Examining Social Values in the EU and China's AI Governance

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Abstract

The recent emergence of ChatGPT has started another heated debate on generative AI technologies. While generative AI is expected to drive massive global economic growth, the government faces consistent challenges in formulating AI governance that aligns with the social values rooted in the culture. Among regions that develop digital economies worldwide, the EU and China are regarded as responding to regulating AI in divergent ways. By researching governmental reports and secondary literature, this paper aims to investigate how social values are reflected in AI governance in the EU and China. To address this question, this paper provides an overview of AI history and EU and China's AI governance frameworks, such as the AI Act and the Interim Measures. It then delves into comparatively analyzing the EU and China's social values embedded in their AI governances. The Findings suggest that the EU accentuates fundamental human rights, whereas China underscores societal harmony. Further studies on the topics of AI governance are necessary in order to successfully navigate the upcoming age of generative AI.

Keywords: Artificial Intelligence, Large Language Models, ChatGPT, governance, human rights, social values.

1 Introduction

Along with the release of the Open AI "Chat Generative Pre-trained Transformer" in late 2022 (ChatGPT), the heated wave of generative artificial intelligence (AI) has come back. ChatGPT is the generative AI model that has attracted mass media's attention following Google's AlphaGo, which defeated the human world champion in the ancient Chinese board game *Go* in 2016.[1] The report shows that generative AI impacts a broad range of industry sectors such as banking, high tech, and life sciences, as well as significantly boosts economic growth, with the potential of raising the global Gross Domestic Product (GDP) by as high as 7 percent.[2] [3] Despite its enormous economic value, governments in different countries have faced various challenges in regulating this relatively new AI technology, in the aspects of social, moral, privacy, and human rights. In order to address these upcoming controversial issues, states are triggered to newly issue and implement the corresponding AI governance.

Concerning the technical concept, AI is an agent entity that can perceive and act, utilizing cognitive abilities such as reasoning, planning and learning to showcase "intelligence."[4] AI is developed to automate behaviors based on the systematic operation of data collection.[5] Generative AI refers to computational models that can generate seemingly new contents in the format of texts, images, videos, or audio from the pool of existing training data. The models of generative AI are made to power agents. Examples include recent occurrence of chatbots, which is a system that supports intelligent question-answering with humans, such as GitHub Copilot, Perplexity AI, Google Gemini, and Open AI ChatGPT-4.[6] Among various chatbots, ChatGPT is leading the way, which was released by Open AI on November 30, 2022. As explained by its name, ChatGPT belongs to one category of large language models (LLMs), which refers to the

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[1] Arthur I. Miller, *The Artist in the Machine: The World of AI-Powered Creativity* (Cambridge, MA: MIT Press, 2019).
[2] Michael Chui, Eric Hazan, Roger Roberts, Alex Singla, and Kate Smaje, "The Economic Potential of Generative AI," 2023, 3.
[3] Goldman Sachs, "Generative AI Could Raise Global GDP by 7%," Goldman Sachs, April 5, 2023, https://www.goldmansachs.com/intelligence/pages/generative-ai-could-raise-global-gdp-by-7-percent.html.
[4] Peter Norvig, *Artificial Intelligence: A Modern Approach*, 4th ed. (New York: Pearson, 2020).
[5] Sukhpal Singh Gill et al., "AI for Next Generation Computing: Emerging Trends and Future Directions," *Internet of Things* 19 (March 2022): 100514, https://doi.org/10.1016/j.iot.2022.100514.
[6] Stefan Feuerriegel, Jochen Hartmann, Christian Janiesch, et al., "Generative AI," Business Information Systems Engineering 66 (2024): 111, https://doi.org/10.1007/s12599-023-00834-7.

techniques of deep learning to train models from massive amounts of text data on the internet.[7]. From the data collected, it learns the patterns and relationships between words and sentences and herein produces fine-tuned, human-like responses in the conversations.[8] [9] Since ChatGPT's release, it has become the driving force to shape the future of AI, which has the potential to challenge the existing AI regulations.

Moreover, social values are defined as "standards, which individuals and social groups employ to define personal goals and essentially shape the nature and form of social order in a collective."[10] Besides, the term governance refers to "the mechanisms whereby societal actors and state actors interact and coordinate to regulate issues of societal concern."[11] In other words, governance approaches are regarded as the means to address the societal risks and future developments posed by the emerging technologies.[12] Therefore, this paper argues that the social values of one country are embedded in their corresponding regulations, magnified by the occurrence of generative AI models in recent years.

