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# AUTOMATION AND ARTIFICIAL INTELLIGENCE IN THE POSSIBLE TRANSITION TO A POSTCAPITALIST SOCIETY

Vasilis Lianos

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## Automation and Artificial Intelligence

## in the possible transition to a postcapitalist society

Vasilis Lianos

#### Abstract

Throughout history, technology and its evolution have significantly impacted the societal modes of production and organisation. The highest rise in technological evolution has been observed under the capitalist system. Technology has not, as of yet, proved to be capitalism's demise. However, some believe that advances in Artificial Intelligence and automation render them radically different technologies to those of the past and will mean capitalism's demise and the dawn of a new, post-capitalist era. This paper will assess this claim by looking at historical evidence and contemporary theoretical and empirical work to argue that, while it is possible that such technologies are radically different to those of the past and might bring about the fall of the capitalist system, such claims cannot yet be substantiated due to the early stage of the aforementioned technologies' development.

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#### Introduction

According to the Marxist theory of historical materialism, societies thus far have been characterised by class conflict. When technology reaches a point where the ruling classes cannot regulate it anymore, society evolves into something new and the societal mode of production changes. Marx and Engels believed that, when the masses have become poor enough and technology has evolved greatly, capitalism will eventually fall and give way to the final historical mode of production: Communism.

These predictions have not, as of yet, come to pass. Despite the rise of the Soviet Union, the evolution of technology and many economic crises which have brought about difficult economic conditions, capitalism has always managed to land on its feet. However, in recent years, significant and unprecedented developments in technologies related to automation and Artificial Intelligence (henceforth referred to as AI) have been observed. This has reignited debates about technology's role in the potential future downfall of the capitalist society. Many believe that automation and AI will mean that more and more people will be out of work. As their consumer power declines, a huge crisis will ensue and capitalism will fall. Others base their prediction on Marx's labour theory of value. As automation and AI will mean that no social labour will be put into production, the goods will be valueless and capitalism will fall. While capitalism has persevered, recent technological developments raise the following question: Are today's developments substantially and qualitatively different from those of the past, meaning that they will be the cause of capitalism's demise?

To tackle this question, the essay will be structured in the following way: First, the Marxist theory of how technology intertwines with societal conditions to bring about the fall of systems (including capitalism) shall be presented. Second, proposed reasons and theories regarding capitalism's survival and resilience will be outlined. Finally, a debate among Marxist theorists will be discussed: Are AI technologies and automation bound to result in either a falling rate of profit (FROP) or a decline in consumer power? In turn, can this mean that capitalism's existence will be threatened? To tackle this issue, the current AI and automation landscape will be outlined and views on what the future consequences might be will be discussed. The essay will conclude that, even though past experience might lead one to conclude that technology will not contribute to a potential capitalist collapse, the truth is not so straightforward. In reality, AI and automation technologies are bound to change the way production and market processes take place so much that making any predictions based on the observation of the past is not a good strategy. However, there is currently no evidence to suggest that these technologies will mean capitalism's demise, either. Drawing conclusions based on available evidence is premature; We cannot know the answer to the question yet. Finally, a concluding section will follow. Acknowledging our inability to predict capitalism's future may help researchers refrain from engaging in wishful thinking when pondering on the future.

#### The role of technology in social change

Marx and Engels believed that there is one crucial material factor which motivates historical change: Technology. As the mode of production evolves, so do the means of production. When a new mode of production comes in place, it revolutionises technology, and thus, the way production takes place. However, after some time, the relations of production cannot regulate technology anymore. This, coupled with class conflict, revolutionises the mode of production and brings forth a new historical era. The most recent step in the social evolutionary process, capitalism, has been the most beneficial system yet.<sup>1</sup> However, capitalism would eventually reach a point when the people would be so poor, and the technology so evolved, that revolution would inevitably take place and communism would take capitalism's place. Despite numerous insights into how capitalism works, and despite what the Marxists of the past would expect, the communist revolution has not yet occurred.

