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Political Philosophies and Practices for the Digital Revolution and Artificial Intelligence: A Chinese-European Comparative Perspective

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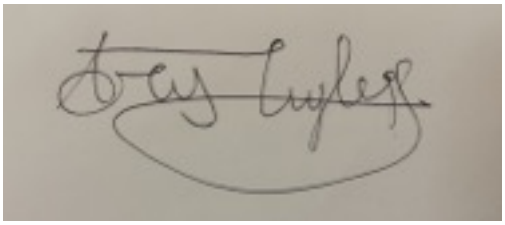
DECLARATION

I hereby declare that this thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis.

Rome, 8 September 2021



Acknowledgment

I believe that this master thesis is the culmination of a long journey I started when I was in primary school. Since I was a child, I had a deep interest in studying, inquiring, and exploring new possibilities. Nonetheless, I would have never arrived so far without the sustain and the love of all the important people of my life.

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摘要

2020-2030年将是第四次工业革命（数字革命）发展成熟的年代。但仅将这场革命描述为工业革命则过于狭隘，因为它将给世界经济和政治领域带来巨变。人工智能（AI）作为一种一般用途技术，其应用可以扩展至各类人类活动领域，也是此次科技革命中影响最大的创新驱动力。人工智能的飞速发展已经给欧洲自由民主国家和东方儒家社会带来了严峻的政治挑战，但在未来十年中，这类挑战将成倍增长。劳动力的瓦解、财富的集中、社会和政治的量化、避免技术极权主义和发展数字民主政体、建立人工智能的伦理框架等，只是为有效治理此类技术而产生的一般政治理论和国家必须系统性认识的一些关键主题。尽管技术治理可被视为是不含其他色彩且仅是技术官僚主义的，但本研究的目的是为了说明关于上述各类挑战的回答应当是多方面的，且受各国政治哲学、传统和公共道德的影响。

本文将通过比较中国和欧盟对人工智能当前的战略设计和道德框架，将理论分析与现实世界相结合。出于研究具有不同政治理论和公共道德的两个世界文明的意愿，并为此问题提供欧洲自由主义和传统中国儒家的解释，本文将欧洲和中国作为比较研究对象；通过比较二者，有助于理解每个社会现有的政治哲学和公共伦理对于诸如人工智能一类的数字工具的治理逻辑和伦理的形成有重要影响。

ABSTRACT

The 2020-2030 decade will be that of the mature development of the digital revolution. However, conceiving this revolution only as industrial is too restrictive since it is likely to represent an incredible transformation in the world economy and politics and human self-perception. Artificial Intelligence (AI) is the most impactful of such innovative process drivers. It is considered a General Purpose Technology, as its application can be spread to several human activities domains. The extremely rapid development of AI is already raising severe political challenges, both to European liberal democracies and eastern Confucian societies, but they will grow exponentially in the next decade. Disruption of labor, wealth concentration, quantified society, and politics,

avoidance of techno-totalitarianism and development of working digital democracies, and creating an ethical framework for AI are just some of the key topics that political theory in general and states specifically have to systematize to offer effective governance of such technologies. Even though technological governance can be perceived as neutral and merely technocratic, the research aims to demonstrate that the answers to the challenges are multifaceted and influenced by each country's political philosophy, traditions, and public ethics.

The demand to integrate the theoretical analysis with a real-world counterpart led to focus on the current political strategy and ethical framework of China and the European Union towards AI. The selection of cases is grounded on the willingness to study two poles of world civilization with different political theories and public ethics to provide a European-liberal and a Chinese-Confucian approach. The comparison is fundamental to prove that any governance and ethics for digital tools such as AI is co-dependent to each society's existing political philosophy and public ethics.

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INTRODUCTION

Contemporary world is shaken by massive crises, changes, fears, and hopes. The Covid-19 pandemic is pushing the current economic, political, and social systems to their functionals and structural limits, showing the necessity of innovation in theoretical paradigms and actual practices.

Great expectations have been given to the positive transformative power of the digital revolution, perceived as a salvific and a possible way out of the present challenges. Within the trends of such revolution, considerable attention is devoted to the effects of the development of artificial intelligence systems (AI) by population, policymakers, managers, and academia. AI, intertwined with Big Data, is probably the main driver of the digital revolution and is a General Purpose Technology. As a result, its creation and applications are likely to generate massive transformation in all the spheres of economics, politics, society, psychology, and human life. The ascent of the digital revolution and AI will cause an epochal transformation for humanity, which generates high potentials and risks. What is necessary is not only to promote cutting-edge technical innovations but also to provide an efficient governance model and a harmonic and trustworthy ethical framework.

As a result, various governments and supranational institutions are elaborating an official strategy for AI development and utilization while in parallel conceiving ethical frameworks to understand which principle its use should be grounded on and how to implement such technology in an acceptable and not harmful manner.

Two of the most advanced official strategies and ethics on AI have been issued by China and the European Union. China and Europe lie at the two extremes of the Eurasian continent. Not only are they geographically opposite, but they also represent two very different patterns of civilization. Until the end of the 20th century, their economic production, social structures, political systems, and cultural traditions were incredibly different, and despite the homologating trend brought by globalization, they remain highly divergent. China and Europe, whose current representative political entity is the EU, are two centers of human civilizations, and as such, they have founded distinct political theories and ethics over history. All the above information supplied, what the research intends to demonstrate is that how any society conceives AI strategies, ethics and applications is not culturally indifferent but historically and logically dependent on each civilization's political philosophy and ethics, rejecting any thesis of cultural neutrality of philosophy of technology. The aim is to develop a cross-cultural digital-AI political philosophy and ethics to

mitigate narrative polarization and spread the conscience of the necessity of dialogue and reciprocal acknowledgments in the field of digital philosophy in the world community and especially between China and the EU.

In order to expand upon the analysis, the research is structured as follows. Chapter 1 studies the digital revolution and AI as its main driver, trying to summarily show the epochal nature of the digital revolution and what AI and Big Data are. In doing so, a focus is given to AI's economic impact, both for industry and for the labor market and to AI-related political challenges, both in international relations and domestic politics.

Chapter 2 is dedicated to China, considered both in its nature of Zhongguo, political entity, and Zhonghua, civilization center. The study investigates the role of Confucianism as the soul of Chinese ethics to show its resilience over time and how it is still central to Chinese ethics. In addition, an in-depth explanation of socialism with Chinese characteristics is given. Departing from the foundational principles of Chairman Mao Zedong to arrive at current Xi Jinping's thought, Socialism with Chinese characteristics is described as the official political theory of China, to explicate how it shapes actual policy-making. Then in the light of the identified Confucianist identity and Socialist with Chinese characteristics and political theory, national AI strategy, and public ethics are scrutinized, also in practical terms by inquiring the policy on tracking-app applications.

Chapter 3 is devoted to the analysis of Europe as a civilization center and the European Union as the political entity representative of the continent. The structure is symmetrical to that of chapter 2. The first part makes a genealogy of European political philosophy and ethics, explaining its Greek-Roman roots and the modernization process launched by liberalism and Enlightenment thought. To these pillars are added the conceptualization of the contemporary thought of welfare states, federalism, protection of human rights, arisen on the ashes of WWII and totalitarian disaster. Finally, the creation and the functioning of the EU is briefly described to be able to study how it structures its AI strategy and public ethics and connecting it to its political philosophy and ethical tradition.

The conclusion furnishes a final comparison between China and Europe to underline their differences, show respective strengths and weaknesses and explaining why a cross-cultural approach to digital and AI philosophy is not only necessary but logically correct.

CHAPTER 1: ACKNOWLEDGING DIGITAL REVOLUTION AND ITS DRIVERS: ARTIFICIAL INTELLIGENCE AND BIG DATA

1.1: DIGITAL REVOLUTION AND HISTORICAL CONTEXT

What the contemporary world is living is a period of massive and unpredictable transformations, which are revolutionizing the whole globe. The years 2020 and 2021, apart from the year of the Covid-19 pandemic, will also be remembered as the year that accelerated the digital revolution. However, such a revolution has deeper roots and has started clearly manifesting in the early 2000s. Of course, its basis is the marriage between digitalization thanks to the Internet and globalization. Besides, the digital revolution is peculiar because it is simultaneously an industrial revolution and a scientific revolution.

The term fourth industrial revolution is coined by Klaus Schwab (Schwab: 2015), founder of the World Economic Forum. Even if the digital revolution is considered a peculiar event, it can not be detached from the chain of previous modern industrial revolutions, which substantially transformed production and economic systems, and therefore society and politics (Min, David, Suk: 2018). A historical summary can help clarifying the process.

-First industrial revolution: it started in 1760 with the invention of the steam engine. The primary source of energy was coal, which replaced human physical force. The dominant means of transportation became the train, while the steel and textile sectors were the prevailing economic activity. It favored the transition from a feudal—farming based-rural society to a modern-industry based-urban society. Also, since it took place mainly in Europe and the United States, it provided the Western world with the material and technological superiority that allowed it to strengthen its colonialist activity.

-Second industrial revolution: it started in 1900 with the invention of the internal combustion engine and was sustained by the deployment of electricity and oil as the main source of energy. Car transportation was added to trains and metallurgy and automobile industries became dominant. Fordism became the main economic model of production, employing assembly line for a supply model of mass production and a subsequent demand model of mass consumption.

-Third industrial revolution: it started in 1960 grounded on new sources of energy such as nuclear and natural gases. The main achievement was the invention of industrial robots and the increasing use of the computer with always improving processing systems, which made possible the automation of highly complex arithmetic and administrative work (Helbing 2018). The wide-

spread use of the Internet represented the peak of the third industrial revolution and settled the fourth one.

-Fourth industrial revolution: it started in the early 2000s and still has to reveal all of its potentials. It is grounded on the main achievement of the previous revolution, namely globalization and the Internet, which from the tiny ARPANET network created in 1969 to connect 4 American universities has now the dimension of 50 billion integrated systems, with zettabytes of data. However, even if a pattern of continuity can be found, “it differs in speed, scale, complexity, and transformative power compared to previous revolutions” (Min, David, Suk Hi; p94: 2018). It is evolving at an exponential rate rather than a linear (Schwab 2015). It is guided mainly by “four drivers: ubiquitous high-speed mobile internet; artificial intelligence; widespread adoption of big data analytics; and cloud technology” (WEF 2018), while green and sustainable energies should become the primary. It implies significant achievements such as Genetic Engineering, NBIC technologies, 3D printing machines, and constantly improving performative artificial intelligence systems. The digital revolution's leverage in economic terms is still not understood as it will violently impact the labor market, almost all sectors, all industries, and all countries (Schwab 2015). From a history of science perspective, the digital revolution represents the fourth scientific and therefore metaphysical revolution for the Western world, as it does not shape only the way the world is materially built, but also the way it is conceptually organized and how humanity represents reality and self-represent itself (Floridi 2019). Being the digital the fourth revolution the previous are:

-Copernican revolution: it started during the 16th century and challenged the geocentric representation of the universe, replacing it with the heliocentric one, deleting from human consciousness the thought of being the center of the universe.

-Darwinian revolution: it started during the 19th century and showed humanity neither that its existence was linked to any God-like will nor that it was the king of the biological kingdom, but just a successful product of evolutionism.

-Psychoanalysis revolution: it took place between the end of the 19th century and the beginning of the 20th century, under the spell of the work of Sigmund Freud. The studies conducted on the human mind found the existence of the sub-conscious, a fundamental element of our behavior and mind that overcome our conscious rational scrutiny. As a result, man was no more even in total control of his/her mind.

-Digital revolution: it started in the '50s thanks to the first creation of primitive systems of artificial intelligence and computing. In 70 years, it led to the creation of the Internet, complex AI systems, supercomputing, social media, virtual reality, augmented reality, cybernetics, human-

machine interface, to quote some inventions that are at the center of present lives and promise to be at the center of future's ones. Also, the digital revolution is producing an information explosion, similar to that generated by the printing press (ESPAS 2019) invented by Gutenberg in 1455 in Europe ad Bi Sheng in 1041. It led to paradoxical results: on one side, it gave humanity the possibility of having real-time and ubiquitous information and knowledge, while on the other side is leading to the creation of AI systems, which are challenging the throne of humans as the only intelligent entity.

Therefore, the digital revolution is transforming the economic, social, and political systems and human psychology and its paradigm to conceptualize and organize the world.

Two key concepts are useful to explain the digital environment's leverage in the contemporary world: the technosphere (Haff 2014) and the infosphere (Florida 2017). They help understand that nowadays, manufactured technological tools, infrastructure, and the Internet are an integrated part of Earth's ecosystem.

The technosphere "includes the world's large-scale energy and resource extraction systems, power generation and transmission systems, communication, transportation, financial and other networks, governments and bureaucracies, cities, factories, farms, and myriad other 'built' systems, as well as all the parts of these systems, including computers, windows, tractors, office memos and humans" (Haff 2014; p127). All the technological infrastructure humanity has built, have reached such an extension that can be confronted to that of the other "spheres" of the Earth (biosphere, geosphere, etc..) from whom humans are completely co-dependent. It will be interesting to see in the future whether the spread of advanced artificial intelligence will provide the technosphere with self-awareness. An extreme futurist theory states that intelligent electronic devices are the new frontier of conscious life and that they will rule themselves as a species whose survival is based on such technosphere such as carbon-based living beings depends on the biosphere (Lovelock 2020).

The infosphere is the online environment composed by the Internet and all the human beings who use them as a tool, inhabiting the net and because of its extension, it can be defined as an ecosystem in itself (Floridi 2014). It is the sea of data every person navigates in every day, that shapes its personal lifestyle and thoughts.

Nevertheless, the digital revolution has to be studied in its proper historical context. It is attested that the first two decades of the 21st century have prepared the ground for a significant transformation in the world as a whole and that the decade 2020-2030 will experience dramatic transformation and a change of epoch (Helbing 2018). A large part of scholars acknowledges that humanity has entered a new era: the Anthropocene. From a geological point of view, the Anthro-

pocene follows the Holocene, as it would represent the geological era where “major ongoing anthropogenic processes may be leaving durable marks (i.e. million years on the planet)” (Jamieson, Di Paola p56: 2016). Even if the Anthropocene is still not accepted as an official geological classification, it is still a helpful category to understand the current trend of contemporary historical context: humanity has highly impacted the world, it has the illusion of imposing human mastery on nature and technology is no more a simple tool, but an integral part of human nature (Jamieson, Di Paola: 2016). Therefore, the present condition of the planet is characterized by: "unprecedented numbers of humans, rapid technological change, global interconnectedness, massive exploitation of nature and consequent ecological degradation" (Jamieson, Di Paola p57: 2016). Therefore, the current historical period is characterized by a chaotic condition (Helbing 2018). Pre-existing economic, social and political order at the national and international level are crumbling, and humanity is about to face global challenges that constitute an existential threat (Bostrom 2014). During the following decades, the world will undergo a disruptive period with various destabilizing variables: pandemics, financial and economic crises, energy transformation, climate change leading to extreme weather phenomena, demographic crisis, and threats to global peace (Helbing p33: 2018). To the objective existence of such major problems and dynamics has to be added a meta-condition: the world has become a hyper-linked entity, a complex dynamic system (Helbing 2018) and the challenges it faces are multidimensional and interconnected as they are impossible to be solved alone and diachronically with tools of mechanic linear thinking (Helbing 2018). To use current terminology the world has entered a VUCA scenario and is facing wicked problems. VUCA (volatile, uncertain, complex and unpredictable) is the condition of the globalized and interconnected world of the Anthropocene where any specific situation or problem is contemporarily unexpected, of unknown duration, interconnected to a other x number of problem situation (thus making it impossible to be detached from other context), causal relationships among them are not clear and real effects are unknown (Spencer-Keyse, Lukhsa, Cubista, 2020) . Climate change and AI governance vast scale application can be inserted in this VUCA scenario, and identified as wicked problems, which are “problem that is difficult or impossible to solve for as many as four reasons: incomplete or contradictory knowledge, the number of people and opinions involved, the large economic burden, and the interconnected nature of these problems with other problems” (Horst, 1973: 155-169).

All the conditions mentioned above prove that we are experiencing a time of tense transformation and that a new paradigm of thinking and especially organizing our society, economics, and politics is urgently needed if humanity wants to cope properly with such issues. Even if the outlined scenario is harsh, the green economy with its sustainable energy and digital revolution

could represent a way out of the chaos to build up a new sustainable and smart future. The digital revolution represents not only a possibility to innovate industrial and governance systems, but also to foster an alternative and more 21st century-suitable *forma mentis*, which nonetheless has completely to be built. It is simultaneously a huge challenge and a great opportunity for humanity. If well handled, it could help us find a new sustainable model for economics, society, and politics, adaptable to contemporary time. Nonetheless, technology is far from being a neutral tool that solely provides humans with implementation power (Mostow, Maschewski: 2019) but it is a living force linked to human nature, and the success of its application relies on the moral and reflexive efforts people and institutions will do to develop a coherent, ethic and holistic framework for it. The most important future challenges of digital technologies will not be to enhance further innovation but rather to develop a proper ethical system and governance model (Floridi 2020; p69-70): namely a political philosophy.

1.2: THE MAIN DRIVERS: AI AND BIG DATA

The digital revolution can not be reduced to AI and Big Data, but it undoubtedly relies on them as main drivers.