China and the European Union both have adopted major policies in AI, while the pathways of developing digital economies are considered to vary in two different ways that are worth further studies.[13] Hence, considering the relations of social values and governance, as well as the increasingly popular generative AI and the regulatory challenges it has brought, this paper would investigate the following research question, that is: To what extent does AI governance

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[7] M. Cascella, J. Montomoli, V. Bellini, and E. Bignami, "Evaluating the Feasibility of ChatGPT in Healthcare: An Analysis of Multiple Clinical and Research Scenarios," Journal of Medical Systems 47, no. 1 (2023): 1–5, https://doi.org/10.1007/s10916-023-01925-4.

[8] J. Haase and P. H. Hanel, "Artificial Muses: Generative Artificial Intelligence Chatbots Have Risen to Human-Level Creativity," *Journal of Creativity* 33, no. 3 (2023): 100066, 2.

[9] Fiona Fui-Hoon Nah, Rui Zheng, Jie Cai, Keng Siau, and Leida Chen, "Generative AI and ChatGPT: Applications, Challenges, and AI-Human Collaboration," *Journal of Information Technology Case and Application Research* 25, no. 3 (2023): 277-304.

[10] Stavroula Tsirogianni, Gordon Sammut, and Eunju Park, "Social Values and Good Living," in *Encyclopedia of Quality of Life and Well-Being Research*, ed. Alex C. Michalos (Dordrecht: Springer, 2014), https://doi.org/10.1007/978-94-007-0753-5_3666.

[11] Susana Borrás and Jakob Edler, eds., *The Governance of Socio-Technical Systems: Explaining* Change (Edward Elgar Publishing, 2014), 13-14.

[12] Stefan Kuhlmann, Peter Stegmaier, and Kornelia Konrad, "The Tentative Governance of Emerging Science and Technology—A Conceptual Introduction," *Research Policy* 48, no. 5 (2019): 1091.

[13] Brett Aho and Roberta Duffield, "Beyond Surveillance Capitalism: Privacy, Regulation and Big Data in Europe and China," *Economy and Society* 49, no. 2 (2020): 187–212, https://doi.org/10.1080/03085147.2019.1690275.

reflect social values in the European Union and China, posed by the development of generative AI technologies?

While drawing on the official reports posted by governments and commissions and reviewing secondary literature, the rest of this paper is structured as follows: Section 2 introduces the history of AI's development; Section 3 provides a brief summary of EU and China's AI governance; Section 4 comparatively discusses the differences of two countries' AI governance and the social values behind it. Finally, the conclusion highlights the key differences in social values and further questions that await discussions.

2 History of AI

Among numbers of myths about the recent wave of generative AI, the most misleading one is that it is a new technology in this century. Yet, the AI technology today has gone through decades of research and development, and it occurred as early as in the 1950s.[14] Before entitling AI an official name, the concept had been developed by many scholars. Among all the works, one of the most important achievements is the paper published by Alan Turing in 1950, called "Computing machinery and intelligence." In that paper, Turing raised the essential question of "Can a machine think?"[15] Specifically, Turing invented the solution to test the intelligence of the machine, namely the Turing Test that is still being used today: herein, if the human interrogator could not tell if the answer is given by a human or a machine, then the machine is considered to be intelligent.[16] Six years later, the term AI was firstly coined in 1956 in Dartmouth College, so called the "birthplace of AI," at a conference after an eight-week-long *Dartmouth Summer Research Project on Artificial Intelligence* (DSRPAI). At the conference, John McCarthy coined

[14] Stuart Russell, "The History and Future of AI," *Oxford Review of Economic Policy* 37, no. 3 (Autumn 2021): 509–520, https://doi.org/10.1093/oxrep/grab013.
[15] Turing, Alan M. *Computing machinery and intelligence*. Springer Netherlands, 2009.
[16] Michael Haenlein and Andreas Kaplan, "A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence," *California Management Review* 61, no. 4 (2019): 5-14, https://doi.org/10.1177/0008125619864925.