#### Why has capitalism not collapsed?

Various reasons have been proposed as to why the capitalist system has proven to be so resilient. In 'Imperialism, the Highest Stage of Capitalism', Lenin explains how he thought imperialism to be the

<sup>&</sup>lt;sup>1</sup> Karl Marx and Friedrich Engels, The Communist Manifesto (New York: Penguin Books, 2011).

highest, ultimate stage of the capitalist system.<sup>2</sup> When the European big powers had utilised all the resources their markets provided for them, economic crisis and poverty would be inevitable. However, capitalism still had one last ace up its sleeve: Imperialism.

When the markets the Europeans had access to started to drain, the European powers expanded all over the globe. By dominating other peoples and forcing them to participate in the global markets, capitalism was reinvigorated. By taking advantage of the foreign markets and extracting their resources to their own gain, they manage to keep their own people happy domestically while those in the colonial areas suffered because of it. Because the domestic populations were kept happy, they did not have a reason to revolt, and the colonial peoples were too weak to.

Imperialism, Lenin argues, also changed how capitalism looked. First, it entered into an era of globalisation, emphasising the extraction of raw materials and connecting globalised markets. Second, it created monopolies. After multiple boom-and-bust cycles, wealth was concentrated into the hands of fewer and fewer actors, and certain banks also became gigantic and incredibly powerful. Furthermore, financial capital started taking central stage in the capitalist society. When one looks at work describing the current era of financialization, they can understand the accuracy of Lenin's claims.<sup>3</sup> What is very

<sup>&</sup>lt;sup>2</sup> Vladimir Lenin, Imperialism: The Highest Stage of Capitalism (London: Penguin, 2010).

<sup>&</sup>lt;sup>3</sup> Costas Lapavitsas, "Financialised Capitalism: Crisis and Financial Expropriation", Historical Materialism, [online] 17(2) (2009), 114–148. doi:10.1163/156920609x436153; Natascha van der Zwan, "Making sense of financialization", Socio-Economic Review, 12(1) (2014), 99–129. doi:10.1093/ser/mwt020.

significant and highly relevant to this discussion is the importance of technology in the spread and the globalisation of financialisation, which became its basis and allowed for such developments to take place.<sup>4</sup>

Others not adopting a Marxist perspective argue that, under capitalism, technology does not interact with social developments in ways that might bring about its downfall. On the contrary, capitalism allows for technological growth which itself benefits the capitalist system and the people living under it. In the past, they claim, technology has threatened certain professions and left some people temporarily out of employment. In the long term, however, these developments benefitted society at large.

According to Autor, all the past worries about technology resulting in joblessness and crisis were unfounded.<sup>5</sup> Technological developments do not result in crisis. On the other hand, automation has increased production and profits. In turn, this growth has resulted in the need for more labour. Indeed, technology may have changed the labour landscape. However, jobs were not eradicated. Rather, people found themselves working jobs that complemented the machines. What is more, thanks to machines, Frey argues, many people stopped working dangerous and physically demanding jobs.<sup>6</sup> While some

<sup>&</sup>lt;sup>4</sup> Gerald F. Davis, Managed by the markets: how finance reshaped America (Oxford ; New York: Oxford University Press, 2011).

<sup>&</sup>lt;sup>5</sup> David H. Autor, "Why Are There Still So Many Jobs? The History and Future of Workplace Automation", Journal of Economic Perspectives, [online] 29(3) (2015) .3– 30. doi:10.1257/jep.29.3.3.

<sup>&</sup>lt;sup>6</sup> Carl Benedikt Frey, The technology trap: capital, labor, and power in the age of automation (Princeton, New Jersey: Princeton University Press, 2019).

people suffered consequences, the vast majority of the workforce enjoyed significant benefits thanks to technological progress and automation. Frey argues that the past century of the capitalist era was incredibly significant, marking the most important era of history from a technological perspective. Such a boost to the human standard of living had never occurred before. This is another important factor explaining the resilience of the capitalist system and setting it apart from previous systems which could not handle technological change.

These factors combined meant that capitalism proved to be more resilient than its Marxist critics would expect. However, the world's current state of affairs, both technological and economic, have made the debate on capitalism's potential demise resurface.