First, it is crucial to define both concepts:

-Big data: “refers to large amounts of data produced very quickly by a high number of diverse sources” (European Commission), while the process of turning phenomenon into data has been called “datification” (Susskind p62; 2019). Datification (or datafication) is a key process of the digital revolution, as it makes possible to reduce to objective and quantifiable data phenomena that previously could not be expressed in any mathematical model. Each person connected to any online electronic device, while surfing the Internet and sharing its personal information, produces digital data. Big Data provide AI with information to train itself, and they are raw material AI systems use to find patterns and make predictive analysis. AI and Big Data are therefore highly correlated, and each of them exists in function of the other. As a result, Big Data are now being defined the “new coal” (Susskind 2019) as they represent the most valuable resource of the digital revolution. The groups of hi-tech industries' economic dominance on the two sides on the Pacific, Facebook-Apple-Google-Amazon in the United States and Baidu-Alibaba-Tencent-Huawei in China, mainly rely on their control of databases. Big Data enables companies and governments with adequate artificial intelligence for predictive analytics to engage in market mining, social mining, and opinion mining, enabling them to discover macro-behavioral patterns.

However, Big Data to be helpful in any way, need proper artificial intelligence systems to find patterns in its massive volume of information (Gianotti, Pedreschi, Helbing, et al. 2013).
Giving a specific and precise definition of what Artificial Intelligence is problematic, as the concept of intelligence itself has not yet received a unified definition by the scientific community (Kaplan 2017). The definition given by the EU High-Level Group Expert on AI is:
"*Artificial intelligence (AI) systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behavior by analyzing how the environment is affected by their previous actions".*
Therefore, artificial intelligence is any technology (software, algorithm, a set of processes, a robot, etc.) that can analyze vast raw digital data to make complexions autonomous decision-making (EPSC, 2018).
Also, AI can be divided into two subcategories:
narrow AI: they are the only existing AI at present times. This categorization includes all the automated systems capable of analyzing large quantities of data, finding patterns between them, and producing an "intelligent output." Practical examples can be the audio and visual recognition technology like Siri and Keyless Visual Authenticator or even AlphaGO, the AI systems that defeated Go world champion Lee Sedol in 2016, or the AI trained to make transactions in the financial market. This kind of AI can make intelligent choices and rational decision-making in a specific field but is incapable of transferring its knowledge to other domains nor developing a self-representation of itself and a consciousness.
General AI: it does exist at current times. It would be an AI able to develop complex multi-sectoral thinking and also a self-consciousness. It has also been named "superintelligence" (Bostrom 2014). There is a long list of scientists and hi-tech entrepreneurs (Gates, Musk, Bostrom, Wozniacki, Hawking) who are skeptical about it. They all state that such a superintelligence will not necessarily align with human interest or concern about cooperating with humanity. Eventually, rather than a helping tool, it could transform itself into an existential threat for humanity as a whole (Bostrom 2014).
Using an organicist metaphor, AI is the neural network that gives the brain the actual capacity of complex thinking, while data are the information and the stimuli taken from the environment that

are necessary as raw material. Besides, micro-processors that strengthen computing power are the matter out of which AI is wired, and the speed and quality of AI functioning rely on them. Besides, AI has an additional important feature: it is considered a General Purpose Technology (Dafoe 2018, Ernst, Merola, Samaan 2018). A General Purpose Technology is:

"*First, it is a technology characterized by general applicability, that is, by the fact that it performs some generic function that is vital to the functioning of a large number of using products or production systems. Second, GPTs exhibit a great deal of technological dynamism: continuous innovational efforts increase the efficiency with which the generic function is performed, benefiting existing users, and prompting further sectors to adopt the improved GPT. Third, GPTs exhibit "innovational complementarities" with the application sectors, in the sense that technical advances in the GPT make it more profitable for its users to innovate and improve their technologies"(Rosenberg and Trajtenberg, 2004, p 5)*

Being a General Purpose Technology, it is likable to "spark revolutions in every domain that it touches" (Cummings, Roff, Cukier, Parakils, Bryce 2018) and affects the entire economy a whole, not only some specific sectors. As a resut AI could stimulate a revolution similar to those of electricity, combustion engines or PCs have done in the past, and it has been considered the most promising technology that may impact the world economy as it is almost impossible to imagine a sector of society which will not be shaped by AI and there is no innovation model in the future that can overlook it. Nonetheless, its application will directly or indirectly reshape and poses fundamental challenges to economics, politics, and human psychology.

1.3: ARTIFICIAL INTELLIGENCE AND TRENDS OF ECONOMIC IMPACT

"*Like the steam engine or electricity in the past, AI is transforming our world, our society and our industry. Growth in computing power, availability of data and progress in algorithms have turned AI into one of the most strategic technologies of the 21st century "(European Commission).*

It is openly accepted that AI technologies will overturn the current economic model and system due to its characteristics of General Purpose Technology. Among many, three main trends concern economists and policymakers: total transformation of model of industrial production and value creation (Masiero, Zanenga 2020), technologically-driven employment disruption and the "wealth cyclone" (Susskind p; 2019).

The digital revolution is completely transforming the model of industrial production and value creation. It originated in Europe during the 18th century and became the dominant model, and such remained until today. It was synthetically based on the importance of raw materials and energy to produce consumption goods; thus, resource control is central. The organizational structure is vertical, hierarchical, and oriented to long-term business planning. The dominant ethic is based on work, and as knowledge is a scarce resource, its privatization is strategically essential; so, each firm tends more to compete rather than cooperate with the others (Masiero, Zanenga 2020). The industrial digital paradigm emerging in these decades seems to be grounded on very different assumptions. First, it is boosted by the "platform revolution" (Choudary, Parker, Alstyne 2016) that made the most profitable firms not necessarily those owning the goods, but those able to create a network to aggregate the supply of services and spread it to the vastest number of consumers. Interestingly, Uber does not own any taxi, Airbnb does not own any house, Amazon or Alibaba does not produce the goods they deliver, and Facebook, the world's most popular media owner, creates no content.

Additionally also the paradigm of work is changing rapidly. Employment disruption by technological development has been a very discussed issue in the political economy. As early as 1937, the technological unemployment theory was developed by Keynes, who found a constant pattern. Technological enhancement produces two effects, a "displacement effect" and a "productivity effect". The first displace jobs from increasingly automated sectors, and this generates a decline in labor demand. The second creates new jobs, as new sectors are born and productivity arises. This creates an incentive for hiring people in newborn labor markets. As a result, automation leads to a result similar to that of multinationals firms' offshoring (Cummings, Roff, Cukier, Parakils, Bryce 2018). Theoretically, the demand for low-skilled, manual, high-routinely jobs declines, while it increases for high-skilled, cognitive, non routinely jobs. Such a pattern can result in job polarization: demand of "middling jobs" declines while very low-skilled and high-skilled jobs rise (WEF 2018). Generally speaking, previous studies and experiences show that after short-run shocks caused by the displacement effect, industries and economies have been capable of adapting to the new technological standards, therefore increasing productivity and employment. (Petropoulos 2017). Can the revolution brought by AI be analyzed in the light of such a framework? The answer is yes, but only partially, as the AI revolution has some completely new characteristics. First, the size and the timing of the AI revolution has no precedent in history (Baldwin 2019): "AI is happening 10 times faster and at 300 times the scale of the industrial revolution of the late 18th and early 19th century, therefore, having roughly 3,000 times the impact" (Petropoulos p12; 2017). It makes precise forecasting and elaboration of accurate policy

responses very difficult. Secondly, as shown in the previous subchapter AI application could spark simultaneously to many domains, causing a contemporary digitalization of all sectors and making the inter-sectoral labour transfer of workers harder to predict an implement (Rullani 2020). Thirdly, intelligent algorithms and learning machines have an almost never-ending capability of acquiring new skills and an extraordinary capacity for substituting human labor (Rullani 2020). The previous framework in which automation would substitute only low-skilled, manual, high-routinely jobs does not hold anymore. AI systems are being programmed to achieve high performance in high cognitive sectors such as finance, justice (Susskind 2019), healthcare, and informational engineering (Alexandre 2017). As AI can store a considerable amount of data and process it incredibly faster than any human, regardless of its IQ, it will directly challenge various specialist whose job consists of technical-cognitive knowledge (Alexandre 2017).

Wealth cyclone refers to the possible future concentration of economic power in the hands of economic elites made by already massively scaled organizations, with increasing concentration of inequality between laborers and capital-owners (Susskind p313-15; 2019) and between small-medium enterprises (SME) and big ones. The latter, by not being able to engage in such technology and talent intensive innovation actions could spawn, transforming the economy into a barbell-shaped with potential risks of market failure and societal issues. Deep inequalities have already been acknowledged as dysfunctional for growth and the economic systems by the OECD, WEF, and the IMF1. Moreover, a high level of workers dissatisfaction could lead to societal unrest, while the exponential failure of SME closing activity would irreversibly damage the backbone of countries' societies (Helbing p132-33: 2018). AI advanced technology is in the hands of few big firms that can handle the innovation cost for the digitalization and find themselves able to build strong oligopolies crowding out small-medium enterprises (Susskind 2019). The risk is of a “the best versus the rest' effect – i.e. a tremendous boom in productivity by only the very best firm” (Cummings, Roff, Cukier, Parakils, Bryce: 2018). The wealth cyclone could inevitably also shift the balance of power between private and public sectors in favor of the former. High-tech industries have a budget that resembles a middle-size state, but they also possess data that the government needs to make information gathering for future policy-making. A crucial challenge for governments will be to manage this growing increasing asymmetry of power in favor of the private sector to avoid losing the actual control of country management.

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1 Inequality hurts economic growth, finds OECD research (12 September 2014), http://www.oecd. org/newsroom/inequality-hurts-economic-growth.htm; Carter C. Price, Why inequality harms eco- nomic growth (11 December 2014), https://www.weforum.org/agenda/2014/12/why-inequality- harms-economic-growth/; Phillip Inman, IMF study finds inequality is damaging to economic growth, The Guardian (26 February 2014), http://www.theguardian.com/business/2014/feb/26/ imf-inequality-economic-growth

1.4: ARTIFICIAL INTELLIGENCE AND POLITICAL CHALLENGES

Being AI one of the new frontiers of power it creates severe challenges to states' global and domestic governance.

"*Past industrial revolutions have generated significant changes in the balance of power, international competition, and international conflict"(Horowitz, Allen, Kania, Scharre 2018 p 3).*

AI is becoming a new focus of international competition, with the potential to restructure the world order and reshape geopolitical power structure (Zhu, Long 2019), triggering the reemergence of a strategic competition era, where power struggle retakes its centrality in international relations and states enhance their organizational apparatus to foster national competitiveness and security (Sherman 2019). Various states so far, US, Canada, Mexico, Brazil, Argentina, Uruguay, UK, Ireland, Spain, France, Italy, Netherlands, Germany, Denmark, Sweden, Finland, Norway, Lituania, Russia, Serbia, Austria, Poland, UAE, Saudi Arabia, Kenya, India, China, Japan, South Korea and Malaysia (plus the EU) that understand the nature of the challenge have already started to develop national strategies and initiatives to assess AI impact and foster structured plan of AI technology implementation and governance[2]. States that do not catch up with AI global standards risk missing national competitiveness. Moreover, if they do not adequately assess the economic and labor market transformation and do not provide opportunities for their population risk to meet societal ad political backlash in the next decade to come (Saran, Srikumar, Natarajan 2018). Moreover, giving the applicability of AI systems to the military sector and LEA (lethal autonomous weapon), AI development becomes also central to national security, as AI could shape the nature of future warfare and military sector, giving an overall competitive advantage to those armies which have a comparative advantage in the AI sector (Allison, Schmidt 2020). Due to the fact that the literature on trend of AI impact in international relations theory is not yet structurally developed, giving a clear statement on how AI will affect it seems not possible. However, most academic contributions already disposable seem to be developing a realist approach towards the theme. Most of the authors insist on the interconnectedness of power politics and AI, with the state as the center of action and planner in AI strategy rather than supra-national institutions, and competitive dynamics overcoming cooperative ones. Some scholars arrive as far

[2] https://futureoflife.org/ai-policy/

as depicting a future of cyber-colonialism. As technology reinforces power and monopolistic market dynamics and private-public cooptation, it could foster the creation of digital empires that will use their AI exported system to vassalize developing states (Miahile 2018).
Shed light on how AI will affect the international scene is crucial. However,
the research focuses on how AI is likely to impact domestic politics as "political systems, elections, decision-making, and citizenship too, are increasingly being driven by aspects or by-products of automation and algorithmic systems at different systemic levels" (Unver 2018; p1). In fact, AI application in the governance field will radically transform how both liberal democracies and authoritarian systems think governance, implement policies, share information, and relate to their populations (Susskind, 2019), with the main driver being the process of datafication of politics.

"The first and most basic rule is to consider social facts as things […] To treat phenomena as things is to treat them as data, and this constitutes the starting point of science" (Durkheim, The Rules of Sociological Method, 1895).

Big data and mining, thanks to the analytics operated by artificial intelligence, are satisfying the biggest dream of 19th-century positivists: being able to reduce human behavioral, social, and political phenomena to quantifiable and therefore rational model as "a growing amount of social activity will be captured and recorded as data and then stored and processed by digital systems" (Susskind 2019; p61).
Conceptually speaking, the aim could be that of evolving the system of the Internet of Things into of Internet of People, where each individual, thanks to electronic devices which are constantly connected to the net, becomes a never-ending data producer: each person's actions are therefore datafied, as they can be turned into a complex mathematical model. Then, such data are stored and rationalized by algorithms, making human interactions quantifiable, hopefully, to elaborate social solution which maximizes the utility outcome for the whole society. Using an organicist metaphor, each person could become a nervous cell of a Planetary Nervous System (Gianotti, Pedreschi, Hellbing et al 2013), while whoever owns the most significant amount of crude data and the most advanced AI systems will be in charge of operating on such data. Such a trend raises various issues. Will the quantity of big data become that complex, and the AI systems such performative that human decision-makers (whether they are politicians or private leaders) will lose their agency, turning the whole process into automated decision-making? Will politicians experience the same "unemployment effect" threatening a wide variety of cognitive

workers worldwide? The myth of turning political governance into a data-driven technocracy is not a new story. Cybernetics applied to social sciences, as Robert Wiener explains, aims at "understanding what is understandable, make it scientifically understandable what is not yet understood, regulate what is regulatable and render regulatable what is not yet regulated" (Nostow Maschewski 2019; p9). Whether such an order is desirable or not is debatable, but what is interesting is that it takes as postulate the possibility of actually quantifying qualitative and deliberative processes ash as social and political ones. First, turning political decision-making into a technical, merely data drive process means the end of politics as conceived, especially for modern democracies. The process could be the final step of political delegation of power to non-majoritarian institutions with the rationale of improving the efficiency of the systems as "algorithms, programmers and technology companies that are responsible for developing and maintaining these structures of automation, thus form a new source of power that is partially independent of states as well as international political institutions" (Unver 2019; p2). The history of politics teaches that purely technocratic decisions do not exist, as any decision-making is based on pre-existing moral values or interest-based preferences, namely political preferences. In addition, if centralized algorithms are enabled to manage every aspect of society, democracy and adaptive innovation could be at high risk (Helbing 2019; p22) as citizenships and parliaments would keep on losing power of proposing solutions if they do not match with the efficiency-driven standards of AI system. Therefore how will it be possible for citizens to express preferences and defend their rights or interests? How can it be ensured that data analytics is not biased and that intelligent systems align to human values and take an actual utility-maximizing decision from a human perspective? The peril is to lose human's self-determination power.

We can also consider a scenario, much closer to a contemporary world model, where political decision making remains in human hands and thanks to vast amount of streaming Big Data and Artificial Intelligence system any government turns into a Smart Nations (Helbing 2019; p37), thanks to the collaboration with the private hi-tech sector which often possess the majority of data and implementing technologies. Thanks to the vast amount of information they have and the predictive and analytical power of AI, states can keep humans as leaders of the decision-making process. Even in such an situation, two main hazards remain abuse of manipulative power (Helbing 2019) and surveillance power (Zuboff 2019).

Manipulative power refers to the ability of actors empowered by the digital ecosystems and artificial intelligence to indirectly influence information, thoughts and political preferences, and choices as has happened with the US 2016 elections and the Brexit campaign of 2016, as shown by the Cambridge Analytica affair (Helbing 2019), a case of digitally-empowered vote manipula-

tion. Thanks to the pervasiveness of electronic internet-connected devices and the mass use of social media platforms, their controllers have the substantial power to drive public audience attention and preferences. So is the hybrid media system. The “hybrid media system,' refers to the multitude of roles performed by social media platforms as they also perform news-media roles during emergencies, as well as political assembly and protest roles during contested events like elections or key events. Therefore, the algorithmic structure of these platforms increasingly impact and shape political messaging, information-seeking, and citizen engagement”
. (Unver 2018; p2). A government with such a power could decide not only to influence the population in specific critical junctures, such as societal crisis or electoral campaign but engage in a more pervasive action, Big Nudging the combination of nudging approach from behavioral economics with big data (Helbing 2019; p28). A government with the substantial power of vast scale Big Nudging could hence turn into a Big Government, with a risky feature that matches to Hannah Arendt's definition of totalitarianism: conducting perception control of reality by shaping personal and public thought according to a specific, non-debatable mindset (Arendt 1967). Big Government and Big Nudging seem still to be sci-fi scenario rather than actual situation, while the phenomenon most similar and correlated to these two is the Filter Bubble Effect (Pariser 2011). Because each netizen in the world is provided with personal smart devices and social media and as the majority of them uses them to obtain (political) information, thanks to social media platform's algorithms technology, is personalized and targeted, causing an echo chamber where personal beliefs are constantly reinforced, causing subsequent political polarization and weakening democratic political debate (Helbing 2019).