the term “Artificial Intelligence,” and defined it as “the science and engineering of making intelligent machines.”[17]

After the successful coining of the term in 1956, AI’s formation was significantly contributed by multiple disciplines in the last half-century. Fields that made their contribution include engineering, biology, psychology, communication theory, economics, statistics, philosophy, and linguistics.[18] Noticeably, Samuel’s checker player in 1956 learned to play at the intermediate intelligent level, followed by Feigenbaum and Feldman’s *Computers and Thought*, the book which first provided descriptions of how to work AI programs in 1963.[19] In 1966, at the Massachusetts Institute of Technology (MIT), Weizenbaum created the program that first passed the Turing Test, namely the ELIZA computer program, which was a natural language processing tool that could simulate conversations with humans.[20] The 1960s was the decade in which AI was initially supported by enterprises and organizations, including two major laboratories at MIT and Carnegie Mellon University (CMU) which cooperated with AI laboratories at Edinburgh and Stanford University.[21] After the 1970s, AI’s winter started which lasted for about 30 years. The reasons not only lay in AI’s technical limitations but also the governments’ strong criticism on AI research’s high cost such as the American Congress’ condemnation in 1973, as well as the investment failure of big capital companies.[22] Not until the late 1990s was AI stated to be revived due to the advancement of microchip manufacturing technologies which could power more advanced computers. The development of computers and the global internet caused the emergence of massive amounts of data such as texts, images, videos, and audio, which ushered the society entering the big data era.[23] A notable development was identified in 2011 when IBM’s

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[17] Stuart J. Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Pearson, 2016).
[18] Buchanan, Bruce G. "A (Very) Brief History of Artificial Intelligence." *AI Magazine* (Winter 2005): 53+.
[19] Ibid.
[20] Michael Haenlein and Andreas Kaplan, "A Brief History of Artificial Intelligence," *California Management Review* 61, no. 4 (2019): 5.
[21] Bruce G. Buchanan, "A (Very) Brief History of Artificial Intelligence," *AI Magazine*.
[22] Amirhosein Toosi et al., "A Brief History of AI: How to Prevent Another Winter (a Critical Review)," *PET Clinics* 16, no. 4 (2021): 449, https://doi.org/10.1016/j.cpet.2021.07.001.
[23] Michael A. Morris et al., "Reinventing Radiology: Big Data and the Future of Medical Imaging," *Journal of Thoracic Imaging* 33, no. 1 (2018): 4.

Watson defeated human champions in the Jeopardy TV quiz show. Along with the publishment of Apple's Siri, AI was once highly at the public's central point of discussion.[24]

Generative AI, a more advanced form of artificial intelligence, then emerged. Due to the previous inventions contributed to AI, technologies such as compute vision (CV) and natural language processing (NLP) were quickly adapted to advance generative AI. In 2014, a significant milestone was achieved due to the publishment of Generative Adversarial Networks (GANs).[25] The breakthrough occurred in 2017 when the transformer architecture was introduced by Vaswani et al. when doing tasks for NLP, which soon became the backbone for prominent large language models such as GPT and BERT.[26] Nowadays, the most popular implementation of generative AI is accredited to chatbots, leading by ChatGPT.

3 Brief of EU and China's AI Governance

In April 2021, the European Commission proposed the draft AI Act, mainly to address the risks of AI usage.[27] In May 2022, the French Council circulated the amendment of the draft AI Act, called "general-purpose AI systems" (GPAIS), which laid the foundation of the final EU's AI Act.[28] In December 2023, the Council of the EU and the European Parliament reached a political agreement on the AI Act. After the establishment of the European Commission AI Office in February 2024, 27 Members of European Parliament (MEPs) adopted the AI Act in March.[29] EU AI Act has become the first AI regulatory framework in the world. Specifically, the act aims to ensure "AI systems respect fundamental rights, safety, and ethical principles and by