#### AI and Automation today: How is this time different?

Dyer-Witheford et. al. present a debate that is highly relevant to the current discussion.<sup>7</sup> It is in the capitalist's interests to replace labourers with machines in order to maximise profit. If that happens, a large part of the population will be out of work. Therefore, by definition, their capacity to buy goods (consumer power) will decline and capitalism will inevitably fall. The other side of the debate has its roots in Marx's work on the concept of a falling rate of profit (FROP). As Marx argues in Capital, the value of goods is set by the labour put into producing them.<sup>8</sup> If machines produce the goods, then there is no

<sup>&</sup>lt;sup>7</sup> Nick Dyer-Witheford et. al., Inhuman Power: Artificial Intelligence and the Future of Capitalism (London: Pluto Press, 2019).

<sup>&</sup>lt;sup>8</sup> Karl Marx, Capital: a critique of political economy (United States: Madison Park, 2010).

labour put into them, and the goods are valueless. Therefore, capitalists cannot make profit. Without these market institutions, capitalism cannot exist and will inevitably fall. We should now see how, and to what degree, such developments came about on the basis of technological progress in the past.

Marx argued that, as the technology in production evolves, then less profit would be made for the capitalists in the sector where the technology was introduced.<sup>9</sup> This meant that capitalism did not have the capacity to continue successfully forever. However, some economists doubted such claims. Okishio formulated a theorem which stated that, as long as wages persist, then technology which makes the production of single units cheaper will certainly bring raising profits to the capitalists.<sup>10</sup> In reality, profit has not declined for the global capitalists. This can be seen by taking a look at wealth concentration. Despite production technologies constantly evolving, the world's rich have only been getting richer in comparison with the world's poor , who are getting poorer.<sup>11</sup> Therefore, theory notwithstanding, FROP has not taken place in such a way as to threaten capitalism's existence.

A similar situation holds true with the concept of a potential decline in consumer power. Marx believed that there is a tendency in the

<sup>&</sup>lt;sup>9</sup> Karl Marx, Capital: Vol. III (Penguin Classics, 1993).

<sup>&</sup>lt;sup>10</sup> Nobuo Okishio, 'Technical Changes and the Rate of Profit", Kobe University Economic Review, 7 (1961), 85–99.

<sup>&</sup>lt;sup>11</sup> Deborah Hardoon and Elena Suckling, "Inequality: Global trends", [online] Development Initiatives (2022), <u>https://devinit.org/resources/inequality-global-trends/#:~:text=The%20poorest%2050%25%200f%20the%20popula-tion%20own%20just%202%25%200f</u>

thinking of capitalists to replace workers with machines.<sup>12</sup> Eventually, workers would be replaced to such an extent that they would not have wages anymore. Therefore, their ability to buy goods would diminish and capitalism would experience crisis. However, as we said, despite the fact that some jobs were lost, people were placed in different employment. Mass unemployment due to technology did not occur. As shown by the rising profits of the capitalists, they did not have problems selling their goods (or services) to the general population. In addition, even if it did, such problems have been dealt with before within capitalist boundaries. Keynesian theory and practice, with their focus on providing employment to allow for the market to function, managed to save the population from mass unemployment in the past. Until now, history has not provided any evidence that mass unemployment due to machinery will occur.

The mention of Keynes in such a context cannot but be accompanied by discussion on government intervention, a possibly key factor in the debate which is often missed. In the past, such interventionist policies have saved countries from great crises. A focal example is found during the Great Depression. With a combination of Keynesian economic policy regarding actions such as promotion of employment and price control, and with the adoption of other interventionist measures, the American government managed to get its economy out of its gravest economic crisis and into its most prosperous era. However, this does not always occur. Intervention is often characterised by political corruption or, simply, failure.

<sup>&</sup>lt;sup>12</sup> Marx, 2010.

Increased use of AI technologies may indeed bring about joblessness. In theory, this could mean that the jobless would revolt against the system to ensure their survival. A way for this to be averted, however, would be to increase redistribution to a massive scale. This would mean that the profits of the very rich would have to be taken away from them, at least partially. In this case, the capitalist system would indeed be changing, but not in a radical, revolutionary way. Such an organic evolution would be the next step of the capitalist system, and we would be talking about a more collective form of capitalism instead of a different system altogether. Still, experience from today does not point us towards that direction. Instead of the ground being paved for redistribution, we see increased concentration of wealth into the hands of the very rich, with the global rich getting richer and the poor getting poorer. As Marx and Engels' famous quote about the modern state being a committee that handles the matters of the bourgeoisie seems to be more relevant than ever, the only way for the system to change, if it ever will, will be radical and revolutionary instead of organic and natural.<sup>13</sup>