Surveillance power entails the capability of an entity to constantly monitor personal believes, movement, online and offline actions in order to surveil population's behavior and possibly intervene when undesirable outcomes are predicted: “a user's fitness tracker, check-in location information and Google search histories combined, can yield a very granular set of information from that person's health, purchasing behavior and political preferences”. (Unver 2019; p4) Combined personal profile if adequately analyzed and mined by AI algorithm can build up an “information infrastructure of mass surveillance and become the largest ever pool of social monitoring and tracking” (Unver 2019; p4). Such surveillance obviously will be almost entirely algorithm-driven. Artificial intelligence systems, programmers, and organizations to whom such technologies belong could constitute a new power source: the surveillance power. Whether or not such infrastructure will be kept in private companies' hands or shared public institutions is not yet detectable. Nonetheless, as the number of netizens and profiles on social platforms increases, the percentage of the world population living under such a regime will grow naturally.

1.5: TOWARDS CHAPTER 2 AND 3: CURRENT AND FUTURE PARADIGM: A NEW POLITICAL PHILOSOPHY AND PUBLIC ETHICS

The above-conducted analysis has shown that the current epoch is a period of major transformations, the disruptive nature of AI as General Purpose Technology, and the subsequent challenges that emerge in the economic and political realms. To properly master a transition in this troubled water, countries do not have only to focus on proper AI implementation and innovation, but rather on developing governance and proper ethical framework to manage it and ensuring that its disruptive power does not become harmful.

AI poses serious challenges both to western liberal political systems and to eastern Confucian-based ones. The subsequent chapters will analyze how different political systems or countries, which represent a civilization in itself, in this case China and European Union, develop a National Strategy for Artificial Intelligence and a system of public ethics to make a collective decision on AI applications acceptable to their citizens. What the research aims to demonstrate is that Artificial Intelligence policy-making and implementations are not neutral, but rather directly influenced by political theory and public ethos of each country as "cultural values from pre-existing ethical systems inform technology governance" (Kirk, Lee Micaleff 2020; p18) and 'Good AI Society', and how this should be achieved, depends on cultural and political factors (Duan, 2020; Floridi et al., 2018). Both of them are needed in order to help to formulate an intercultural digital political philosophy and ethics.

CHAPTER 2: CHINA

2.1: PREAMBLE, BASIC PHILOSOPHICAL-HISTORICAL BACKGROUND: ON ZHONGGUO AND ZHONGUA

What the present research aims to demonstrate is that the way a determinate technology governance is thought and implemented by any political institutions and how the public debate and ethics about it is structured is not value-neutral, but dependent on pre existing tradition of political theory and public ethics. The argument of technological consequentialism (which affirms that technology is just a mere tool that have to be administrated in the best performative way after having conducted a simple technical analysis) is inconsistent. As a matter of fact, this chapter wants to underline how the shape of the Chinese National Strategy for AI, its implementation and the ethical issues and solution about it are highly intertwined to its traditional political theory and public ethics, whose essential elements are Confucianism and socialism with Chinese characteristics. In order to conduct such an inquiry the chapter will explain to what extent China can be considered a "Civilization-state" in itself rather than a nation-state, the basic contents and Confucianism and socialism with Chinese characteristics.

Preliminary to the analysis, an essential historical-philosophical background is needed to underline two peculiar facts about China's background, which may not be intuitive for a Western observer.

Firstly, China is "Civilization-state" in itself (Jacques, 2009), to the extent that its culture, ethos and practices are millennial-lasting, remarkably unique and so complex and peculiar that it can not be reduced to any global or western identity. The term China, in Chinese "*Zhongguo*" 中国 (central state) or "*Zhonghua*" 中华 (central efflorescence) displays the will to self-represent itself both as a political entity, but especially as a civilization in itself: "throughout Chinese history, Chinese rulers and intellectuals employed it (*Zhonghua*) to mean the universal vocation of the center of civilization, not referring to a modern type of nation-state" (Youngmin 2018: p27). Together with the Fertile Crescent, the Indian rivers area and some part of central and South America, China was the area where the most ancient civilizations in human history were born (Diamond 2014). Throughout history, China has become the identity pillar of its geographic area as central efflorescence, spreading its civilization's model and practices in its surrounding area as "the Sinic civilization, [is] the only continuous and enduring riverine early high culture civilization, encompassing the continental land mass of China as well as spreading to the Korean penin-

sula, the Japanese islands, and southwards to northern Vietnam, areas with an affinity of wet-rice agriculture" (Therborn, 2020: p231). Simultaneously, it maintained the capability to absorb external cultural traits, such as Buddhism from India, while conserving its core characteristics and resisting material and cultural western colonialism. The historical term "*Tianxia*" 天下 (All Under Heaven) expresses China's self-representation as the center of global civilization. As a result, Western scholars and citizens have to keep in mind that they are inquiring a completely different, long-lasting, and self-sufficient (political) thought and ethics when referring to Chinese philosophy, history and politics as from each civilization arose a model of governance and principles to rule.

China as Zhongguo (central state) has a long tradition of political unity that is impossible to find in any other country in the world. The debate on whether "China as ultimately a unitary unit, notwithstanding its internal multiplicity" (Youngmin 2018) is still ongoing, and reducing the geographical, political, ethnic, and cultural variety of China to a single coherent unit creates a risk of reductionism (Youngmin 2018). Nevertheless, it can not be neglected that China has achieved, notwithstanding various external and domestic crisis, to develop the oldest modern central state (Fukuyama 2015)[3] and that such political unity showed an incredibly high level of resilience: "after each collapse, the Chinese state reconstituted itself as if by some immutable law of nature" (Kissinger 2011: p. 12). The first seeds of a political system were planted already at the end of the III millennium B.C., while next, the most extended living empire-like political entity in human history was created, which started in 221 B.C. with the Qin Dynasty and resisted until the fall of the Qing in 1912. In ancient times, establishing an advanced civilization and political system favored centralization, standardization in administration, and cultural reinforcing of Chinese tendency towards unification. Consequently, society became accustomed to accepting a central organizing power that could harmonize the majority of other human activities as "agricultural, technological, commercial, military, literary, religious, artistic (that) would make their contributions as subordinate parts of the whole" (Fairbank 2006: p.45) and political authority was marked by harmony, organicism, pervasiveness and monopoly of power. Besides, Chinese natural geography positively influenced the centripetal impetus: clear external borders, internal interconnectedness thanks to long rivers that, together with fertile land, offered the possibility to various endemic agriculture to grow, providing China with plentiful natural resources that make it self sufficient. To this have to be added the occurrence (especially in ancient times) of catastrophic nat-

[3] http://www.oir.pku.edu.cn/info/1163/3097.htm

ural events and the steppes' role, which was areas of nomadic invasion. These threats needed a solid central and coordinated government to be faced (Ko, Koyama, Sng 2018).
The before-mentioned concepts of state-civilization and traditional habit to national political unity are an essential conceptual environment that has to be kept in mind when approaching Chinese political theory to contextualize the following analysis properly.

2.2: CONFUCIANISM: THE SOUL OF CHINESE ETHICS

2.2.1: CONTEXTUALIZING CONFUCIANISM

Giving a precise definition of Confucianism is almost impossible. Over time it has been considered as “a wide range of entities, from a narrowly conceived orthodoxy maintained by the cultural elite; a political ideology sustained through civil service examination by autocratic rulers; a philosophical discourse based on the interpretation of a set of classical texts” (Youngmin 2018: p34). Fundamentally, it is inconceivable to crystallize such a vast concept, as Confucianism can be interpreted as a metaphysical philosophy, a political philosophy, a social philosophy, an ethical tradition, a political theory, or a laical religion.
Moreover, by being an ancient philosophy, its pure theoretical nature can not be detached form its historical path. In more than 2,500 years after the death of Confucius (551–479 BCE), the path of Confucianism has been long and has taken various philosophical, political, and geographical diversifications. Indeed, it should not be discussed solely about Confucianism but about Confucianism(s), as there have been many and contrasting ways of conceiving the teaching of the master and receiving its legacy geographically and culturally. First Confucianism through history has spread from China to the neighboring area and became a pivotal cultural trait to most far East Asia. One of the most prominent examples is *Ritsuryo* Confucianism imported into Japan from China during the Tang period, which also formed Japanese political thought (Holcombe 1997). Consequently, Confucianism merged with various local cultural and political systems, always becoming something different from Confucius's initial teaching, informing different ethics and political theories. Really today, Korea, Japan, Vietnam, and Singapore have a common Confucianist ethical identity, despite their peculiar characteristics. As far as China is concerned, Confucianism is a cultural phenomenon that coalesced with the destiny of Chinese civilization itself, becoming its ethical substratum, de facto its ethical soul (Cheng 2000). Confucius presented himself not as an original thinker but as an interpreter and systematizer of the traditional and

eternal Chinese culture, stating that its role was conceiving a new and long-lasting explanation of it to deal with the rough time of war he was living. From the Han period on (206 BCE) it became the official Chinese ideology in the form of Imperial Confucianism and remained unchallenged until the 20th century. After the collapse of the empire it was blamed to be the ideology behind the political disaster and experienced a period of disgrace. Furthermore, the Civil War period and the subsequent Maoist era were times when Confucianism was officially not appreciated. Still, it remained the unconscious ethical substratum of Chinese people and politics and started to be recovered in the public ethics by the post-Deng reformist class until it now plays a central role in Xi Jinping political thought. Really, the institutes in charge of teaching Chinese language and culture abroad China are named "Confucian Institute"[4]. Such continuity and luck of Confucianism in China depend mainly on three factors: the above-mentioned fact that it became the official political ideology until 1912, the importance of the classical canon, and the subsequent capacity to absorb external philosophical influence and historical shocks within its framework.

After the short-living Qin empire that lasted only 15 years (221-206B BCE.) which took Legalism[5] as official doctrine, the Han dynasty switched to Confucianism. Under them, the ruling class started to be educated under Confucian precepts. Next, such a scheme was better structured by the Tang (618-907), which improved the "*kejun*" 科举 (Imperial Examination) system whose aim was to furnish skillful civil servants who could make function the intricate gears of the Chinese public engine. This system as well partly endowed the highly meritocratic Chinese ethos that is still visible nowadays. As a result, Confucianism became a central part of Chinese political thought and lasted until today.

Secondly, Confucianism had a solid core of texts where to derive its principles, and its dynamism did not depend on the writing on new masterpieces, but on the several interpretations philosophers and political intellectuals gave to the Classics. In fact, "Confucianists draw from the Five Classics of Chi Book of Changes, The Book of History, The Book of Od and The Spring and Autumn Annals. Under the Neo-C Analects, Great Learning, and Doctrine of the Mean, a or The Four Books" (Ackerly 2005: p556), which became the official canon of Chinese educational and political thought. Such canon guaranteed the fluent harmonization of thought and its integrity, ensuring its continuity over time.

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https://www.digmandarin.com/confucius-institutes-around-the-world.html

[5] Legalism: political theory which analyzes human nature, society and politics as they crudely are: egoistic and chaotic. Therefore it provides a political philosophy centered on string legislation and a strong central state which can implement it to put order to an inevitably anarchical human world. (Cheng 2000).

The third feature is directly correlated to the first two, and it deals with Confucianism's inclination of absorbing in itself the other major philosophical Chinese currents, mainly Legalism, Buddhism and especially Daoism the other endemic philosophy of China, from which the Confucianism inherited the metaphysical concept of 道 (Dao). Confucianism's status as hegemonic ethical and political thought and its nature of "dynamic tradition of practice and reflection" (Angle 2012: p 8) made it capable of combining with other currents, incorporating external concepts and reflections, and transform itself according to different historical context and shocks, nonetheless maintaining its internal coherence and stability over time. Confucianism can be categorically divided as follows (Drechsler 2020: p29):

-Confucianism as such, corresponding to the thought of Confucius and its disciples. In this period, it incorporated Legalism and started a dialectic with Daoism.

-Neo Confucianism (ca. 800–1905) a more concrete state doctrine, which included the above-mentioned state examination system. In this period it incorporated Buddhism.

-New Confucianism (since 1905) which is "the intellectual worldview that makes Confucianism applicable, and applies it, to individual life, society and state today, and it entails a response to the west, with the idea that learning should go both ways" (S-H Tan 2008: p141-53; Bell 2010).

-Contemporary "functional Confucianism" which is the further adaptation of New Confucianist to current epoch, especially in the context of socialism with Chinese characteristics and contemporary Chinese society.

As highlighted above Confucianism is a dynamic and ancient thought with a distinctive historical evolution. The aim of next subchapter is to detect its core purer philosophical concepts which are the skeleton of Chinese political philosophy and ethics.

2.2.2 CONFUCIANIST BASIC CONCEPTS TO BUILD A CHINESE PUBLIC ETHICS AND POLITICAL THEORY

Thanks to the above contextualization, Confucianism has been identified as the soul of Chinese ethics and political thought. It is now necessary to underline its philosophical characteristics, that especially compared to Western ethics and political theory may seem peculiar and counterintuitive. The analysis is organized into vocabularies, expressions, and macro concepts that are the structural bases of Chinese public ethics and political thought. Obviously it would be impossible to summarize the basic ideas of Confucianism in a single subchapter. Nonetheless basic concepts that best present the core of this philosophy have been selected.

The key term of departure from which Confucian thought blossomed is "*ren*" 仁 (humanity). It is formed by the radical "*ren*" 人 (person) and the character "er" 二 that means two: the etymology itself conceptualizes that no (human) being is an isolated entity but is socially and substantially linked to others (Cheng 2000; p52). The term *ren* 仁 encourages an optimistic conception of human nature: each person is inherently good and what he or she has to do is self cultivating its inner ren, through virtues aiming at constantly increasing personal wisdom.

The critical element of this Confucianist concept that puts it in open opposition to western values (Ruiping 2010) is that it rejects an atomistic vision of human nature and human society, stating that any (human) being from the moment of its birth is already inserted into a network of complex social relations, that have to be harmonized . The Chinese man is a familial man and not a political man as the Aristotelian one (Ruiping 2010). Society is not formed by detached individuals who rationally decide its existence and do it basically to protect their freedom and security (Ruiping 2010), but it ontologically exists as every being is necessarily interconnected to others, therefore what humans should care about is harmonizing it and manage it properly. From an ontological/metaphysical perspective what really matters Confucian (but also to Daoist) philosophy is not the nature of the individual beings *per se*, but rather the nature and quality of the interconnections established among them. Such relations (that are operationalized in terms of society when it come to social philosophy) have then an ontological status, and Confucianist metaphysics is interested in studying how they should be better structured in order to provide an harmonious world. Therefore Confucianism can be defined has a "philosophy of relations" rather than a "philosophy of beings".

Confucianist thought imagines then an answer for such theory of relations. Confucius conceptualized the 5 "*wu lun*" 五伦 (5 basic relationship) around which building human society. They are- ruler/subject, father/son, elder brother/younger brother, husband/wife and friend/friend. 3out of five are internal to the family and the most important one is "*xiao*" 孝 (filial piety) that expresses the natural love and respect that a son should have towards the father. Confucianism do believe in harmony by osmosis; as family and society are two distinct but communicating sphere of human order if the equilibrium is kept in the micro-realm (the family) it will be mirrored in the macro-realm (society). Extending this notion to societal and political connections it express the principle of three societal bonds "let the lord be lordly, the retainer loyal, the father fatherly, and the son sonly" "君君臣臣，父父子子" (Analects 12.1). As a result, "Confucianism has provided one of the great historical answers to the problem of social stability." (Fairbank 2006: p.53) and has rationalized the familistic Chinese society and the Imperial rule. Moreover, Confucianist

ethics is not based on egalitarianism nor universalism, as its familist matrix necessarily provides each person with special ties and preference to its relatives and closest companion. Essentially, inequalities exist for two reasons: people are not mutually disinterested, and they do not worth morally to the same extent (Ruiping 2010). Concepts such as "*qin-qin*" 亲 亲 (affection towards relatives) and "*zun-xian*" 尊贤 (unequal respect) illustrate it. In such a field there is no fertile land for the concept of equality to grow, as people are naturally ordered hierarchically and as they are not requested to be universalistic in social relations.

However, such hierarchical relations are not built on coercion and authoritarian rule but instead on the notions "*xin*" 信 (trust) and respect of "*li*" 礼 (rituals). The son and the people have to follow the father and the ruling class, respectively, but they do it because they trust their wisdom and virtue. Nonetheless, the entity put at the higher hierarchical point has to handle its role and manage it according to strict moral virtues, and in the interest of the group he/she is ruling. This concept directly links to the way Confucian classics interpret and construct authority legitimation, rethinking the ancient concept of "*tianming*" 天命 (Mandate of Heaven) and the concept of min 民 (People). The *tianming* idea was established during the Shang dynasty (XVIII - XVI century BCE) to justify a hereditary and theologic right to rule. After the Zhou dynasty overthrown them during XI century BCE reshaped it on the following four principles:

1) Heaven grants the emperor the right to rule,
2) since there is only one Heaven, there can only be one emperor at any given time,
3) the emperor's virtue determines his right to rule, and,
4) No one dynasty has a permanent right to rule. (Drechsler 2020; p36).

Confucianist ethics absorbed such an ancient tool and added some original features: people's (min) well-big as a source of legitimacy and a consequential performance imperative (Drechsler 2020). A passage in Mencius 5A:5 clarifies the argument:

Wan Zhang said, "Is it the case that Yao gave the world to Shun?"
Mencius said, "It is not. The Son of Heaven cannot give the world to another person."
Wan Zhang asked, "In the case, when Shun had the world, who gave it to him?"
Mencius said, "Heaven (Tian) gave it to him."
Wan Zhang said, "When Heaven gave it to him, did it openly decree (ming) it?"
Mencius said, "It did not. Heaven does not speak, but simply reveals the Mandate through actions and affairs."
Wan Zhang asked, "How does it reveal it through actions and affairs?"