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[24] Amirhosein Toosi et al., "A Brief History of AI: How to Prevent Another Winter," *PET Clinics* 16, no. 4 (2021): 449.
[25] Ian J. Goodfellow et al., "Generative Adversarial Networks," *ArXiv*, Cornell University, June 2014, https://doi.org/10.48550/arxiv.1406.2661.
[26] Yihan Cao et al., "A Comprehensive Survey of AI-Generated Content (AIGC): A History of Generative AI from GAN to ChatGPT," *ArXiv, Cornell University*, March 2023, https://doi.org/10.48550/arxiv.2303.04226.
[27] European Commission, "AI Act | Shaping Europe's Digital Future," *The European Commission*, 2024, https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai.
[28] Philipp Hacker, Andreas Engel, and Marco Mauer, "Regulating ChatGPT and Other Large Generative AI Models," *in Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency* (June 2023): 1112–23, https://doi.org/10.1145/3593013.3594067.
[29] European Parliament, "Artificial Intelligence Act: MEPs Adopt Landmark Law," 2024, https://www.europarl.europa.eu/news/en/press-room/20240308IPR19015/artificial-intelligence-act-meps-adopt-landmark-law.

addressing risks of very compelling and impactful AI models."[30] The risks are categorized into four levels: unacceptable risk, high risk, limited risk, and minimal risk. The harmful risks particularly include "AI systems that deploy harmful manipulative 'subliminal techniques'; AI systems that exploit specific vulnerable groups (physical or mental disability)," in addition to forbidding any biometric identification systems.[31] To regulate high-risk AI systems that have adverse influences on people's safety and fundamental rights, acts are enforced in eight fields (for example, law enforcement that may interfere with people's basic rights and essential private and public services).[32] Limited Risk includes the lack of transparency in AI usage to ensure humans are informed when they interact with a machine. Most importantly, the act proposed the use of sandboxes to use personal data in a safe way to foster AI innovation, which complies with the strict provisions of the General Data Protection Regulation (GDPR) issued in 2016. [33]

China, on the other hand, started the response to AI earlier. Because of the victory of AlphaGo in 2016, the China State Council released the strategy for developing AI in July 2017, the New Generation Artificial Intelligence Development Plan (AIDP). The AIDP outlines China's objective is to become the worldwide AI leader by 2030 by applying AI in a broad range of areas, such as social welfare and developing ethical standards of its usage.[34] The AIDP has been implemented by the AI Strategy Advisory Committee which was established in November 2017, alongside the Ministry of Science and Technology (MIST) and the AI Plan Promotion Office.[35] The 2021 regulation on recommendation algorithms marked the start of China's stricter governance of AI.[36] Just a few days before the release of ChatGPT, on November 25, 2022, the Chinese Communist Party (CCP) established deep synthesis regulation to address the broad regulation issues of generative AI, which should "adhere to the correct political direction," and not "disturb economic and social order".[37] In response to the increasing amount of public-facing LLMs, on April 2023, the Cyberspace Administration of China (CAC) issued the draft of a new

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[30] European Commission, "AI Act | Shaping Europe's Digital Future."
[31] Tambiama Madiega, "Artificial Intelligence Act," *European Parliamentary Research Service*, 2024, PE 698.792.
[32] Ibid.
[33] Ibid.
[34] Huw Roberts et al., "The Chinese Approach to Artificial Intelligence: An Analysis of Policy, Ethics, and Regulation," *AI & Society* 36 (2020): 36, https://doi.org/10.1007/s00146-020-00992-2.
[35] Ibid.
[36] Matt Sheehan, "China's AI Regulations and How They Get Made," *Carnegie Endowment for International Peace*, 2023.
[37] Ibid.

generative AI regulation to address the new concerns. The objectives primarily require AI applications to embody Chinese Core Socialist Values.[38] Eventually, in July 2023, CAC and six other governmental agencies released the Interim Measures for the Administration of Generative Artificial Intelligence Services (the Interim Measures).

4 Comparative Discussion

In response to the increasing usage of AI models in recent years, especially considering the latest heating of generative AI models led by ChatGPT, commissions are compelled to perceive and address various newly created risks, including decreases of human rights, impedes of autonomy, invades of privacy information, as well as intentional misuse of cyberattacks, weapon, deep fakes, espionage, etc.[39] Different countries have faced the challenges of laying down the regulation of AI usage in line with their established social values in distinct aspects.