Of course, this lack of distribution is not a natural phenomenon of some sort. Rather, it occurs due to political will or, better put, due to a lack thereof. And the consequences of AI technologies will be based on that (lack of) political will. Currently, the world's big AI powers are the world's richest countries, the United States and China. These countries have very different distribution levels. In the United States, the people are left without governmental care and the inequality gap

<sup>&</sup>lt;sup>13</sup> Marx and Engels, 2011.

constantly widens.<sup>14</sup> China is a completely different situation. The quality of life of the masses constantly rises and the people have access to more services than ever before. In addition, inequality keeps declining.<sup>15</sup> Clearly, the political will in each country is different. It makes sense that the way AI will be utilised will be different, thus rendering its consequences different as well. And if China were to follow through its with its people-friendly policies, then systemic change will be less likely to occur there. Still, as has been mentioned before, this technology and its consequences are bound to be so different that past experience cannot be relied upon to draw concrete conclusions, and it will be very interesting to observe developments in both countries in the coming years.

As has been proven by reality, neither FROP nor some sort of decline in consumer power tended to materialise; At least not in such a way as to bring the fall of capitalism about. To a large extent, capitalism's ability to ensure employment is the reason behind its resilience. However, improvements in machinery and automation in the past were not as radical as today. Previously, even where machines replaced the people who carried out the physically demanding work, it was still people who would operate those machines. Even with automation, people still had to make sure machines were operated correctly and, of course, programme them. However, with AI, machines have become intelligent themselves. And some scenarios see

<sup>&</sup>lt;sup>14</sup> Juliana Menasce Horowitz et. al., "Trends in U.S. income and wealth inequality", [online] Pew Research Center (2020), <u>https://www.pewresearch.org/social-</u> <u>trends/2020/01/09/trends-in-income-and-wealth-inequality/</u>.

<sup>&</sup>lt;sup>15</sup> Sonali Jain-Chandra et. al., "Inequality in China – Trends, Drivers and Policy Remedies", International Monetary Fund (2018).

machines operating on their own and carrying out many different types of activities in the near future.<sup>16</sup> As this would mean that machines have become intelligent, somewhat autonomous and capable of carrying out complex tasks, AI technologies may soon be radically different from those of the past.

Indeed, a reason why automation in the past did not bring about joblessness was that machines were complimentary to human labour. An interesting example is advancements in medical technology. In the past, machines would help doctors observe places of the human body that they could not before. Technology has allowed endoscopic procedures such as colonoscopy and gastroscopy to take place. While the machines were essential, they needed the doctors to operate them and make diagnoses. With current technology, not only can machines undertake the examination themselves, but they can now make their own diagnoses also.<sup>17</sup> Such technology is at a very early stage and is bound to become more advanced. When machine can do a doctor's job, it is not in the financial interest of a private hospital owner to hire a gastroenterologist. In addition, such technology has been on the rise in various service/non-production industries. Machines have started writing academic papers, delivering goods to houses, providing care

<sup>&</sup>lt;sup>16</sup> Ted Goertzel, "The path to more general artificial intelligence", Journal of Experimental & Theoretical Artificial Intelligence, 26(3) (2014), 343–354. doi:10.1080/0952813x.2014.895106.

<sup>&</sup>lt;sup>17</sup> Yogesh Kumar et. al., "Artificial intelligence in disease diagnosis: a systematic literature review, synthesizing framework and future research agenda", Journal of Ambient Intelligence and Humanized Computing, 1–28 (2022). doi:10.1007/s12652-021-03612-z.

services to the elderly etc.<sup>18</sup> It should be noted that they do not just help carry out these tasks. They do it them themselves. Furthermore, this process is not limited to services but also occurs in factories and production sites. Without having to spend too much money, factory owners and managers have managed to produce goods of a good quality, at a high quantity, at very little cost and make a higher profit. In addition, AI means that less working time has to be put in production and less workers are occupied in the production process. This has meant that the 'unskilled' workers will have problems finding work and fitting in, while those skilled in computation, machine learning and thriving technologies will be able to more easily find work.<sup>19</sup>