Mencius replied, "The Son of Heaven can present a person to Heaven, but he cannot make Heaven give him the world. The various lords can present a person to the Son of Heaven, but they cannot make him give that person a state . . . Formerly, Emperor Yao presented Shun to Heaven, and Heaven accepted him. He made him known to the people (min), and the people accepted him. Hence, I say that Heaven does not speak but simply reveals the Mandate through actions and affairs."
Wan Zhang continued, "May I ask how he recommended him to Heaven and Heaven accepted him, how he presented him to the people and the people accepted him?"
Mencius replied, "Yao put Shun in charge of the ritual sacrifices, and the various spirits were pleased with him. This was Heaven accepting him. He put Shun in charge of affairs, and the affairs were well-ordered, and the people were at ease with him. This was the people accepting him. Heaven gave it to him, and the people gave it to him . . . The Great Announcement says, 'Heaven sees as my people see; Heaven hears as my people hear.' This expresses what I mean.

People (*min*) plays a crucial role in legitimating the ruler as their well-being is the sign of its capacity and legitimacy and "the people's contentedness with their well-being was not just a good policy goal, but the actual conduct of the state's legitimacy" (Angle 2012: p39). However, no right to rebellion can be deducted. The people's legitimation is not the source of the authority but rather a sign of its well-functioning. The agency remains in the hands of the expert administrative class, which have the technical expertise to do so, have studied the classic, and cultivate inner moral virtues. To this extend, Confucianist ethics remains aristocratic (Angle 2012). However, the public administration had to respond to high demanding performance imperative in order to preserve the legitimacy of their status (Drechsler 2020): in fact, "if social stability is the cardinal sign of a legitimate government, providing for the people and maintaining that stability becomes the ruler's highest priority" (Kirk, Lee, Micaleff 2020; p5). Politically speaking, Confucianism as a political doctrine has always worked to preserve cohesion and unity, creating a peaceful world, with a stable order and where every being is aware of its role, willing to comply to it and with no intention of subverting the harmonic status quo; it is the "*da yi tong*" 大一统 (Great Unity).
To give fulfillment to the Confucian philosophy building, a last concept has to be added that permeates it and gives it sense, "*he*" 和 (harmony).

"Confucianism puts tremendous weight on interpersonal harmony, such as the harmony between ruler and minister, between parent and child, between husband and wife, between siblings, and between friends. It also places tremendous weight on the harmony between human society and the natural world. Its ultimate goal is to achieve a grand harmony throughout the cosmos. For Confucians, the difference between harmony and disharmony is like that between right and wrong, good and bad, and success and failure" (Chenyang, 2006: p588-9).

He (harmony) is therefore both a metaphysical and an ethical category, the principle on which cosmological relations aree structured and on which consequentially human, social and political relations should be shaped on. Harmony is relational in its nature, because it implies the coexistence and codependence of multiple entities (Chenyang, 2006), as Confucian philosophy in general does. Recognizing that any living entity is qualitatively different but strongly interconnected to the others, the aim is not to provide an unnatural equality, but rather to develop harmonious relations among unequal entities (Ruiping 2010). Harmony is therefore the only way to achieve the desirable Great Unity (*da yi tong*).

The subchapter has described the basic cosmological, metaphysical, ethical and political concepts of Confucian philosophy, underlining its relational, hierarchical, harmony-seeker and conservative nature. In the following pages it will be shown how Confucianism is *de facto* the philosophical soul of China, by constantly interconnecting the notions above discussed to socialism with Chinese characteristics.

2.3: THE GOVERNANCE OF CONTEMPORARY CHINA: SOCIALISM WITH CHINESE CHARACTERISTICS

The victory in China's New-Democratic Revolution and the successes in its socialist cause have been achieved by the Chinese people of all ethnicities, under the leadership of the Communist Party of China and the guidance of Marxism-Leninism and Mao Zedong Thought, by upholding truth, correcting errors, and surmounting numerous difficulties and hardships. China will be in the primary stage of socialism for a long time to come. The basic task of the nation is to concentrate its effort on socialist modernization along the road of socialism with Chinese characteristics. Under the leadership of the Communist Party of China and the guidance of Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory, the important thought of Three Represents, the Scientific Outlook on Development, and the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Chinese people of all ethnicities will continue to adhere to the

people's democratic dictatorship and the socialist road, persevere in reform and opening to the outside world, steadily improve socialist institutions, develop the socialist market economy, develop socialist democracy, improve the socialist rule of law, apply a new vision of development, and work hard and self-reliantly to modernize the country's industry, agriculture, national defense, and science and technology step by step, to promote the coordinated development of the material, political, spiritual, social, and ecological civilizations, to turn China into a strong modern socialist country that is prosperous, democratic, culturally advanced, harmonious, and beautiful, and to realize the great rejuvenation for the Chinese nation.
(Preamble, Constitution of the People's republic of China)
Article 1: The People's Republic of China is a socialist State under the people's democratic dictatorship led by the working class and based on the alliance of workers and peasants.
The socialist system is the primary system of the People's Republic of China. The defining feature of socialism with Chinese characteristics is the leadership of the Communist Party of China. Disruption of the socialist system by any organization or individual is prohibited.
(Constitution of the People's republic of China)

As the quote form the Constitution of the People Republic of China expresses, the peculiarity of Chinese political thought is that it is explicitly incorporated in its Constitution, not only in the form of abstract principle, as it happens in Western Constitution but also in a "*lilun*" 理论 (well-defined theory). It is a systematic and rational political theory whose essence is openly that of establishing a coherent and omni-comprehensive set of ethical and organizational principles, practices and regulations to sustain the governance of the country and its policy-making directly, providing the country's leadership and the population with a theoretical framework to guide themselves (Narayan 2006). The Party leadership has practically used political ideology from Deng Xiaoping to contextualize, legitimize to the population their strategic decisions about the future of China.
The Constitution's preamble frankly underlines the foundations of Chinese political *lilun* (theory): Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory, the critical thought of Three Represents, the Scientific Outlook on Development, and the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. Nonetheless, the actual path of Chinese politics and political ideology is not as straight as the Constitution describes. Reconstructing it from a historical perspective is helpful to grasp the nature of contemporary Chinese political thought. The analysis will be structured in four parts. The first is dedicated to how Marxism-Leninism was absorbed by the Chinese context and Mao Zedong's thoughts. The second will deal with

China's theoretical and actual transformations that occurred under Deng Xiaoping and the funding of Socialism with Chinese characteristics. The third part considers the theorization provided by Jiang Zemin and Hu Jintao during the period pf outstanding Chinese economic growth at the turn of the 20th and 21st centuries. Finally, the last part investigates Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the current Chinese political *lilun*, which is the result of the previous and the theory within which the National Strategy for Artificial Intelligence has been conceived and implemented. Moreover, in each step of the analysis a connection to Confucian philosophy will be developed, to clarify its continuity to contemporary Chinese political theory.

2.3.1: A REVOLUTIONARY THOUGHT: MAO AND THE SINIFICATION OF MARXISM-LENINISM

The success of the October Revolution 1917 in Russia opened the Chinese gate to the entrance of Marxism-Leninism into the country. However, even if the October Revolution was a revelation to China, its influx did not gain initial strengths and had to wait 20 years until it was systematically included in Mao Zedong (1893-1976) thought and revolutionary practices (Nomura 1970; p87-88). Maoism was able to re-contextualize Marxism-Leninism, a theory developed in and for a Western urban, industrial and bourgeois environment to the Chinese, rural, agricultural, and colonialist one (Fairbank 2016). He transformed Marxist dialectical materialism, whose European incarnation was the struggle of class between the proletariat and the bourgeoisie into the "*maodunlun*" 矛盾 论 (theory of contradiction). Its actors were the oppressed Chinese People and an oppressing feudal-urban ruling class co-opted by Western imperialists, as "it could be asserted that the domination of the landlord class ("feudalism") was backed by the "imperialist" exploiters from abroad" (Fairbank 2006; p343). The theory of contradiction, which could be confronted to Marxist dialectical materialism, argues that contradiction is a product of opposite forces, the never-ending conflict inner to any entity and between any entity which is an ontological trait of both nature and society, namely, "the dialectics of the development of society", that subsequently makes "politics as class struggle the expression of contradiction within society" (Zheng 2015; p90-92). Taken this Marxist-inspired assumption as the point of departure Mao's thought and practices followed two directions: first achieving the revolutionary victory and then building up a harmonious socialist society.

China, under the leadership of Mao, achieved double success and started a double process of revolution. By winning the Civil War, the Communist party was able to liberate the Chinese People's from its internal enemies (feudalism), and winning the Sino-Japanese war against external enemies, setting China free from the yoke of imperialism (Morgan 2015; p661). This first stage of Maoist thought has given China's political thought an important dual legacy. First, develop a philosophy of history to figure out how the country should act and prepare a strategic plan according to the specific historical period it was experiencing . Secondly, the internationalization of Chinese political systems (Zheng 2021) was necessary to contextualize Chinese political thoughts and actions according to the international relations scenario.

Such double legacy will be central to future Chinese political theory because every *lilun* following Mao's one will keep on contextualizing China's condition taking into account historical and international relations variables.

Once the revolutionary victory was obtained, Mao had transform a theory of revolution into a constructive political theory to equip the newborn People's Republic of China with an organizational principle, a political economy, a new ethos, and a framework for leadership's legitimization by the People.

The organizational principle was to be found on Leninist concept of democratic centralism, also expressed in the Constitution itself "The State organs of the People's Republic of China apply the principle of democratic centralism" (art 3). Decisions are taken by a central leadership of the Communist Party, which sets the main plans of actions and goals, are subsequently "carried out by disciplined rank and file followers" (Morgan 2015; p657). Such a method can promote unified objective and harmonize overall actions while leaving to local authorities the possibility to implement it most suitably according to their territorial context and capabilities, providing a good balance between order and flexibility by ensuring that "the socialist political order is protected by a combined top-down–bottom-up process" (Zheng 2015; p107).

Maoist political economy was probably the purest Communist traits of its thought, as it became completely planned: "The State-owned economy, namely, the socialist economy under ownership by the whole people, is the leading force in the national economy. The State ensures the consolidation and growth of the State-owned economy" (art 7). This concept is probably the one that, both in theory and practice, has transformed more, as the continuation of the analysis will show.

Mao's thought put much effort in the "cultivation of a New People", who had to be educated with a renovated public ethos: in fact, "the state in Mao's political theory has power to promote a right way of life" (Zheng 2015: 104) and "actively cultivates individuals' ethical value system" (Zheng 2015: 101). The aim was to develop a collective proletarian spirit consisting of modesty, solidari-

ty, and industrious attitude and that openly opposed individualism, the Western ethical disease, by providing a moral transition to collectivism. In traditional China, individualism itself did not exist, but neither did collectivism. Most people were independent farmers who believed only in Familism, whose essence is between collectivism and individualism. Even if each individual had fundamental ties to a social context, the family was the master at organizing their productions and somehow became a big individual. By providing a proletarian, collective public ethos, Mao's thought built up a unified public interest to which the people should be devoted to ensuring homogeneity and harmony to Chinese society. Although, in such a framework, the individuals are necessarily tied to a common good and individual claims which can lead to a decrease in overall public welfare are not accepted: “in contrast to individualism, the collective spirit puts the welfare of the people and the state prior to an individual's private interest, which should conform to the interest of the state” (Zheng 2015; p100). Again individuals are not the centre of the theory, but rather subordinated to societal structure.

Finally, Mao's political theory provided the frame of interaction between the governed and the governors and a subsequent system of legitimation of power. The elements to consider are three: the people, the leadership, and the masses. Both the leadership and the masses are part of the people, but the former is the actual governor who ensure to manage the country in the interest of the whole people. It directly relates to the masses thanks to the mass-line method, which prevents the leadership from becoming bureaucratic and merely self-interest seeker (Zheng 2015). The mass lines consist of elaborating policy making only after a vast process of bottom-up information gathering is made. Such data provides the leadership with "unsystematic ideas" which reflects people's actual necessity. As a result, the leadership's function is that of turning this scattered information into a systematic national plan to properly serve the people and the country in its collective well-being (Zheng 2015). The system results in “the party's leadership at the higher level and the broad masses at the lower level”. Interestingly, even if Mao had openly criticized Confucianism ethos and public philosophy by blaming it for accommodating people's blind obedience to a ruling class, his system of legitimacy and interpretation of the masses can also be analyzed as a contemporary transformation of the concepts of Mandate of Heaven (*tianming*) and *min* (people in Confucian thought). The seed of Maoism grew up on a fertile land of traditional political thought suitable to its basic notions. Democratic centralism as an organizational principle of the Communist Party and national governance resembles the system of the skillful imperial bureaucracy, hired according to talent, avoiding hereditary non-meritocratic system, which was able to keep united an empire as extended as entire continental Europe for two millennia. In addition, as far as political economy is concerned, in China, the norm is that politics drives the

economy, not vice versa. The government has always been the regulator and provider of long term policies and regulatory frameworks: “measures such as state monopoly and profiteering with some “key commodities” (e.g., salt, iron, and wine), strict licensing control (often applied to long-distance trade), and occasional bans (on maritime trade)” (Deng 2010: p. 502) were common and constant in Chinese history. Lastly, the Chinese political class has always had a political ideology to give conceptual order to its conduct, seek legitimization by the people, and provide a national public ethos. Such ideology has been Confucianism itself until the empire decay in 1912.

Maoism was consciously or unconsciously a bridge in Chinese history and thought which set the beginning of a new epoch. Deng Xiaoping kept building the same bridge, developing a new one, which best suited its time's domestic and historical context.

2.3.2. THE NECESSITY OF MODERNIZATION: DENG XIAOPING AND SOCIALISM WITH CHINESE CHARACTERISTICS

Mao remained Chairman of the Communist Party of China for more than 30 years (1945-1976). Over such a long period historical and international context around China had changed, and so had interior features and necessities. His designed successor was Hua Guofeng, who kept a Maoist line and a centrally planned economy. However, he was quickly forced out by the emergence of new communist leadership, who wanted to modernize the country in several terms.

The 3rd Plenary Session of the 11th Central Committee of the Chinese Communist Party held in Beijing, China, from December 18 to December 22 1978, signed a watershed in Chinese political theory and practice as it marked the beginning of the “Reform and Opening Up” policy, the birth of Socialism with Chinese characteristics (中国特色社会主义) and the ascent of Deng Xiaoping (1904-1997) as the paramount leader of Chinese Communist Party. Deng justified its detachment from classical Maoism within Maoism itself, stating “genuine Mao Zedong Thought [has] to be taken as an integrated whole in guiding the people, army and Party” (Narayan 2006; p333). In Deng's perspective, the core concept of Mao's thought was not class struggle, but rather “seeking truth from facts” and “practice is the sole criterion for truth”. Facts were that the Maoist revolutionary period came to an end and that China's necessity was to engage in economic growth to sustain and improve the conditions of its vast population. To do so, a program of massive modernization and reform was needed both practically and theoretically.

“In carrying out our modernization programme, we must proceed from Chinese realities […]We must integrate the universal truth of Marxism with the concrete realities of China, blaze a path of our own and build a socialism with Chinese characteristics” (Deng 1982).

The key transformation Deng wanted to achieve were:

-reforming governance and ensuring solid Party leadership,

-providing a new way of legitimizing and implementing economic liberalization while maintaining political power hierarchically superior to economic forces,

-integrating China into the international community,

-building up a solid national spirit,

-a new public ethos around meritocratic principles

Deng's main concern was to make Chinese governance more modern to make it increasingly well functioning over time. He ensured the healthy functioning of the most immense bureaucracy of the world, encouraging democratic centralism, and by empowering a system of decentralization to boost efficiency, that is practically expressed by the “*tiao/kuai guanxi*" 条块关系 (lines/pieces relationship) system of relationships across political bodies (Lieberthal 2004). as “democratic centralism is an attempt to enjoy the advantages of disciplined dictatorship without sacrificing free discussion and the airing of views” (Lieberthal 2004: 193). Because of China's vastness and diversity, it has been targeted as fundamental to obtain accurate information, that is more easily collected at the local level. Thanks to the loss of ideology and the opening towards more freedom of discussion, the policy-making process became more deliberative. Through documents and systemic meetings, information and opinions were exchanged vertically and horizontally, improving the quality of data available and empowering politically (at least relatively) local governments. Free consultation and expressions of views are accepted in the preliminary phases, but once a decision is taken, centralism prevails, and everyone is bounded regardless they agree with the decision or not. The *tiao/kuai guanxi* system is the model describing the bureaucratic system's organizational nature. Its main goal is to ensure a balance between centralism and decentralization of power by guaranteeing that certain types of issues and guidelines are decided at the central level while allowing the resolution of the problem to the lowest administrative level of the system where consensus can be found (Lieberthal 2004). The decentralization tendency opened by the reforms has incredibly ameliorated the quality of political debate and efficiency, empowering local communities and governments, which have been the source of China's economic miracle. China appears then as fragmented authoritarianism: it is true that the CCP has the monopoly of power, but it is highly fragmented, and it prevents an excessive concentration of it. By

building up this system, Deng set the theoretical and practical basis of Chinese economic outstanding performance, a kind of de facto “economic federalism with Chinese characteristics” as “this [system] has given local states primary responsibility for regional economic prosperity at the cost of the central government's monopoly control over the Chinese economy” (Zheng 2021; p2).

The nature of Deng's two-hand formula was gradually liberalizing the economy and achieving growth while maintaining a solid governmental grip on market forces. Also, “under Deng's leadership, China truly joined the world community, becoming an active part of international organizations and of the global system of trade and finance” (Vogel 2011; p 6). by becoming a member of the World Bank and the International Monetary Fund. The rationale was that to truly modernize and materially prosper, China needed to enter the world economy and politics.