EU has been always at the frontier to ensure fundamental human rights and individual privacy protection. These core values are deeply embedded in the EU's primary and secondary laws, including personal data protection, freedom of expression, public and private interests.[40] Thus the EU's main challenge is to implement new AI governance to ensure the emerging generative AI models are compliable with the existing human-based values.[41] As mentioned, EU AI Act encourages the use of sandboxes to process personal information lawfully to train AI models.[42] This is largely because that ChatGPT was publicly condemned for violating articles in GDPR in 2023, including the violation of privacy data leakage and transparent data processing. Like other LLMs, ChatGPT is suffered from the "hallucination effect", meaning the information generation is unverified and not trustworthy, and that the generated answers follow its internal

[38] Ibid.
[39] P.G.R. de Almeida, C.D. dos Santos, and J.S. Farias, "Artificial Intelligence Regulation: A Framework for Governance," *Ethics in Information Technology* 23 (2021): 505-525, https://doi.org/10.1007/s10676-021-09593-z.
[40] Jan J. Zygmuntowski, Laura Zoboli, and Paul Nemitz, "Embedding European Values in Data Governance: A Case for Public Data Commons," *Internet Policy Review* 10, no. 3 (2021): 1.
[41] Ibid.
[42] Ibid.

logic instead of basing on the factual realities.[43] In specific, ChatGPT exploited users' data without informing the data subject. Article 5 in GDPR indicates that data processes should be taken in a "lawful, fair and transparent" manner, but Open AI shows no indication when processing personal information.[44] GDPR states that users are granted the rights to access, delete, and transfer their personal data; while Open AI claimed to follow the regulation, scholars argued that it was not sufficient to address the individual privacy concerns.[45] EU's high attention to safeguarding individual rights is not only shown in GDPR but also in the categorization of risks level in AI Act, which prohibits biometric identification and manipulates individuals subliminally of any kind.[46]

On the other hand, China's main concern is to align the AI governance with its Core Socialist Values and Social Credit System (SCS). A report by PwC suggested that China was expected to gain the most from AI globally: that China will have a GDP of up to 26% by 2030, compared to the impacts of 9.9% in Northern Europe and 11.5% in South Europe.[47] Since economic growth has been of the central priority in China in the last 40 years, its regulation on other aspects is relevantly lacking. Thus AIDP indicates that AI can be used to actively promote the social and moral governance, improving citizens' social warfare to "live a better life" according to President Xi.[48] Moreover, the common goal of AIDP and the Interim Measures is to be align with SCS, which uses tools to address China's social problems.[49] Such regulation works based on internal surveillance, allowing government and local provinces to have access to citizens' data and to regulate their social behaviors when necessary, hence the AI regulations were critiqued to strengthen the state's governance capacity.[50] Controversially, in May 2018,

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[43] Zihao Li, "The Dark Side of ChatGPT: Legal and Ethical Challenges from Stochastic Parrots and Hallucination," *arXiv preprint arXiv:2304.14347* (2023).
[44] Ceren Yakışır, "An Evaluation of the ChatGPT Decision, Which Italy Blocked Access on the Grounds of Violation of the GDPR," (2023).
[45] X. Wu, R. Duan, and J. Ni, "Unveiling Security, Privacy, and Ethical Concerns of ChatGPT," *Journal of Information and Intelligence* 2, no. 2 (2024): 102-115.
[46] Madiega, "Artificial Intelligence Act," PE 698.792.
[47] Anand Rao and Gerard Verweij, "Sizing the Prize: PwC's Global AI Study—Exploiting the AI Revolution," *PwC Digital Services*, 2021.
[48] J. Meng, "Principal Contradiction Facing Chinese Society Has Evolved in New Era: Xi," *Xinhua*, 2017, https://www.xinhuanet.com/english/2017-10/18/c_136688132.htm.
[49] Martin Chorzempa, Paul Triolo, and Samm Sacks, "China's Social Credit System: A Mark of Progress or a Threat to Privacy?" No. PB18-14, 2018.
[50] Huw Roberts et al., "The Chinese Approach to Artificial Intelligence: An Analysis of Policy, Ethics, and Regulation," in *Ethics, Governance, and Policies in Artificial Intelligence,* 47-79 (2021).