As we saw earlier, neither FROP nor a decline in consumer power materialised in such a way as to bring about crisis. However, the situation today is radically different. Therefore, making predictions and assumptions about the future on the basis of the past and on pattern recognition, while often a good strategy, is now rendered void. Due to the aforementioned technological developments, our knowledge

atimes.com/news/strategy-and-management/the-tech-behind-fedexs-robot-thatwill-deliver-goods-at-your-doorstep/72152262?redirect=1; Zoë Corbyn, "The future of elder care is here – and it's artificial intelligence", [online] the Guardian (2021). https://www.theguardian.com/us-news/2021/jun/03/elder-care-artificial-intelligence-software; Alex Hern, "AI bot ChatGPT stuns academics with essay-writing skills and usability" [online] the Guardian (2022). <u>https://www.theguardian.com/technology/2022/dec/04/ai-bot-chatgpt-stuns-academics-with-essay-</u> writing-skills-and-usability

<sup>&</sup>lt;sup>18</sup> Riya Pahuja, "The tech behind FedEx's robot that will deliver goods at your doorstep", [online] ETCIO.com (2019). <u>https://cio.economictimes.indi-</u>

<sup>&</sup>lt;sup>19</sup> Carl Benedikt Frey and Michael A. Osborne, "The Future of employment: How Susceptible Are Jobs to computerisation?", Technological Forecasting and Social Change, [online] 114(1) (2017), .254–280. doi:10.1016/j.techfore.2016.08.019.

regarding an answer to the debate is back to square one. Indeed, the evolution of technology did not see profits fall, nor did it see the majority of the world's population unable to afford goods and consume. However, this does not mean that the situation will stay the same. Technology is bound to be so unrecognisable that making assumptions on how technology will impact capitalism in the future on the basis of how it did in the past will be like making predictions for the future of the international environment on the basis of how the ancient Greek city-states behaved. There is not much, if anything, to lead us to believe that AI and advanced automation fit, or help bring about, the Marxist predictions about capitalism's fall. In reality, we simply cannot know. However, this does not mean we have hit a dead end. Rather, this realisation can help us change a course of action. If we look at the new technologies as something essentially new, and if we keep observing their development and their impact without making quick assumptions, then we can develop new perspectives and frameworks with which to engage in research in the subject.

#### Conclusion

Humanity is on the brink of immense technological advancements. Artificial intelligence and automation technologies are bound to change the world. Two fields which are likely to go through major changes are the workplace and the production site. From those who provide services to those who produce goods, the lives of the world's workers will not be the same. So significant is the evolution of these technologies that some Marxists believe that this evolution might bring about the fall of the capitalist system, either on the basis of a falling rate of profit or of a decline in consumer power. While technological evolution did not do this in the past, this does not mean anything as AI now renders the playing field different. In all actuality, there is no hard evidence to suggest that things will remain the same. On the other hand, due to the radically different nature of the new technologies, there is no hard evidence to suggest the opposite, either. Is this time different? Right now, we simply cannot know. In order to be able to make any sort of prediction about the future, we will need to assess the impact of these new technologies on the workforce in the coming years.

## **Bibliography**

- Autor, David H. "Why Are There Still so Many Jobs? The History and Future of Workplace Automation." Journal of Economic Perspectives 29, no. 3 (2015): 3–30. <u>https://doi.org/10.1257/jep.29.3.3</u>.
- Corbyn, Zoë. "The Future of Elder Care Is Here and It's Artificial Intelligence." the Guardian, 2021. <u>https://www.theguardian.com/usnews/2021/jun/03/elder-care-artificial-intelligence-software</u>.
- Davis, Gerald F. Managed by the Markets: How Finance Reshaped America. Oxford; New York: Oxford University Press, 2011.
- Dyer-Witheford, Nick, Steinhoff, James, and Kjøsen, Atle Mikkola. Inhuman Power: Artificial Intelligence and the Future of Capitalism. London: Pluto Press, 2019.