Finally, Deng's time was a period of an important transformation in collective national spirit and public ethos. Thanks to the concept of socialism with Chinese characteristics, China distinguished itself from both the Communist Soviet and Western capitalist blocks. Thanks to the expansion of the educational system, Chinese population ameliorated cultural conditions, and mandarinization occurred with the widespread use of the “*putonghua*” 普通话 (Chinese standard language). As a result, the “growth of a truly national culture” (Vogel 2011; p13) occurred in this period. Moreover, Deng's recovered an ethic based on meritocracy and high personal performance that was already in existence in imperial times under Confucianism diktat of personal cultivation and administration accountability, as the “Mandate of Heaven, provided the Confucian bureaucracy with a severe performance imperative”(Drechsler 2020; 25). In fact, “Deng established a system of highly competitive meritocratic examinations at each level, from elementary school through university to officialdom” (Vogel 2011; 21) to transform also the national bureaucracy the CCP that under Mao was selected more in terms of political trustworthiness rather than expertise to foster internal modernization. Meritocratic principles became central also within party selections through the “*sihua”* “four-way transformation” looking for “younger, more educated and more technically specialized” members (Nathan 2003: 10), securing the rise of the value of party human capital.

As the analysis showed, Deng's political theory is undoubtedly transformative and well blended into the traditional path of Chinese political philosophy. Deng ended the building of the bridge that Mao had started working on, by finishing to coalesce Socialist and Confucianist ethics into a contemporary environment and by furnishing a political theory and a political economy that remained socialist while adding peculiar Chinese traits and new elements that made it adaptable to

a globalized and market oriented world . The subsequent Chairman Jiang Zhemin and Hu Jintao's turn led China into the new step of its political and theoretical history.

2.3.3 GUIDING CHINA AT THE TURN OF THE MILLENNIUM: JIANG ZEMIN AND HU JINTAO PREPARE THE FIELD

Jiang Zemin (1926-), who was Chairman of the Communist Party 1989-2002 and Hu Jintao (1942-), Chairman in the period 2002-2012, had the task to give maturity to the thought of Deng and its implementation, during a time when China experienced an outstanding economic growth necessarily living its contradiction and ascending as a world superpower.

Jiang Zemin mainly had to handle the economic growth and liberalization to keep them under control and in the interest of the Chinese people while building up a new legitimization system for the Party leadership. His most crucial ideological contribution was the "*sange daibiao*" 三个代表 (Thought of the Three Represents), which indeed was included in the Constitution after the 16th Party Congress in 2002. In theory, the Three Represents that the CPC must always represent are: "the development trend of China's advanced productive forces, the orientation of China's advanced culture, the fundamental interests of the overwhelming majority of the people"(Narayan 2006; p336). The Three Represents had the aim to recognize the importance of private economic initiative and include in the CPC also private entrepreneurs. As far as legitimacy is concerned, it was mainly built on economic performance and improved living standards. Again, this concept is not entirely new to Chinese political thought as it is in continuity with the Confucianist legitimization system of the administrative elites, who were publicly approved as long as they succeeded in keeping material conditions of the min (people) to a decent level.

Hu Jintao became Chairman in 2002, a moment when economic growth started to show its side effects. Since Deng, the overall development of China was linked only to the rate of GDP's growth. Hu Jintao's leadership then was responsible for providing a new paradigm for development that was broader than a mere growth-led one. The new theory took the name of the "five overalls": "overall urban and rural development, overall regional development, overall economic and social development, overall harmonious development between man and nature, and overall domestic development and open policy" (Narayan 2006; p338). Basically, the quality of these five variables are to be taken into account when evaluating China well-being, substituting this multidimensional indicator with the one-dimensional GDP growth.

Nonetheless, he stressed the importance of governmental control over the economy to fight its weakest point. The main side effects of economic growth were that it made the Chinese econo-

mic model excessively dependent on investment and exports (Manion 2018). If these weaknesses are undeniable, the diversification of the Chinese economy and the state's direct intervention has enabled them to deaden. For example, a series of countercyclical measures based on infrastructure investments and credit from state-owned banks in favor of the real economy was launched during the 2008 crisis. These efforts stabilized the Chinese economy, and its GDP growth rate was at 9,6% even during the 2008 global recession. To govern a country that had become one of the major world economies, Hu Jintao's leadership worked on "*zhizheng nengli*" 执政能力(governing capacity) to ensure a proper assessment and resolution of all the societal problems that were emerging to establish a harmonious society, taking inspiration from Confucian thought again. When Xi Jinping took office as Chairman of the CPC in November 2012 China was no more a developing state, but the 2nd world economy[6] with all its potential and problematics.

2.3.4 THE ASCENT AS A GLOBAL POWER AND THE CHINESE DREAM: XI JINPING THOUGHT

In 9 years of mandate Xi Jinping has already acquired the reputation of most powerful and influential CPC Chairman since Mao Zedong. This is due to multiple factors, but the constitutional amendments proposed by him is one of the central and most functional to the research analysis. The 2018 constitutional amendments included 21 articles, and it represents the most critical transformation since Deng's period. To some extent it is also a "Xi Jinping Constitution" as it thought, the "*Xi shidai Zhongguo tese she hui zhuyi sixiang*" 习近平新时代中国特色社会主义思想 (Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era) entered the Constitution and removed presidential term limits officially. Xi Jinping thought is dedicated both to provide an updated theoretical framework for domestic politics, with the core idea being "*si ge quanmian zhanlüe buju*" 四个全面战略布局 ("Four-Pronged Comprehensive Strategy") but also to give an indispensable contribution for the self-representation of China in the international environment and a new conceptualization of the international relations themselves, in the theory of "New Type of International Relations" (Garrick&Berret 2018).

The first strand of the Four Comprehensive is to "build a moderately prosperous society". The aim is that of achieving "social harmony [that] is an inherent attribute of Chinese socialism" because "common prosperity is the fundamental principle of Chinese socialism – this is why we must ensure that all the people share the fruits of development in a fair way, and move steadily

[6] https://www.reinisfischer.com/top-10-largest-countries-gdp-2012

towards common prosperity" (Xi Jinping 2014). There is an open continuity with the protection of the well-being of the people and the concept of achieving the "*da yi tong*" 大一统(Great Unity) through the establishment of an harmonic rather than equal order, inherent both to Confucianist and socialist thought. In addition in Xi Jinping's words there is a different and more economic-theory perspective to consider. For the gigantic Chinese economy to become less dependent on foreign investment and trade, a prosperous society is needed to foster a solid internal market to sustain it without the risk of being subject to the volatility and uncertainty of international flows. Moreover a further economic modernization is necessary for China to remain competitive in the global market, especially in highly strategic sector. To achieve so the new socialist market economy has to be characterized by "innovation-driven development, rural vitalization, coordinated regional and sustainable development". The second strand: "deepening reform", is directly linked to the necessity of a more advanced economic system that at the same time can be held under the control of the government to prevent any detrimental situation of anarchy. The macro-strategies in term of economic development empowers private enterprisers and public-private collaboration but continually granting to "give top priority to overall planning" as "we must carry out the overall plan, pursue coordinated development in all areas of our modernization drive, and promote harmony between the relationships of production and the productive forces, and between the superstructure and the economic base" (Xi Jinping 2014). The traditional grip on the economy of the Chinese government remains and the avoidance of a real market-liberal economy remain central also in a contemporary context. Clearly explanatory of such dynamic and of the power the Chinese government still has in the domestic market is the Alibaba affair (the Chinese Amazon counterpart controlled by Jack Ma) and Ant Group Co (the financial-technology giant also controlled by Jack Ma) affair. The former ended with Alibaba receiving a fine of 8.2 billion yuan (more than $3.6 billion) in April 2021 from (Chinese) State Administration for Market Regulation for abusing its market dominance in digital retail[7] while the latter was forced to align to a "rectifictation plan" of its financial activities under supervision of Chinese central government. The third and the fourth strand, respectively "governing the nation according to law" and "tightening Party discipline" are to be inserted in the never-ending process of Chinese political theory of ensuring a high level of governance and administration for the country and reinvigorating the core socialist values (Garret&Berret 2018: p103). After two decades of constant decentralization of power, Xi decided to give more strength to centralism, providing a theoretical and actual

[7] https://www.nytimes.com/2021/04/12/technology/ant-group-alibaba-china.html

framework closer to the original democratic centralism inspired by Leninist theory and Maoist practice.

Moreover, as common in the Chinese political thought since Mao, Xi also elaborated a precise theory to locate in China in the international relations system. The theory of the “New Type of International Relations” a multidimensional notion that offers a scientific, systemic, and comprehensive analytical system (Wang 2018) based on the following assumption:

1) China is now a "Major Country" as it is the second world economy in terms of GDP. It hosts almost one-fifth of the entire world population and is a Permanent Member of the UN Security Council. Therefore China can “systematically and actively not just participating in but also shaping international affairs as a power, not at the peripheral but the center of the world stage” (Wang 2018; p5). Its importance in world politics is objective, and so China itself can start engaging more proactively to give its original contribution to world diplomacy.

2) It is “a new model of relationship different from the historical clashes and confrontations between major powers.”. (Xi Jinping 2014; p402). The key term is a major country and not major power. The linguistic difference reflects a new mindset: a “power” is a state that treats itself as an entity with the right to expand its interest at the expense of the other, thanks to its substantial superiority. On the other hand, a major country is aware of its dominant position, defending its affair and identity but in cooperation with other states, without undermining its self-determination (Wang 2018). President Xi Jinping clearly stated that is necessary is to present an idea different from the Western historical theories of international relations and has the willingness to give a Chinese contribution to the new elaboration of an international relations theory.

3) It is the basic assumption of the new type of international relations (which is analyzed in the next chapter) founded on five pillars: a community of shared destiny of mankind, people development, win-win cooperation, partnerships, and correct understanding of justice and interest.

4) This kind of diplomacy has “distinctive Chinese features” or “Chinese characteristics”. China people are aware of offering Chinese input to human exploration of world governance (Wang 2018). A critical example is the success the Chinese system of governance has achieved in solving the 2008 and the Covid-19 pandemic financial crisis. That means by definition that China's major-country diplomacy should be different from the diplomacy of other major countries implying the uniqueness of China's diplomacy (Wang 2018). This point is directly intertwined with the previous, showing China's willingness not to adapt to the existing status quo paradigm but to shape it originally. Basically, this new doctrine “is determined to inject Chinese concepts and ideas into the narratives of world affairs” (Wang 2018; p6).

Another key term is that of “Community of Shared Future for Mankind”.

President Xi Jinping pronounced the following words : “by living in the same global village in the same era where history and reality meet, (humanity) has increasingly emerged as a community of common destiny in which everyone has in himself a little bit of others” (Xi Jinping 2014; p396)

This concept seems to be very metaphysical and rhetoric if not properly investigated in all its part. First, the logical point of departure is that all countries' future (or destiny) is highly interlocked (Wang 2018): one country can not expect to flourish at the others' expense. The fact is simple: the more interconnected states are, the more common destiny they will have, and the more they have to cooperate. The reason is basically that as president Xi explained, humankind is facing “numerous difficulties and challenges”. They range from the continued underlying impact of the international financial crisis, an apparent upsurge of all kinds of protectionism, incessant regional flashpoints, rising hegemonism, power politics and neo- interventionism, to a web of conventional and non-conventional security threats, such as the arms race, terrorism and cybersecurity" (Xi Jinping 2014; p391) to which it is has to be added the climate crisis. These are network challenges, which means that they have to be faced collectively and in a networking approach and no country can expect to solve it alone. The vision of how to solve them has to be collective and to build a shared future.

Secondly, to genuinely act in such a cooperative way, two more notions have to be put to the awareness of states: countries should treat each other as equals, engage in mutual consultation and show mutual understanding (Zhang 2017). Therefore, this should foster a vision that promotes “a security architecture featuring fairness, justice, joint contribution and shared benefits” (Zhang 2017; p3) and inclusive development. The final result should be that of make blossoming the Confucian concept of harmony (和) and “*shijie datong*” 世界大同 (one world) (Zhang 2017). In this vision, all states should arrive at a point of osmotic relationship, in which the success of one depends and foster that of the others with a thought of sustaining the harmony of the entire globe. The goal is to “promote harmony without uniformity”. Given the two major concepts above analyzed of Major Country Diplomacy and Community of Shared Future for Mankind, it is possible to depict the “New Type of International Relations Theory” emerging from the 9th National Congress of the Communist Party China (CPC). Wether this theory is instilled with mere rethorical or not is debatable; nonetheless it is interesting that Xi has kept following the path of its predecessors by providing a *lilun* (theory) which is logically inserted into a theory of philosophy of history and international relations context.

Xi Jinping thought it is an omni-comprehensive political theory able to acknowledge China's domestic and external problems while maintaining a solid interconnection with both Confucian and socialist tradition. It is in this framework that is included the National Artificial Intelligence Development Plan.

2.4: CHINESE NATIONAL STRATEGY: BUILDING AI STRATEGY ON THE LEGACY OF SOCIALISM WITH CHINESE CHARACTERISTICS

After 2016 public initiatives in AI governance and strategies have blossomed in many states around the world, through which each one clearly stated their x-term goals in AI development. China has lived its “Sputnik moment” in 2016, when the AI-based machine AlphaGo, produced by DeepMind, a Google-linked UK company, beat at the traditional game of Go the champion Lee Sedol (Ding, 2018). The State Council issued the “New Generation AI Development Plan” in July 2017, which is part of a bigger strategy named “Made in China 2025”, establishing investments in AI and declaring AI a top-priority field for the national government by stating clearly that the objective is to become the world's primary AI innovation center by 2030.
“The plan's specific benchmarks for AI and AI-related industries (including by 2030 a gross output of RMB 1 trillion (US $150.8 billion) for the core AI industry and RMB 10 trillion (1.5 trillion) for related industries) demonstrated China's aspiration to lead the world in the field” (Ding 2019, p 7).
Such quote explains the scientific, economic and political effort Chinese institutions and firms are making on the issue. In terms of governance model and political economy Chinese National Artificial Intelligence strategy is a strong example of Socialism with Chinese characteristics, as various elements found in the previous analysis, like democratic centralism, balance between planned and free-market economy, offset between local initiative and central directives, stress on efficiency and performance and attention to international context are central.
Chinese approach to AI national strategy has a strong element of central planning (Wang, Chen 2018), as previous experience in supporting technological innovation and infrastructure development in the country. The whole-of-government Chinese strategy has addressed AI-ecosystem development as a megaproject and has established clear long-term goals. As other centrally-planned Chinese strategies have shown to be, it is very efficient in developing national infrastructure and strategic sectors. The two fundamental documents on the issue (Next Generation

Artificial Intelligence Development Plan (NGAIDP) issued by the State Council in 2017 and Made in China 2025) explicitly set plans for a span of time of at list ten years.

The NGAIDP primarily depicts 13-year policy, with specific goals to be obtained by 2020, 2025, and 2030. Moreover, In China, certain central bodies provide funding for AI, including the National Natural Science Foundation of China, National Key R&D Programs, Megaprojects, and Government Guiding Funds (Colvin et al., 2020). The strategical thought, especially in the megaprojects' first years, is to experiment first and regulate later. This approach is diametrically oppose the European Union one, whose rationale is to provide lengthy and high-level regulation and ethical standards for AI application before developing the industry themselves (Ding 2020).

To give an example of the success of long-termism and central planning strategy it is interesting to mention the development of supercomputing production, the AI-related sub-field where China catching-up is outstanding. In 2014, China's share of the supercomputers listed in Top 500 was only 76 systems (15.2%), very far from US share of 232 systems (46.4%). In June 2017 Top 500 list saw China very close to US, with the former having 159 systems (31.8%) and the latter 168 systems (33.6%) (Ding 2019). Today China has outnumbered the US in the quantity of supercomputers, with 214 (42,8%) against 113 (22,6%). Nonetheless, reducing Chinese economic policy to mere central planning means not understanding the nature of the contemporary thought of socialism with Chines characteristics. It has to be considered the capability Beijing has to co-opt private companies, allocate strategic funds and create real economic incentives for firms, making them willing to cooperate, which makes the Chinese strategy highly attractive for private entities as “While the central government plays an important guiding role, bureaucratic agencies, private companies, academic labs, and subnational governments are all pursuing their own interests to stake out their claims” (Ding, 2018: p3)

The Ministry of Science and Technology founded a “*réngōng zhìnéng guójiā duì*” 人工智能国家队 (AI National Team), a group of 13 technology companies that the Chinese government endorses as “champions” for researching and developing by giving them preferential access to governmental data and governmental projects (see image). In exchange the government sets the guidelines of the economic path that AI-related firms will make, making the private-public sector cooperation a clear “competitive advantage of the Chinese strategy”. In addition such enterprises are expected to proactively commit in sharing informations and technologies in realms such as data sharing, research and development, open source software and ecosystem participation. The rationale behind the decision is that such national champion should become the skeleton of Chinese innovation platforms and standard-setting to benefit smaller companies that would not be

able to engage in such innovative activities and ensure harmonization of standards all over the country (Wang, Florid et al 2021). Such a process should generate therefore a 'lead geese effect' (头雁效应) (Ding 2020):

Source: DigiChina, 2019

central government and National AI team should set a plan of action and engaging in mega projects, infrastructures, and platforms building to provide local governments and minor companies with the bases on which to act.

Again, the principle of democratic centralism and of “promoting nationally, acting locally” (Ding 2020; p9) that implies the central government, with the aid of the national champions to set a central plan while leaving to local and minor entities the freedom of action and interpretation takes actual shape in Chinese National AI Strategy. In just 1 year, more than 20 provinces issued more than 30 specific reports on AI strategy and actions in the sector (Ding 2020). Cross-sectoral innovation in many AI fields has been achieved, thanks to the strategy of leaving freedom of initiatives to cultivate local innovation ecosystems that enable local government to select their own specific plan of economic strategy and implementation in the light of the macro-level plan of the central government. After all, Chinese provinces have the dimension, population, and economic output of European state,s making this system an “economic federalism with Chinese characteristics”. Such a system appear to be highly efficient as it permit to develop harmonic ecosystem, set standards and scale-up of regional initiatives even if it can hinder bottom-up creativity and grassroots innovation.