China released the Personal Information Security Specification (the Specification), a privacy standard to ensure people have the right to control and transmit their personal data.[51] Some indicated that China's Specification is quite comparable to EU's GDPR and pointed out that the provisions in Specification were much more onerous.[52] While the majority suggested that though the Specification strives to protect privacy, the decisions surrounding data collection and usage are determined by governments rather than by legal and practical constraints.[53]

As discussed, the EU parliament addresses the challenges more from the perspective of ensuring fundamental human rights by protecting personal data privacy, while China is more concerned about reinforcing public social welfare. Scholars suggested that there is a clear political and ethical divide on the lawful usage of AI between China and Western democracies such as EU.[54] Particularly, according to AIDP and the Interim Measures, China's AI governance tends to favor national security and positive impacts on social welfare with a strict control of cyberspace rather than privacy and individual rights.[55] Yet, China also imposed quite onerous governance, the Specification, in protecting citizens' data privacy while strictly following Chinese Core Socialist Values and SCS. The emphasis on social responsibility in the community is suggested to be consistent with the crucial Confucian ethics rooted in the Chinese culture.[56] Nonetheless, according to the AI Act and GDPR, the EU's AI governance is centralized in safeguarding fundamental human rights, rooted in Europe's long history. Although the EU also highlights public interest to lawfully process personal data in GDPR, the crucial differences lie in the fact that the EU's judiciary has more autonomy to determine the permissibility of legislation, whereas China's judiciary is more subjective to the supervision and interference from the legislature.[57] Additionally, China's Interim Measures mandate AI providers to be "truth, accuracy, objectivity, and diversity" in their training data, which is considered almost impossible to achieve because the training of LLMs are highly dependent on scraping massive amounts of

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[51] Ibid.
[52] Chorzempa, Triolo, and Sacks, "China's Social Credit System."
[53] Roberts et al., "The Chinese Approach to Artificial Intelligence," 47-79.
[54] Alberto Arenal et al., "Innovation Ecosystems Theory Revisited: The Case of Artificial Intelligence in China," *Telecommunications Policy* 44, no. 6 (2020): 101960.
[55] Ibid.
[56] Pak-hang Wong, "Confucian Social Media: An Oxymoron?" *Dao* 12, no. 3 (2013): 283-296.
[57] Roberts et al., "The Chinese Approach to Artificial Intelligence," 47-79.

data on the internet.[58] The Interim Measures also require the generated content to be "true and accurate," which is regarded as impossible as well due to LLMs' unsolvable technical issue of the hallucination effect.[59] Furthermore, scholars have compared the vital differences between GDPR and SCS. It is identified that GDPR defines the individual and digital relationship through protecting personal agency and autonomy due to the presumed inviolability of personal rights and freedoms that are rooted in the Western liberal ideology. Meanwhile, SCS instead puts emphasis on promoting social harmony and ethics that aligned with Confucian values by regulating personal behaviors in the community.[60] This paper believes that the social values embedded in GDPR and SCS have been transmitted in the recent AI governance, such as in the AI Act and the Interim Measures, and the values would remain their central positions in relevant regulations in the future.

5 Conclusion

In conclusion, this paper examines the social values reflected in the AI governance of the EU and China, influenced by generative AI technologies recently. It reviews the history of AI development and the AI regulations in the EU and China, including the EU's AI Act and GDPR, as well as China's Interim Measures, Specifications, and SCS. After examination, this paper suggests that the EU prioritizes privacy and personal data protection, while China focuses on aligning generative AI applications with the SCS and Core Socialist Values. This comparative analysis highlights that the EU emphasizes individual rights based on the Western liberalism, whereas China underlies social benefits and harmony based on Confucian values.

Given the rapid evolution of AI technologies, this paper may not reflect the most recent governmental decisions and drafted AI regulations, which are still under review and, therefore, cannot include an analysis of them. Additionally, the inference drawn from the regulations, such as the references to the Western liberalism and Confucian ethics, are based on existing secondary literature rather than first-handed reports. Furthermore, there are various research questions that

[58] Sheehan, "China's AI Regulations."
[59] Ibid.
[60] Aho and Duffield, "Beyond Surveillance Capitalism," 187–212.

remain unanswered from a broad picture perspective, including: How will the future of AI regulations be shaped by the ideologies of different countries? To what extent will the race for AI governance determine the global economic and geopolitical landscape in the next ten years? To what extent does the technological advancement determine the political divisions between China, EU, and USA in the future? In a nutshell, this paper argues that governance is an important lens for reflecting a country's core values and priorities, especially today when different countries are faced with enormous technological opportunities to enhance their national power in the new information age.

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