies to conduct automated decision system impacts assessments on existing automated decision systems "as frequently as the Commission determines is necessary" and on new high-risk systems "prior to implementation."[174] The disclosure of the assessments conducted by the companies would not be compulsory under the Bill.[175] Nevertheless, because the Bill authorizes the FTC to enforce its rules in unfair or deceptive acts or practices cases,[176] like proxy discrimination, companies would have to produce such assessments, and the FTC could review those records during an investigation.[177]

C. Criticism of the Algorithmic Accountability Act

Critics have argued that because the Bill does not impose any mandate on companies to disclose specifics on their algorithm formulas, the Bill would be ineffective.[178] For this reason, whereas the EU Proposal ensures "transparency" and "explainability" requirements, the Bill lacks these two elements.[179] Adding those two elements is essential because doing so would ensure accountability on the part of companies, something that the EU Proposal values. Overall, the Bill presents similar goals as the ones of the EU Proposal. Yet because the EU approach would ensure that companies disclose information on the life cycle of the AI, the EU Proposal is more advanced and comprehensive.

Others have noted other flaws in the Bill. For instance, critics have attacked the Bill for targeting only automated high-risk decision-making and not human decision-making.[180] This criticism stems from the idea that by only addressing automated decisions, the Bill would stigmatize and

173. *See supra* note 58.

174. H.R. 2231 § 3(b)(1)(A)(i)–(ii).

175. *Id.* § 3(b)(2).

176. *Id.* § 3(d).

177. *See* 15 U.S.C. § 46(a) ("The Commission shall also have power . . . [t]o gather and compile information concerning, and to investigate from time to time the organization, business, conduct, practices, and management of any person, partnership, or corporation engaged in or whose business affects commerce."). *See also A Brief Overview of the Federal Trade Commission's Investigative, Law Enforcement, and Rulemaking Authority*, FED. TRADE COMM'N, https://www.ftc.gov/about-ftc/what-we-do/enforcement-authority (last modified May 2021) (providing an overview of the FTC enforcement powers).

178. MacCarthy, *supra* note 148, at 3.

179. *Id.*

180. Joshua New, *How to Fix the Algorithmic Accountability Act*, CTR. FOR DATA INNOVATION (Sept. 23, 2019), https://datainnovation.org/2019/09/how-to-fix-the-algorithmic-accountability-act/.

discourage AI use, promoting the idea that automated decision systems are "less trustworthy or more dangerous than human ones."[181] This argument makes the valid point that in this day and age, policymakers should encourage AI use as these new technologies spur innovation and can be a source of economic development.[182] Yet, this argument is misplaced because the Bill's goal is to detect automated decision systems that can create risks to consumers not easily detectable without the type of assessment the Bill proposes. Intuitively, identifying human decisions may be less problematic than identifying automated decisions that create AI biases and discrimination. The obligations in the Bill are imposed on the companies and developers, who are obviously humans. Therefore, the Bill would also address human decision-making. A different criticism is that the Bill does not refer to mandatory human oversight on automated systems like the EU Proposal does. This is something that the drafters could consider adding to ensure human accountability.

Critics have also noted that the Bill would apply only to large companies with specific set annual revenue and companies that are in possession of a certain amount of data or consumer devices.[183] This would mean that smaller companies would not need to meet the obligations under the Bill and those that the FTC would impose.[184] Under this argument, risks associated with automated decision systems could escape review and oversight. However, the Bill may apply only to larger companies to ensure that smaller, start-up companies do not face great financial hardships connected to compliance with the possible regulations the FTC would impose. This in turn would ensure R&D of smaller companies in the AI field.

Although the criticism is a valid one, a piece of legislation that could potentially prevent R&D would have a low chance of becoming law. In fact, this may be the case because, when amending the Bill, the drafters would need to acknowledge different interests of those who are against regulating AI, or other new technologies, to ensure that the Bill becomes law.[185]

A final criticism of the Bill is that it does not distinguish between high-risk decisions and low-risk ones, imposing obligations on companies even when their use of the data in an automated system does not involve high-risk decisions.[186] The EU Proposal addresses this issue because it distinguishes between prohibited, high-risk, and low-risk AI systems.[187] Moreover, in

181. *Id.*
182. *See* discussion *supra* Part I.A.
183. New, *supra* note 180.
184. *Id.*
185. *See supra* note 72.
186. New, *supra* note 180.
187. *See supra* discussion Part II.A.

cases of companies dealing with low-risk assessments, the EU Proposal only advises the companies to follow the guidelines to ensure ethical AI development and use.[188] Under the current version of the Bill, it is unclear whether companies that would use automated systems for innocuous purposes would need to comply with the Bill.[189] Because the Bill specifically refers to high-risk automated systems, it would be under the FTC's authority to determine whether those innocuous applications would be considered high-risk. Contrary to what critics suggest, those companies would not automatically be required to comply with impact assessments.