Quoting some positive examples of such strategies' success is useful to comprehend its actual functioning:

-City Brain is a system of urban traffic management first developed in Hangzhou in 2016 powered Alibaba Cloud's ET together with 13 companies. The primary objective was to reduce traffic, but it was then spread across 11 major areas of city life, including transportation, urban government, cultural tourism, and health. It is now available in 23 cities in Asia as shown in the figure[8].

[8] Alibaba Clouder, ‘City Brain Now in 23 Cities in Asia’, Alibaba Cloud, 28 October 2019, accessed 8 April 2020, https://www.alibabacloud.com/blog/city-brain-now-in-23- cities-in-usia_595479 https://www.alibabacloud.com/blog/city-brain-now-in-23-cities-in-asia_595479

-System 206 "is the codename for the Shanghai High People's Court intelligent assistive case-handling system for criminal cases, which aims to improve quality and reduce 'false, unjust, or wrong' charges and sentences" (NESTA 2020; p38). Similarly to City-Brain it has been developed with a joint effort with various hi-tech companies and a national champion, iFlytek, and scaled up from Shanghai's jurisdictions to others[9].

Both cases show how such a strategy promoted a well-balanced development model, where a political entity, national champions, and hi-tech industries have cooperated to develop AI platforms and applications, innovating and scaling up at a high-speed rate.

Besides, the government perceives AI as a fundamental tool for improving administration, public security management and functional for digital environmental protection and "building a moderately prosperous society" (Roberts, Cowls 2020). China has acknowledged "the historical opportunity of AI development and take stock of the current situation and make proactive plans to serve socioeconomic development and national security and to lead leapfrog advancement of national competitiveness" (NGAIDP). Compared to other countries, China has an enormous advantage: an abundance of data that has been openly described as the new coal (Susskind 2019) or the new oil of the digital revolution. Data are the food AI are fed with and are essential to training algorithms and improving their performances, "organizations with larger datasets thus have an advantage in developing superior applications" (Horowitz, Allen, Kania, Scharre 2018 p 5). This is sector where China has the most significant competitive advantage. As a matter of fact, China is the first country in the world per number of internet users (765 million in 2016), while for example the US has "only" 245 million users[10]. More users mean more data, and more data means more possibilities of training domestic AI systems. The Chinese government can benefit from it, thanks to the above mentioned collaboration with private AI giants that possess the majority of this data and the peculiar relations between private and public sector that exists in China. In addition privacy regulation about personal data do not have the same standards as in Europe, as data are made easily available to public institutions. AI will reinforce socioeconomic developments and big data analytics can help the government making a precise calculation about redistributive policies and advanced digital system, making fundamental public services available and scalable to broader areas of the country, as improving healthcare and credit system to expand to rural areas where appropriate health and financial services are not yet offered. The situation to some extent, seems to reinforce the principle of trust and asymmetry of information and power that exist-

[9] https://www.chinadaily.com.cn/a/201901/24/WS5c4959f9a3106c65c34e64ea.html

[10] https://ourworldindata.org/internet

ed in Confucian and early Maoist time between the Chinese people (*min*) and the political leadership. The latter, empowered by information gathered thanks to Big Data and mined thanks to AI, can organize the un-scattered ideas of the population to provide the most efficient and best administration in the interest of the people themselves. Moreover, Chinese government is undoubtedly the one with the highest surveillance and manipulative power in the entire world, thanks to its mass-surveillance system and Social Credit Score which reinforce "the key ideological assumption [is] that social order is governed by an objective and intelligible set of laws. Big data and AI technologies not only assist in better understanding these laws, but they can also help in 'engineering' society to solve development problems". (NESTA 2020: p 64). However, it would be curious to see to what extent China will face the side effects of quantified politics as listed in the first chapter. If politics and society become increasingly datafied and quantified, then the enormous amount of data could be mined and rationalize only by AI algorithms and platforms. As a result, it could trigger automated decision-making technologies of self-improving machine learning algorithms, threatening human monopoly of power on the political and administrative resolution.

Lastly, Chinese National Strategy for Artificial Intelligence appears to be adequately influenced by the government's awareness of the historical period and Chinese knowledge of its position in international relations, especially compared to the US, while the EU is not yet perceived as a real competitor, but rather as a inspirational actor to copy best practices from, especially on regulations.

2.5: HOW TO DEVELOP AN ETHICAL FRAMEWORK FOR AI IN CHINA: INCREASING ENGAGEMENT, CONFUCIANISM AND SOCIALISM WITH CHINESE CHARACTERISTICS AS PILLARS

As described in chapter one, AI's ascent raises psychological shock and major moral dilemmas to governments and society as they have, consciously or unconsciously, the necessity to justify the collective actions they take according to some coherent ethical framework. Nonetheless, the subchapter aims to explain that as the Chinese National Strategy is grounded on the political theory of socialism with Chinese characteristics, the public ethics that the government and society are developing around AI are grounded on Confucianism and some elements of collectivism. The objective is to stress the importance of intercultural perspectives as a determinant of technology ethics.

China is internationally perceived as a low-engaged entity for ethics and regulation, especially in newborn scientific fields where ethical issues and rules could neglect some advantages in terms of innovation. This paradigm seems to be changing when it comes to AI. Even if consensus is not yet achieved and advanced regulations are still lacking, public and official debate about ethical principles and guidelines sprouted after 2017 in China, with various committees settled, research institutions founded, and publications released.

Firstly, Chinese engagement in AI ethics has substantially increased after the issuing by the State Council of the Next Generation Artificial Intelligence Development Plan in September 2017. Thanks to the database available online on the platform LAIP (Linking Artificial Intelligence Principle)[11] ,which gather and connects all the official document issued worldwide the field of AI ethics with publishing date a quantitative analysis can be done. The ethical engagement of Chinese institutions will be operationalized in terms of documents issued on AI ethics. Data are interesting when a timeline analysis is made for Chinese documents:

-3 were published in the year 2018 (30%)

-7 were published in the year 2019 (70%)

Confronting it with the worldwide document issued per year, we can identify the subsequent patterns:

-Chinese engagement in AI ethics has been zero in the years 2016-2018.

-Chinese concentration in AI ethics has started increasing only in the year 2018, remaining below average world production in the year (30% vs 38,16%)

-Chinese engagement in AI ethics blossomed in the year 2019 and entirely surpassed the average world production in the year (70% vs. 34,21%)

Data seems to positively test that Chinese ethical engagement in the AI field has risen since the Next Generation Artificial Intelligence Development Plan published in September 2017. 100% of the documents were released after the date of issue, and the production of documents on AI ethics in the year 2019 more than doubled the average world production. Most of the production that happened in the year 2019 describes another issue: some institutions were established only after the release of the Plan and needed some time to develop an AI ethics-specific commission and therefore were able to operate only in 2019. This is the case for the organizations that issued the two currently most essential documents on AI ethics: Beijing Ai Principles (May 2019), made by the Beijing Academy of Artificial Intelligence created in 2018, and the Governance Principles

[11] http://www.linking-ai-principles.org/principles
Curiously, the platform itself its Chinese, as it is developed by the Chinese Academy of Science, Institute of automation, Beijing.

for a New Generation of AI (June 2019) published by National New Generation AI Governance Expert Committee established in 2019. The most advanced model is probably that provided by BAAI[12].

After having recognized the importance of debate around AI ethics in China, it is necessary to understand its direction and the columns it is built on. It is recognized that Confucianism is the ethical framework that is indirectly shaping the principles of AI governance as "Chinese government looks not just to the future but also the past, building upon Confucian notions of harmony, legitimacy, and social hierarchy to inform contemporary technology application" (Kirk, Lee, Micaleff 2020: p1). Nonetheless, it is not solely Confucianism that shapes Chinese public ethics for AI, but rather its interaction and integration with the values system provided by socialism with Chinese characteristics that the research has previously shown to be in continuity rather than being detached.

Even if the Principles expressed by BAAI seemed to be highly influenced by the international western-lead debate around AI ethics, actual application of AI empowered technologies still remain ascribable to a Confucian background. It is necessary to underlines, especially to Westerners, how Confucianism justifies a system of individual rights and the balance it searches between it and the collective utility. Indeed, it is not the case that Confucianism is not suitable for a human rights system. However, instead, it is not ideal for a system of liberal human rights: "Confucianism is not compatible with the liberal version of human rights because Confucianism cannot accept the absolutist principlism and individualism that characterize the liberal version of human rights" (Ruiping 2011; p57). As formerly explained, Confucian ethics is not built in any way on the assumption of individualism, personal atomization, or agreement by social contract. Confucian thought is aware that the primacy of individual rights risks creating disproportion between individual and public utility. Confucian philosophical anthropology's relational nature combined with the collectivistic dimension of Chinese socialist values generates public ethics that maximizes collective utility rather than personal's. A perspective that prioritizes individual interest at the constant disruption of communitarian well-being is perceived as morally and logically dysfunctional. Indeed, among Confucian values is enlisted "*ziwo-kanxian*" 自我坎陷 (self-restriction), a virtue that belongs to those who understand the context and are willing to sacrifice a part of their freedom/utility to improve the communitarian.

How is the actual implementation of such an ethical system visible in AI and digital governance? The example of the tracking system to fight the spreading of the Covid-19 pandemics seems par-

[12] https://www.baai.ac.cn/news/beijing-ai-principles-en.html

ticularly appropriate. Chinese government and society have proved to be highly resilient to the current crisis caused by the Covid-19 pandemic. Various countries worldwide have used digital contact tracing technology during the pandemic; China has proved to be one of the most efficient experiments in the field of tracking apps (CTAs)[13] application. Tracking apps are a clear example of the symbiotic relationship between Big Data and AI. A vast amount of data is harvested thanks to the data each user provides through the app, while a system of artificial intelligence finds patterns among them to give logical and precise outcomes that can be used to make an individual and collective decision. Obviously, tracking apps' mass use poses a serious ethical challenge that each society assesses according to its system of values (Klar, Lanzerath 2020). CTAs technologies can be highly effective in fighting the spread of clusters. Still, they could also empower governments in charge of such technologies with unprecedented surveillance power that could be used for purposes other than containment of a pandemic as governments might exploit the crisis to establish a systemic tracking system without consulting the citizens and use such mined data collection in another realm such as law enforcement (Klar, Lanzerath 2020).

Nevertheless, CTAs technologies appear a powerful tool to ensure societal management and safety security. The ethical cleavage is the necessity to find a balance between individual freedom, privacy on the one hand and ensuring whole-of-society well being and utility maximization on the other hand. As discussed in the analysis, it is not surprising that the Chinese decision favors the latter rather than the former. In China, people have to download CTAs if they want to access public areas, shops, or use public transportation services. The CTA gives each user a colored code (green, amber, red). Green codes ensure complete free movement; a yellow code means people have to stay one week in quarantine; red expresses a quarantine of 14 days. The only way to receive such a rating is to download this app. Even though the app's use is pro forma voluntary, it is *de facto* necessary to access most public places, shops, and services (Klar, Lanzerath 2020). Undoubtedly, the implementation of this system is ethically problematic, but it is not neglectable that it successfully tackled the spread of the virus. According to the database, https://www.worldometers.info/coronavirus/ China is ranked 92nd in the list of countries per number of total cases of coronavirus and 210th per real cases per 1 million population as it has registered only 90,400 cases in total by the 10th of April. The ethical rational behind the CTAs' application appears clear: grounded on the mixed ethics provided by Confucianism and socialism with Chinese characteristics, Chinese policy-makers and society have opted for a digital-AI correlated application which constraints to some extent personal freedom and privacy while ensuring a so-

[13] The apps were developed by Alipay (a mobile and online payment platform, established by Alibaba Group co-founder Jack Ma) and Tencent Holdings Ltd.'s WeChat .

cietal utility maximization that was crucial in such a critical conjuncture such as the Covid-19 pandemic to grant overall safety and unity.

CHAPTER 3 EUROPE AND EUROPEAN UNION:

3.1: ON EUROPE, DEFINING A CONTINENT AND A CIVILIZATION

The aim of this chapter, as with chapter 2 on China, is to highlight which are the core political theory and ethical traits of European civilization from ancient to contemporary history and how they have influenced the strategy and the public ethics of AI of the European Union, the most supra-national institutions that can be identified as the political entity representing such civilization.

Defining the border of what Europe is, both in geographical terms and especially in cultural traits, is highly complex due to the open nature of the continent. Europe does not only represents the occidental area of the Eurasian continent, but rather a pole of human civilization, which founded the Western conceptualization of the world and fostered globalization. Nonetheless it is important to stress that in this research European civilization is not a synonym of Western civilization, but rather simultaneously its ancestor and current subset with peculiar elements that can not be reduced to a worldwide-Western identity.

Therefore in the study, it will be considered Europe according to the following categories. First, a multifaceted but coherent philosophical tradition, which comprehends various political theories and ethics developed in the ancient world, specifically Greek-Roman philosophies and Christianity, the modern liberal thought promotes during the scientific revolution and the Enlightenment, the 19th century thought, the contemporary liberal-egalitarian, federalist and neo-liberal ideas. A part of the literature assuming an historical approach states that in civic-political terms:

"*the European civilization included institutions of deciding and voting assemblies, from the Athenian Assembly of citizens and the Roman Senate, traditions carried through into the second millennium C.E. by the Christian Church Councils and by the election of the two highest positions of medieval Europe, the Pope and the Emperor (of the Holy Roman Empire of German Nation). North of Greco-Roman Antiquity there were Germanic peasant assemblies-cum-courts and elected kings. However the civilization splintered politically into warring states rules by Absolutist dynastic monarchs, and has later mutated culturally, into a trans-Atlantic Western, increasingly secular configuration*" (Therborn 2020: p232)

Secondly, in political terms, "it is characteristic that the basis of European civilisation is not a single state, but a specific "European unity" that has been striving to create a mature political system, so far unsuccessfully (Daszkiewicz 2017: 389). Nonetheless, it will be considered the European Union as it is the single institutional actor trying to give an economic, and to some extent,

political and strategical unity to a multipolar, diverse, and fragmented archipelago of states, each representing a component of the above-mentioned European civilization, also considering that it is the only existing institutions which can translates theoretical concepts into policies and official regulations at continental level.

3.2: EUROPEAN AND EUROPEAN UNION POLITICAL THEORY AND ETHICS GENEALOGY

3.2.1 BUILDING THE AGORA': GREEK-ROMAN PHILOSOPHY

European political theory and ethics are not the sums of multiple geographical ideas or philosophical movements but rather a complex system of speculations that acquired its internal coherence over time and informed an entire continent's political practice and public ethics. The journey of European philosophy over history is very long. The sub-chapter aims to detect its theoretical pillars in ancient history, precisely Greek-Roman political philosophy and ethics. As done for Confucianism, the inquiry will be based on key terms which contain macro-concepts of these philosophies.

When reading two of the masterpieces of European political theory, the Republic by Plato and Politics by Aristotle, the units of analysis are clear. They are the notion of justice, the individual, and the polis (city) as collective dimension. In its inquiry to grasp the pure idea of dikaiosune (justice) and theorizing a perfect, immutable city, Plato writes: “perhaps, then, justice may exist in larger proportions in the greater subject, and thus be easier to discover; so if you please, let us first investigate what justice is like in cities; afterward let us apply the same inquiry to the individual” (Republic 369e). Similarly, Aristotle in Politics asserts: “the polis, or political association, is the crown: it completes and fulfills the nature of the man: it is natural to him, ad he is himself a naturally polis animal” (Politics, 1252a) and “when we come to the final part and perfect association we have already reached the polis [...] it exist for the sake of a good life” (Politics, 1252b). From the passage cited above emerges the bases of the subsequent European speculation. Firstly, a strong emphasis is given to the individual's introspection, to understand its internal soul, inner psychology, and moral status in himself/herself, without any necessary logical or political relationship to a given social group. Secondly, the political unit of analysis is not an empire or a national state but rather a micro-urban environment populated mainly by merchants, the polis a “community of equal citizens, representative bodies, elements of merchant culture, rationality and emancipation” (Daszkiewicz 2017: 402). In the polis context, specifically in that

of Athens the idea of democracy itself was born and it is really well clarified by the words of Pericles:

"Our constitution does not copy the laws of neighboring states; we are rather a pattern to others than imitators ourselves. Its administration favours the many instead of the few; this is why it is called a democracy. If we look to the laws, they afford equal justice to all in their private differences; if no social stand- ing, advancement in public life falls to reputation for capacity, class considerations not being allowed to interfere with merit; nor again does poverty bar the way, if a man is able to serve the state, he is not hindered by the obscurity of his condition. The freedom we enjoy in our government extends also to our ordinary life". (Thucydides Peloponnesian War, Book 2.34-46). In the ancient Athenian democracy there are two of the most important seeds of contemporary liberal-democracy notions, expressly conceptualized by Aristotle: isonomia and eleutheria. Isonomia refers to the quality of all the citizens before the law, while elutheria is the enjoyment of individual liberty. Nonetheless it has to be pointed out that not all people actually living in Athens were citizens (women, slaves and foreigners were not granted such rights) an such principle of equality and freedom could only be applied to a small amount of Athens' inhabitants (Di Paola, Jamieson: 385).

Finally, the third key point is not about the content of political theory and ethics but rather about philosophical inquiry methodology. Greek thought is grounded on abstract numbers and takes "postulation as their (philosophical) starting point" (Fung Yu-Lan 1966. P.23) fostering the development of scientific thought;

"*the Greeks were the first to produce a number of thinkers who took it upon themselves to learn about the world of phenomena using only reason and experience, who set impassable barriers to authority and revelation, who assigned a task to themselves to explain everything and consistently apply the principle saying that whatever exists must be understood rather than believed*" (Daszkiewicz 2017: 392).