- Frey, Carl Benedikt. The Technology Trap: Capital, Labor, and Power in the Age of Automation. Princeton, New Jersey: Princeton University Press, 2019.
- Frey, Carl Benedikt, and Osborne, Michael A. "The Future of Employment: How Susceptible Are Jobs to Computerisation?" Technological Forecasting and Social Change 114, no. 1 (2017): 254–80. https://doi.org/10.1016/j.techfore.2016.08.019.
- Goertzel, Ted. "The Path to More General Artificial Intelligence." Journal of Experimental & Theoretical Artificial Intelligence 26, no. 3 (2014): 343–54. <u>https://doi.org/10.1080/0952813x.2014.895106</u>.
- Hardoon, Deborah, and Suckling, Elena. "Inequality: Global Trends." Development Initiatives, 2022. <u>https://devinit.org/resources/inequality-global-trends/#:~:text=The%20poorest%2050%25%200f%20the%20popula-</u> tion%20own%20just%202%25%200f.
- Hern, Alex. "AI Bot ChatGPT Stuns Academics with Essay-Writing Skills and Usability." the Guardian, 2022. <u>https://www.theguardian.com/technology/2022/dec/04/ai-bot-chatgpt-stuns-academics-with-essay-writing-skills-and-usability.</u>
- Horowitz, Juliana, Igielnik, Ruth, and Kochhar, Rakesh. "Trends in U.S. Income and Wealth Inequality." Pew Research Center. Pew Research Center, 2020. <u>https://www.pewresearch.org/socialtrends/2020/01/09/trends-in-income-and-wealth-inequality/</u>.
- Jain-Chandra, Sonali, Khor, Niny, Mano, Rui, Schauer, Johanna, Wingender, Philippe, and Zhuang, Juzhong. "Inequality in China – Trends, Drivers and Policy Remedies." IMF, 2019.
- Kumar, Yogesh, Koul, Apeksha, Singla, Ruchi, and Ijaz, Muhammad Fazal. "Artificial Intelligence in Disease Diagnosis: A Systematic Literature Review, Synthesizing Framework and Future Research Agenda." Journal of Ambient Intelligence and Humanized Computing, 2022. <u>https://doi.org/10.1007/s12652-021-03612-z</u>.

- Lapavitsas, Costas. "Financialised Capitalism: Crisis and Financial Expropriation." Historical Materialism 17, no. 2 (2009): 114–48. https://doi.org/10.1163/156920609x436153.
- Lenin, Vladimir. Imperialism: The Highest Stage of Capitalism. London: Penguin, 2010.
- Marx, Karl. Capital: A Critique of Political Economy. United States: Madison Park, 2010.
- Marx, Karl. Capital: Vol. III. Penguin Classics, 1993.
- Marx, Karl, and Engels, Friedrich. The Communist Manifesto. New York: Penguin Books, 2011.
- Okishio, Nobuo. "Technical Changes and the Rate of Profit." Kobe University Economic Review 7 (1961): 85–99.
- Pahuja, Riya. "The Tech behind FedEx's Robot That Will Deliver Goods at Your Doorstep." ETCIO.com, 2019. <u>https://cio.economictimes.indiatimes.com/news/strategy-and-management/thetech-behind-fedexs-robot-that-will-deliver-goods-at-your-doorstep/72152262?redirect=1.</u>
- Van der Zwan, Natascha. "Making Sense of Financialization." Socio-Economic Review 12, no. 1 (2014): 99–129. <u>https://doi.org/10.1093/ser/mwt020</u>.

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It has been noted that it is easier to imagine the end of the world than the end of capitalism, invoking the need for serious reflection on the end of the existing order and a transition to a postcapitalist way of life. Yet the future of the world economy is but one of the aspects of postcapitalism. After all, capitalism itself might be prima facie an economic system, but it has evolved into a comprehensive political, cultural, anthropological and international order. Postcapitalism, however it might evolve, is not merely the modification of an economic system; it will prove to be a new political, cultural, anthropological, civilisational paradigm - a new era indeed. A dystopian one, a utopian one, or anything in between. And the turbulences of the gradual transition are to be witnessed by all. The oligarchic decline of liberal democracy engenders countless variations of authoritarian tendencies; the supply chain of tributes for the global minotaur are increasingly interrupted; novel desiderata for emancipation are articulated; the chasms between megacities and provinces nurture silent, cold civil wars; the emergence of a non-Anglophone, non-Atlantic, non-liberal, non-bipartisan state as the planet's largest economy is just around the corner, overturning a twocenturies-old order; the changes in global demography and geopolitics are vertiginous; climate change is threatening our very existence. Transformations of gigantic proportions radically reshape the world before our very eyes.

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