Nonetheless, adding more specificity into the Bill—with the differentiation between high-risk and low-risk automated systems—would give more guidance to the FTC. The FTC could better determine which companies and their AI systems would fall within their jurisdiction and within the language of the Bill. The EU Proposal in this sense presents valuable guidance for future drafters of an AI bill.

D. The 2022 Algorithmic Accountability Act

In early 2022, members of the House and the Senate reintroduced the Algorithmic Accountability Act with modifications from the 2019 Bill.[190] The press release on the 2022 Bill highlights how this new version presents updates to the 2019 Bill.[191]

The most notable difference between the two Bills is that the 2022 one does not refer to high-risk automated decisions systems but to "augmented critical decision process."[192] Unlike the high-risk automated decision systems definition in the 2019 Bill, which highlights AI discrimination and biases, the 2022 definition is broader.

As noted for the EU Proposal, which lacks mention of discrimination in its definition, the 2019 Bill's specificity is desirable.[193] Given the legislative

---

188. *Id.*

189. For example, it is not clear whether companies that use applications of analytics for items' allocation in clothing retailers based on gender would have to comply with the Bill. New, *supra* note 180.

190. Press Release, Wyden, Booker and Clarke Introduce Algorithmic Accountability Act of 2022 to Require New Transparency and Accountability for Automated Decision Systems (Feb. 3, 2022), https://www.wyden.senate.gov/news/press-releases/wyden-booker-and-clarke-introduce-algorithmic-accountability-act-of-2022-to-require-new-transparency-and-accountability-for-automated-decision-systems. This last section addresses the main differences that the author noticed with the 2019 Bill, and it is not intended to be a comprehensive analysis.

191. *Id.*

192. Algorithmic Accountability Act of 2022, H.R. 6580, 117th Cong. § 2(1) (2022). Augmented critical decision processes are "a process, procedure, or other activity that employs an automated decision system to make a critical decision." *Id.* A critical decision is one that can have "legal, material, or similarly significant effect on a consumer's life." *Id.* § 2(8).

193. *See* discussion *supra* Part III.A.

purpose to prevent algorithmic discrimination and biases, expressly including these issues in the Bill's language would further this legislative intent. Thus, the 2022 drafters should have included discrimination and bias in the definition of automated decision systems and critical decisions, instead of simply mentioning these in the impact assessment section.[194]

Finally, although the impact assessment requirements in the 2022 Bill are more extensive than the ones in the 2019 Bill, the 2022 Bill does not specifically address the human oversight requirement present in the EU Proposal. Explicitly including the human oversight requirement can counter the arguments that a bill regulating AI systems stigmatizes AI by supporting the idea that AI decision systems are less trustworthy than human decision-making.[195]

The 2019 and 2022 Algorithmic Accountability Acts are a novelty in U.S. legislative history as probably the very first attempts at the federal level to create comprehensive legislation on AI-related issues and data protection.[196] Given the extensive experience of the European Union in legislating and regulating new technologies, the EU Proposal represents a useful guide for U.S. legislators. The 2022 Bill will likely be amended, and drafters and legislators should look back at the 2019 Bill and EU Proposal for guidance. The 2022 Bill supports a conclusion that in the United States there is a willingness to address AI discrimination and bias, and other AI-related risks, and that enacting comprehensive legislation is possible.

CONCLUSION

This Note provides an overview on the issues of algorithmic bias and discrimination in the health care industry and on solutions that legislators can enact to prevent these issues. As many scholars have advocated in recent years, Congress should take a more active approach in AI regulation by enacting comprehensive legislation. The 2019 Algorithmic Accountability Act represents such an attempt. However, as this Note argues, considering the Bill's weaknesses, Congress can look at the EU Artificial Intelligence Act to improve upon the Bill. The recent introduction of the 2022 Bill proves that legislators at the federal level have not abandoned the idea of enacting this type of legislation.

---

194. *See* H.R. 6580 § 4(a)(11) (2022) (mentioning possible issues of algorithmic bias and discrimination in the "Requirements for Covered Entity Impact Assessment" section of the Bill).

195. *See* discussion *supra* Part III.B.

196. *See* MacCarthy, *supra* note 148, at 3 (highlighting that the European General Data Protection Regulation inspired the drafters of the Bill to create similar legislation).

It is nearly impossible to predict what the next ten, twenty, or hundred years will look like. We may have a reality like the one Stephen Hawking described in which computers will overcome humans, or we may not. Regardless of what the future will look like, the sound policy approach for Congress should be to enact legislation on AI that will be able to prevent AI-related issues, like algorithmic bias and discrimination in the health care industry.