In fact, Plato was influenced by the mathematical theories of the Pythagoreans and was convinced of the geometric-mathematical nature of reality, while Aristotle was also a biologist (he created the most ancient westerner taxonomy of living creatures). Also politics started to be treated with a scientific approach, hoping to make it manipulable to build a logically constructed sets of principles, practices and institutions that could rule a community in the most efficient and simultaneously ethical manner for the majority of the citizens. Greek philosophical methods therefore laid the foundations for the scientific thought which characterized western epistemology.

Greek political philosophy is highly interconnected to Roman political theory. The Greeks undoubtedly informs Roman thought but it developed key features which became part of European political DNA as “the Ancient Rome not only absorbed Greek culture and mediated in its continuation, but also gave the European civilisation the culture of law, political effectiveness, the organization of a democratic society (from the Roman Republic) and the political and civilisational dominance over large areas of the European continent” (Golka 2012: p55). Cicero is probably the most notable thinker of Roman thought. His two political works, “On the Republics” and “On the Laws” propose a conception of an ideal constitution and an adequate system of laws for it. He argued that the Roman Republic structure had achieved an optimal political equilibrium by balancing and representing various stakeholders of a broad political organization such as Rome of the II century BCE. Indeed, Rome was the most extensive multiethnic empire of ancient European history and left a vital legacy for multicultural political entities' political management. However, his most important original contribution to European political theory is the detailed prescription of an ideal law code for governing the state: “the most learned men have determined to begin with Law, and it would seem that they are right, if, according to their definition, Law is the highest reason, implanted in Nature, which commands what ought to be done and forbids the opposite. This reason, when firmly fixed and fully developed in the human mind is Law” (On the Laws, Book I). The paragraph reflects the importance that laws (jus) had in the Roman Republic and Empire. Law and jus were not only a theoretical legacy Romans lived to Europe, but a much more concrete one. In fact, the Roman legal system took definitive forms in the years 450-51 with the creation of the Law of the Twelve Tables and then the final codification and harmonization with the Code of Justinian during the first half of the VIth century. It was therefore spread to almost all European continental states legal systems, which hence inherited principle and practices of the Roman world (Daszkiewicz 2017).

As a result, Greek-Roman thought, built the conceptual and practical pillars to develop the future European philosophy, namely scientific method, the importance of the individual, equality and freedom as key values, city as an ideal political unit of analysis and the necessity of a structured legal system that can codified the rationalization and contractualization of social relations. These classical legacy was inherited and conserved over in history and has always remained a theoretical paradigm to which every thinker and governor has to compare and take inspirations in the realm of European political philosophy and ethics.

3.2.2.: MODERN REVOLUTION AND FREE THOUGHT: EUROPEAN LIBERAL IDENTITY TAKES SHAPE

The modernization of European thought started at the very end of the XV century with the Italian Renaissance, continued with the Copernican and scientific revolution over the century XVI-XVII and had as its apex the Enlightenment over the century XVIII and a part of the XIX. Such intellectual modernization coalesced with the transformation of political systems and socio-economic architecture of European societies. The ancient regime made of the absolutist-feudal state transformed into the modern national forms (partly representative) with an urban-industrial trade economy, led by the bourgeoisie middle class. The sub-chapter plans to describe which core ideas developed in the period became part of the European thought's paradigm in ethics, political theory, and political economy.

The period of modernization in Europe experienced the ascent of two key ideas: equality and freedom. Both of them were part of the French Revolution's motto; egalitè, libertè, fraternitè. History has shown that, especially in liberal democracies, they play the protagonist role of public debate in the triad: "men are born, and always continue, free and equal in respect of their rights. Civil distinctions, therefore, can be founded only on public utility" (The Declaration of the Rights of Man and Citizen, Art I). Since the XVI century, European political philosophy aims to find an appropriate balance between these two principles to grant every person a proper amount of enjoyment of its freedom while ensuring a decent degree of social equality to ensure society stabilization and avoid collective public conflict. The most influential intellectual solution founded to guarantee both while establishing a political association with legitimacy is the social contract system. Its pioneers were Hobbes and Locke, both authors of the XVII century English Enlightenment and influenced by natural law ideals. Such a belief informed following philosophers such as Rousseau, Kant and, Rawls. Men are considered to be in an abstract, natural condition when they are furnished with an equal share of equality and maximal freedom since no external coercive authority exists. Therefore to avoid conflict among people (bellum omnia contra omnes), maximize public security and, protect private property, each individual consciously decides to transfer a portion of his/her natural rights to society. A government can then be created, whose legitimacy derives from its role as "regulator" of society, ensuring public security while maintaining the individual enjoyments of personal liberty at the highest degree feasible. The central theses arisen are:

-all citizens are equal and free as they dispose of a set of inalienable natural rights.

-a free, conscious will of delegation of power by individuals is the genesis and the source of legitimacy of a government. As a result, the individual is before the state and not vice-versa.
-private property is crucial, and its sole source is labor.
-political authority is legitimate within the scope agreed by the citizen in the social contract. The government can not overcome such boundaries. Moreover the state should act more as a regulator of citizens free activities rather than an active actor in the public sphere.
-since the legitimacy of the state derives from citizens' choice and its aim is to ensure collective security without invading the sphere of personal freedom, popular resistance to the government is justified, including resistance by force. An extra vital contribution to the European liberal political systems conceptualization has been given by the theory of the separation of powers developed by Montesquieu (1689-1755): "in every government, there are three sorts of power: the legislative; the executive in respect to things dependent on the law of nations; and the executive, in regard to things that depend on the civil laws" because:

"(1) If the legislative and executive powers are combined in the same organ, the liberty of the people gets jeopardized because it leads to tyrannical exercise of these two powers.
(2) If the judicial and legislative powers are combined in the same organ, the interpretation of laws becomes meaningless because in this case the law-maker also acts as the law interpreter and he never accepts the errors of his laws.
(3) If the judicial power is combined with the executive power and is given to one-person or one organ, the administration of justice becomes meaningless and faulty because then the police (Executive) becomes the judge (judiciary)" (Montesquieu, 1748, The Spirit of The Laws)

As it understandable form the passage above, such preemptive system of checks and balances between the government branches was perceived as the best institutional design able to protect the most important value developed by liberal-democracy political philosophy: the neutral/regulator role of the state, the objectiveness of laws to ensure isonomia and the safeguarding of citizens personal freedom. Conversely, such political theory started to shape a precise European modern ethics built upon inalienable human rights, like individual liberty valued, equality, and the virtue of tolerance, required to respect others in legitimate civil, open societies. The state's form is that of the minimal north-European liberal democracy, which is the "regulator" of society but has two boundaries to its powers. The first is the rule of law, making public institutions accountable to the national legal system, namely the social contract. The second is popular will since the citizens can contest a government that does not respect its tasks. European political philosophy and ethics guided by individualist anthropology, human dignity, codified law centrality, and scientific thought were born.

Even if European political philosophy has a high sensitivity for postulation and abstractions, such a political thought was deeply intertwined with a given socio-economic environment that inspired by its transformation, that is useful to analyze to start inquiring the foundations of European economic thought.

A watershed occurred after the Renaissance. Stressed on individual liberties, the ascent of an urban social class of professionals (namely the bourgeoisie), and the increasing leverage it had in economics and technological enhancement challenged the old order ruled by aristocratic landlords (the so-called ancient regimes). Economically speaking, this caused ongoing competition between newborn small-scale private enterprises whose aim was to maximize their profit and avoid state control over their activities. These are the first seeds of European capitalism. At the end of the 19th century, European society was dramatically transformed. The aristocracy had almost disappeared in Western Europe, while simultaneously, the bourgeoisie, thanks to its economic centrality and the new quasi-democratic institutions where it found representation, now played a dominant role. Few peasants were allowed to emancipate or substantially improve their condition. They either remained implied in the agricultural sector or moved to the city to become the new urban-industrial society's proletarian class. The rise of the bourgeoisie class, together with political fragmentation that allowed a persecuted thinker to move from one country to another to seek asylum, is intertwined with the XVII century thought revolution. By criticizing the establishment of cultural authority (the Church and the Holy Religious Text) and political authority (the landlords and the coopted monarchs), various free thinkers of the bourgeoisie developed the paradigm of modern European culture above-discussed.

The political model fostered by this socio-economic is the open commercial republic, presented as a more human and developed political system in contradiction to the dogmatic theological-political regimes that dominated Europe. Thinkers began to believe that society's cultural and material process could be encouraged by intellectual and commercial freedom as “every man, as long as he does not violates the laws of justice, is left perfectly free to pursue its own interest his own way, and to bring both his industry and capital into competition with those of any other man” (Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations; 1776). As a result, the economic realm started its process of overwhelming politics. The state started to be conceptualized as that sovereign entity whose main task was to ensure personal and commercial freedom while providing security through common laws and equality by partly reallocating resources. The first seeds of the paradigm of free market and state as a regulator were planted.

Eventually, the modern philosophical thought arisen in Europe is essential based on free and rational-scientific thought, protection of personal rights, immanentism, economic liberalism, liberal democracy, and the cult of material progress.

3.2.3: CONTEMPORARY THOUGHT: LIBERAL DEMOCRACY RESURRECTS ON THE ASHES OF TOTALITARIAN'S DISASTER

The political and socio-economic characteristics above discussed experienced the first and the industrial revolution, which gave Europe the economic and material advantage that enabled its states to engage in worldwide colonialism. Nonetheless, such a framework had devastating side effects. On the one hand, technological progress was boosted, raising productivity, diversification of products, and improvements of the population's material condition; on the other hand, social and political unrest became common. Besides, competition (if not war) for acquiring scarce resources became common among the medium-small size European states. Various burghs, kingdoms, city-states, national states, and empires engaged themselves in constant wars to enlarge their power in the continent or obtain resources that their small-medium size territory did not have. The apex was reached with WWI that caused the Great Central Empires' fall (Austro-Hungarich, II Reich and the Ottoman Empire). Afterward, Europe experienced the ascent of authoritarian (if not totalitarian) nationalist states on most of its surface, whose most famous examples are Italian Fascism and German Nazism. It was the age of the catastrophe (Hobsbawn, 1994). Europe experienced a political, economic, cultural, and humanitarian collapse, as its model of republican self-government of the people had been defeated by totalitarian mass movements. The decline was characterized by loss of liberal governmental authority, societal atomization, diminished civic participation, disrespect of human dignity and rights, abolition of tolerance, plurality, and freedom. However, after the disaster of WWI, liberal-democratic thought resurrected on the ashes of the destruction.

European political thought was traumatized by totalitarian experienced that gave massive power to non-democratic and centralized nation-states. Consequently, Post-WWII European political theory and ethics recovered the legacy of the modern revolution while rewriting it. The results was a neo-contractualism able to give a new balance between the principle of equality and liberty, the establishment of representative liberal democracy based on universal suffrage, leverage of human rights, a new economic deal based on welfare states, and a system of continental federalism.

The most notable contemporary author on neo-contractualism is John Rawls (1921-2002), whose aim was to develop an egalitarian-liberal political philosophy and public ethics. The necessity was to find a proper equilibrium between liberals, who mainly cared about individual liberty and rights and condemned egalitarians as paternalistic. The latter was willing to sacrifice a higher portion of their freedom to ensure the highest possible societal equality degree. In his master-piece “A Theory of Justice”, he elaborated an approach reconciling liberty and equality. People defining the social contract are in an “Original Condition”, namely under a veil of ignorance that hides them their socio-economic conditions. Given this premise, they are asked to create a social contract to rule their societies. The result should be a liberal-egalitarian system that sacrifices the lowest possible personal liberty and rights to ensure an acceptable degree of societal equality and well-being. This system had its actual implementation in contemporary European parliamentary liberal democracy and the welfare state. Parliamentary liberal democracy ensured a high degree of civic and political rights to their citizens, from which they now receive legitimacy. They also empowered civil society's political participation, because it is perceived as empowerment of democratic process and public debate while also being a preventive measure to any unlawful act of the governments attempting to gain more power than that delegated to it. Parliamentary democracy gains its legitimacy by voted Constitution, representing the crystallization of society's ethics, popular will, and vertex of the legal system. Parliamentary democracy also committed to proactively defending human rights and ensured various social rights listed in the Constitution, developing the Welfare state. The welfare state implies that the government spends public money to reallocate it across society, to provide social services to its citizens (such as schooling and healthcare). Also, it plays a role in the market economy by managing industries in strategic sectors, regulating prices, currency fluctuation, or simply by setting basic rules of economic conduct for private firms (Lindbeck 2006). Nonetheless, various systems of political economy developed after WWII in Europe in different countries; they are essentially liberal market economies, coordinated market economies, and mixed market economies. The first developed mainly in the UK on pure liberal theory, and the state was conceived as having a minimalist role in the economy, and the efficiency of the free market was trusted for the proper allocation of the resources. Coordinated market economies, whose most prominent example was West Germany; the state plays the role of stringent regulator of market dynamics to ensure competition, cooperation among economic stakeholder (worker, industrial, public administration) while providing an adequate amount of social services to the population. In mixed market economies, such as the country of Mediterranean Europe, the state is not solely an economic regulator but rather a player. It holds some strategic enterprises (such as communication and transportation sectors) and promotes

vast-scale public services to citizens, with the trade-off of less efficient market functioning and resource allocation (Schmidt 2009). Despite the variety of political economy led by European states (UK is excluded) each of them played an active role in implementing policies guided by social and welfare economy premises.

The analysis has outlined the core attributes of European ethics and political philosophy that arose after the catastrophe of the two World Wars during the second half of 20th century. Ethically speaking, the focus is the never-ending quest to find a balance between equality and liberty while giving back civic, political, and social rights to individuals and civil society that were outrageously disregarded under fascist regimes. The state, whose form in the parliamentary democracy, takes its legitimacy from popular will, embodied in the legislature and the voted Constitution. Besides, it plays a role in the market economy to reallocate resources and ensure public services.

3.2.4: UNITED IN DIVERSITY: FEDERALISM, NEO-LIBERALISM AND THE PROCESS OF EUROPEAN INTEGRATION

When analyzing European politics as a continent, there is no unitary state as the US or China would be, but rather an exceptionally highly advanced but fragmented, supranational institution, namely the EU. This sub-chapter aims to shortly describe its ascent and which pillars of political theory it is built on.

The idea of creating a pan-European system of economic and political cooperation arose after the devastation of WWII and the necessity to face a critical juncture in European history and politics, namely the development of a post-war European pacific order (Fabbrini 2015) and economic recovery of the continent devastated bu the war. The new theoretical solution to guide political thought in such troubled water was founded in the federalist theory a set "of convictions developed abstractly before and immediately after 1945, in response to the terrible political and moral crisis provoked by the Nazis" (Gilbert, 2015: p 29). The federalist theory was meant to overcome the Westphalian order of international relations, which implied the co-existence and no interference of several wholly autonomous and sovereign states, which had shown to be realistically a failure. As written in the Ventotene Manifesto,

"we came to develop the central idea of the essential contradiction, responsible for the crises, wars, suffering and all the exploitation that afflict our society: this contradiction was the existence of geographically, economically and militarily distinct sovereign states, considering other states as rivals and potential enemies, all living in a permanent, mutual condition of bellum om-

nium contra omnes […] We have been motivated to create an autonomous organization, with the objective of promoting the idea of a European Federation as an achievable goal in the immediate post−war years because of the priority, the pre−eminence of this problem over all others affecting our immediate future and the certain knowledge that, if the situation is allowed to return to old nationalistic patterns, the opportunity will be lost for ever, ruling out lasting peace and welfare for our continent" (Spinelli, Rossi, Colorni, Hirschmann: Ventotene Manifesto, 1941-42, edited in 1944).

Federalism provide a sets of thoughts, methods and practice according to which several nation states can unite politically, economically and lawfully into a institutional framework that contains them all. Each country (after its own parliamentary has formally accepted such measure) partially devolves its sovereign power to a new founded supranational organization, while keeping its degree of autonomy in their national realms. The aims were to support continental cooperation in strategic economic sectors, promote European reconstruction, and avoid further internal conflicts by planning European market coordination.

The path was lead by six forward-thinking states. Italy, West Germany, France, Belgium, Netherlands, and Luxembourg. In the '50s, three European Communities were founded. The first European Coal and Steel Community was created in 1951 with the Treaty of Paris, with the aim of creating incrementally political cooperation starting form economic cooperation by creating common framework for strategic resources and technologies first: "pooling of coal and steel production should immediately provide for the setting up of common foundations for economic development as a first step in the federation of Europe" (Schuman Declaration, 1950).

Subsequently the European Atomic Energy Community (EURATOM) in 1957, and the European Community in 1957 with the Treaty of Rome. As a matter of fact, the European Community overtime was institutionalized, creating specific organs. Supra-states authorities, partly independent from the member states and partly still accountable to them, were created to provide a framework of European governance: the Council, the Commission, the European Parliament, and the European Court of Justice (ECJ).

-The Council is a body of legislative power composed of national ministers from member states that remain accountable to their national government.

-The Commission was the community's executive, drafting the law, and its members acted in the European interest.

-The Parliament, representing the people of each member state, had a less prominent role initially (mainly consultative). Nonetheless, it acquired form 1975 on it started getting more involved

to solve inter-institutional disagreement and gained much legitimacy after the first European election in 1979.

- the European Court of Justice (ECJ) which had the task to ensure compliance of member states to communitarian laws. It became a powerful institution and increased the leverage of European law over national law over time, as it promoted the superiority of European law over national law.

Such an institutional framework, which remains the basis for the future European Union, derives its conceptual legacy from a synthesis between liberal-democracy and federalist political theory. European Community had a contractualist birth, as every state can be logically considered an individual entity willing to hand over a part of its autonomy (freedom) to ensure continental (societal) security and avoiding a *bellum amnia contra omnes* scenario. The devolution is based on the voluntary agreement of free and equal member state. It intended mostly to promote continental integration though economic cooperation, as fostered by liberal political theory, and cultivating equality while preserving the highest possible degree of freedom and competitiveness. Each rule and practice were coded and institutionalized, and European law had an expanding binding power on the national legal system. Thus, it is also obviously informed by federalist thought. Wether EU is today a confederation or a federation is complex to be clarified and academia is strongly decoupled on the issue. In the research the EU will be defined as a "federalist union". The European Community in the past and especially European Union today is considered to be a "federalist union" as it "aggregates several previously independent states asymmetrically correlated" and whose aggregation "implies the setting up of a center with delimited and controlled powers" (Fabbrini 2015; p XIX).

After the first decade of foundation, European integration went on mostly with objective of building a common market developed on the legacy of liberal economic theory, as its primary rationale was fostering the appropriate rules of economic competition while ensuring the free circulation of goods by lowering or eliminating frontiers' taxes through a customary union. The goal was to create a European Single Market that could permit free circulation of goods, services, people, and capitals within the territories and the economic system of the member states. It was gradually achieved thanks to the establishment of the European Monetary System in 1979 (a system of fixed exchange rates among member states' currencies) and the official establishment of the European Single Market in 1986.

As discussed during the sub-chapter above, the majority of European stated implemented welfare state and social policy in the span of time '50s-'80s, which were theoretically based on Keynesianism and social market economy. The trend started reversing during the '80s, as the theory of

neo-liberalism gained lots of consensus and became the dominant political theory. As long as the Europen Community (and later EU) is concerned it fostered such passage of paradigms, while preserving elements of the old model in the new neo-liberal framework. Neo-liberalism is intended as a set of political philosophy and political economy ideas, discourse, and actual policies that "involves a commitment to certain core principles focused on market competition and a limited state" (Thatcher, Schmidt 2013; p 1). Its core content consists of trust of resources' capability by the free market, enhancing international trade and capital mobility, less interventionist role of the state in the economy, monetarism, institutionalization of independent central banks, and gradual privatization and liberalization of services and goods previously publicly provided (Schmidt, Thatcher 2013). In the light of the federalist and neoliberal theoretical context, it is possible to comprehend the transformation of the EC into the EU that occurred in 1992 after the signature of the Treaty of Maastricht. The newborn EU was divided into three pillars:

-first pillar: Regulating the single market

-second pillar: Common Foreign and Security Policy

-third pillar: Police and Judicial Co-operation in Criminal Matters.

The first pillar was the one that achieved the best model of policy-making by allowing vast powers to the Commission in constant consultation with the two legislative organs (the Council and the Parliament). In this realm, the European Union managed the continental economy as an actual federal state. Nonetheless, this does not hold for the other two pillars, where an intergovernmental model of governance remained, thence diminishing the possibility of coordination and reinforcing a confederalist and inefficient model of political governance (Fabbrini 2015). Meanwhile, the creation of the Single Market evolved with the creation of the European Central Bank in 1998 and the adoption of the common currency, the euro, in 2002. At this point, the European Union has taken its contemporary shape of regulatory supra-national institution. EU economic regulation, whose main objectives are enhancing free circulation of goods and services and promoting competition, resulted in constant requests for liberalization and privatization to member states to meet the Eurozone requirements. Economic solid regulation and interconnectedness, without a proportional political unity, is at the basis of the current lack of unity and popular legitimacy the EU is facing. The failure of the attempt to transform European Treaties into a constitution in 2007 and the subsequent Treaty of Lisbon witnessed the political fragmentation of the European continent.

The European Union developed a de facto federal union as the coordination of the common market depends on its institutions, and its regulations are binding and hierarchically superior to member states' legislation. It has structural similarities with federal states even if it is not funded

on a constitution but rather on Treaties. EU can be therefore defined as a federal union, because it combines federalism and confederalism (Fabbrini 2015; p xxiii).
Eventually it is necessary to stress that the European Union does not only represents a political institutions but rather a set of ethical and social principles that it tries to protect and promote through advanced human rights regulation and social policy, expressly quoted in art 2 of the Treaty on European Union (TEU):
"The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail."
The quotations is a perfect crystallization and synthesis of the core values of European political theory and ethics discussed along the whole research. From a political perspectives what is part of European identity is defense of democracy and citizens participation in political life, tolerance of ethnic and cultural minorities, coordination of pluralism and affirmation of rule of law. They all reflect principles of liberal democracy. On the ethical side the centre of analysis is always the individual, empowered with his/her universal human rights, which have to be inserted into a collective dimension which should be able to balance the pendulum freedom/equality and ensuring justice.
After having described the institutionalization of the EU and the political theory legacy that influenced its formation is necessary to analyze how these characteristics are linked to the current EU strategy on AI.

3.3: THE ATTEMPT TO BUIILD A COORDINATED STRATEGY: EU PLAN ON ARTIFICIAL INTELLIGENCE

"The European approach for AI aims to promote Europe's innovation capacity in the area of AI while supporting the development and uptake of ethical and trustworthy AI across the EU economy. AI should work for people and be a force for good in society". (European Commission White Paper; 2020)

These words synthetically contain the most relevant conceptual lines on EU strategy on AI. The purpose of this subchapter is to explore its main content through Commission's official document and understand to what extent it is based on European modern and contemporary political theory.

Indeed, three main objectives are listed as priorities in official documents the White Paper on Artificial Intelligence, the Coordinated Plan on Artificial Intelligence, and Artificial intelligence for Europe, all issued by European Commission. The first is to boost EU industrial innovation and economic competitiveness both for firms and the private sector. The second is to ensure that society, economics, and individuals are adequately prepared to handle such an epochal change and that "no one is left behind in the digital transformation" (EC, AI for Europe 2018; p3). Last but not least is to develop the globally most advanced set of ethics, standard and normative regulation of the AI sector that complies with EU values (Roberts, Cowls, Floridi, et al. 2021). The optimal result for the Commission would be that of cultivating an ecosystem of excellence in the economic realm and an ecosystem of trust in the individual and societal's sphere (CE, AI White Paper 2020).

Examining each point of the plan in deeper details is necessary to make the more "European" attributes of the strategy emerge. First is necessary to emphasize that despite ""n April 2018, 24 EU countries and Norway signed a Declaration of Cooperation on AI, formalizing their intention to promote a collective European response to the opportunities and challenges presented by AI" (Roberts, Cowls, Floridi, et al. 2021), European Strategy on AI is still highly fragmented. By the time the Coordinated plan was issued in 2018, France, Finland, Sweden, and Germany have elaborated their own AI strategies. Like Denmark, Luxembourg, the Netherlands, Ireland, and Norway, other member states have produced a comprehensive digitalization strategy, including AI-related actions, while Austria, Belgium, Czech Republic, Denmark, Estonia, Germany, Italy, Latvia, Poland, Portugal, and Slovenia developed their specific national approach. The presence of so many overlapping strategies is a double-edged sword (CE, Coordinated Plan on Artificial Intelligence, 2020). Diversity of actions can generate transferrable best practices and productivity diversification but risks harming the European Single Market's stability and coordination. The Commission appeared to take this point seriously as "a common European approach to AI is necessary to reach sufficient scale and avoid the fragmentation of the single market" (CE, White Paper, p3).

Moreover, "overall, Europe is behind in private investments in AI which totaled around EUR 2.4-3.2 billion in 2016, compared with EUR 6.5-9.7 billion in Asia and EUR 12.1-18.6 billion in North America" (EC, On Artificial Intelligence; p 5). The Commission has figured out that public and private investments have to increase if the EU wants to maintain a competitive pace compared to China. The EU should aim to increase this investment to at least EUR 20 billion by the end of 2020: "it should then aim for more than EUR 20 billion per year over the following decade" (CE, Artificial Intelligence for Europe, 2018; p 7). To fill this gap, the Commission has

launched initiatives through European funds to enhance member state cooperation and deploy all potential European creativity. To encourage the multifaceted continental private sectors, the EU promotes R&D for AI through investment mechanisms. The most relevant actions are:

-Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion (not all of them allocatable to AI projects) over the years 2021-2027

-InvestEU: a long term-planning funds or sustain member states' firms, twith 372 billion in total available (not all of them allocatable to AI projects)

-the Digital Europe program: a 9,2 billion euro budget over the years 2021-2027 to enhance digital capacities and sustain wide digital applications

- Public-Private Partnership under Horizon Europe with a specific 1,5 billion euro investment in AI

- the European innovation Council, applied in the years 2018-2020 that "made available for 2018-2020 to support 1,000 potential breakthrough projects and 3,000 feasibility awards" (CE, 2018; p 7), especially for SME's industries, which represents the backbone of the European economy.

-the creation of Digital Innovation Hubs in various member states exploits all the European potentials in start-ups and innovative technology.

Such methodology of financing is very indicative of the political philosophy and economic thought of Europe, and it is diametrically opposed to the approach China has. As a matter of fact EU institutions, are not trying to act coordinately with specific economic actors such as China AI National Team, probably because EU world not even if practically able to conduct such a policy. What they are doing instead through such funding opportunities is to provide grants for which organizations can apply, after supervising the design of their project of innovation. Which are the pros and cons of this methodology? Pros are found mainly in the degree of variety of innovations and diversifications of technology while cons are risk of fragmentation of AI ecosystems and difficulty of scaling-up. Moreover such funding opportunities are not always AI-specific, but funds which can finance a wide range of activities among which AI applications can be inserted.

To sum up, Europe's strategy is intertwined with its confederalist nature. The variety of actions promoted by the member state can be a considerable resource in terms of creativity and economic diversification and an obstacle to a coordinated continental strategy to develop a single digital market and clear long-term priorities.

As far as the second pillar is concerned, "prepare for socio-economic changes," the rationale of the strategy is "encouraging the modernization of education and training systems, nurturing talent, anticipating changes in the labour market, supporting labour market transitions and adapta-

tion of social protection systems" (CE, 2018; p 4). Also, the focus is to prepare individuals and society for the digitalization paradigm shift.

In the plans of EU and in the humanist vision AI should be able to empower humans, not threatening them. By providing the highest standards of personal data privacy and by promoting mass-scale re-skilling and up-skilling of workers and students EU has mainly three to purposes. The first is to reduce highly educated and rights-empowered European citizens' mistrust towards data gathering and AI applications, building up trustworthy data-AI ecosystems. The second is to nourish European AI talent by "increasing the number of people trained in AI, encouraging diversity" (CE, 2018; p 13) to avoid brain drain through the Digital Education Action Plan. Some projects already launched are the "Digital Opportunity Traineeships" to acquire digital skills and actions within the Digital Skills and Jobs Coalition. The third critical challenge is that of re-training various manual workers to evade AI-led job disruption. The Commission is endeavoring to enhance SMEs enterprise digitalization and also training workers. Since SME, and especially manufacturing, which accounts to 23% of GDP (European Political Strategy Centre 2018) represents the backbone of EU society, a problem of technological unemployment would mine European societal stability and the enjoyment of the principle of equality among citizens supporting the effort of state for labor education policies.

Lastly, it is necessary to investigate the importance of "ensuring an appropriate ethical and legal framework, based on the Union's values and in line with the Charter of Fundamental Rights of the European Union" (CE, 2020, p 3). As the research has underlined, codified law and strict regulations are typical of European political philosophy and EU actual practice. Ensuring top-level standards in the fields seems natural in a European environment. EU has given a top priority to grant a human-centric approach, respect for democracy, liberty, equality, the rule of law, human rights and dignity, and minority toleration (Cowls, Roberts, Floridi et al. 2021) in the realm of AI standard-setting.

In this realm EU institutions have proved to have a clear long-term thought:

"A Chinese model is neither possible nor desirable. Successive waves of technological advancement have essentially revolved around the empowerment of individuals. In the long run, there will not be digital 'prosperity' for countries that do not address issues related to the effect of technology on citizens' well-being. If not addressed early-on in the development of technology, the tension between users and misuse of technology might escalate at a later stage, when it can be more difficult to handle". (European Political Strategy Centre 2018: p 5).

Moreover, the Commission has appointed a High Expert Level Group on AI[14] made of 52 experts form diverse field as universities, civil society, and entrepreneurship to set ethical guidelines for the realization of the European Strategy on Artificial Intelligence. Study in details the work of such body is the aim of the next subchapter.

Nonetheless, the EU is not engaged in setting AI normative framework for only ethical goals. Recently, scholars seem to have recognized the importance of ethical engagement in terms of power politics, such that Bjerkem and Harbour, in a paper elaborated for the European Policy Program, have stated that: "at the international level, standards are increasingly becoming a matter of geopolitical competition" (Bjerkem, Harbour 2020, p 6). Ethics provide a general framework for the setting of standards in new technologies. Developing coherent and exportable standards in new technologies makes the way to become a standard-setter. It increases the competitive advantages of national industries, indirectly forcing foreign ones to align to their standard. "Conversely, Europe has an opportunity to set global standards to reach the highest level of welfare for citizens, gaining trust and thereby setting the ground for a stable and broad level of acceptance of the new technology, not only in Europe but, over time, also in other parts of the world. In the short term this can imply additional hurdles for companies willing to invest in Europe. However, in the long run it is likely that higher standards will prevail, so the companies that gain early trust among users could have a competitive advantage". (European Political Strategy Centre 2018: p 5).

Having recognized that it is lagging in innovation terms, the EU is trying to stress its comparative advantage in norms by providing the most advanced and widespread legal-ethical framework.

The sub-chapter has expressed the nature of the EU strategy for AI, and to what extent it is influenced by its continental political theory legacy:

Its "federal union" nature provides economic diversification and competitiveness, thus weakening coordinating capacity and the clear setting of long term goals.

The stressed on socio-economic adaptation depends on the legacy of post-WWII welfare states and civil society empowerment, thus mitigated by the neo-liberalist ideas,

while importance of the regulatory frameworks and the human-centric approach derives from the traditional importance of codified law, humanism, and attention to individual rights.

[14] https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai

3.4: TECH-APPLIED EUROPEAN ETHICS: TRUSTWORTHY AI AND HUMAN CENTRIC APPROACH

"AI has the potential to significantly transform society. AI is not an end in itself, but rather a promising means to increase human flourishing, thereby enhancing individual and societal well-being and the common good, as well as bringing progress and innovation [...] To do this, AI systems need to be human-centric, resting on a commitment to their use in the service of humanity and the common good, with the goal of improving human welfare and freedom. While offering great opportunities, AI systems also give rise to certain risks that must be handled appropriately and proportionately. We now have an important window of opportunity to shape their development. We want to ensure that we can trust the socio-technical environments in which they are embedded" (HLEG on AI, 2019; p 4).

The passage expresses the importance EU gives to AI ethics and its kind of priorities. This subchapter has the intention to define the public ethics European institutions are trying to promote and how it is linked to the European ethical background.
As written above, provide an "appropriate ethical and legal framework (for AI) to strengthen European values" (HLEG, 2019; p 6) is one of three key pillars of EU strategy for AI. Specifically, the objective of AI ethics, which "s a sub-field of applied ethics, focusing on the ethical issues raised by the development, deployment, and use of AI" (HLEH, 2019; p 9) is to conceive and achieve a Trustworthy AI. Trustworthiness is multidimensional, as it should apply to various domains: "trustworthy AI hence concerns not only the trustworthiness of the AI system itself but requires a holistic and systemic approach, encompassing the trustworthiness of all actors and processes that are part of the system's socio-technical context throughout its entire life cycle" (HLEG, 2019; p 5). Therefore:
-trustworthy should be the algorithm themselves, by ensuring that they are coded with appropriate ethical consideration and avoid any bias,
-trustworthy should be the process of automated decision-making,
-trustworthy should be the outcome of such a decision, which must desist any harmful conduct for the human being,
-trustworthy should be their socio-economic effect which should maximize individual and collective wellbeing respecting the fundamental rights listed in the European Treaties and Charter of Fundamental Rights.

The concept itself of Trustworthiness if analyzed in the light of the research is very well inserted into the paradigm of European political philosophy and ethics, and figuring out why such specific quality has been identified as essential to AI systems is important. What an AI has to grant, in first place, being so Trustworthy, is its behavior towards citizens, ensuring that their fundamental individual rights are not infringed, and that its behaviors can be somehow predicted, as established by laws or contracts. Secondly, its societal impacts should be mitigated, as AI is perceived as a potentially socially-disruptive innovation that could hinder the European society mostly composed of small-medium enterprises and cities.

Conducting their study, HLEG identifies how the entire AI life cycle to be trustworthy has to be legal, ethical and robust. By lawful AI is intended an AI system that operates according to the legal system provided by national member states, EU primary, and secondary law, UN Human Rights Treaties, and the Council of Europe (HLEG, 2019). Once more the codified law and rule of affirm the centrality in any ethical design functional to policy-making in a European context. Ethical AI means respecting and aligning with the fundamental ethical principle and European values, which are also legally crystalized in EU primary and secondary law. The aim is to construct a Trustworthy AI which is human-centric and defends the fundamental human rights developed by European culture as "the common foundation that unites these rights can be understood as rooted in respect for human dignity – thereby reflecting what we describe as a "human-centric approach" in which the human being enjoys a unique and inalienable moral status of primacy in the civil, political, economic and social fields" (HLEG, 2019; p 10). Despite various rights already enlisted and legally protected by the EU Charter and ECHR Convention, such an ethical framework still represents an ideal type. The fundamental rights that serve as columns for such techno-ethical systems are: respect for human dignity, freedom of the individual, respect for democracy, justice and the rule of law, equality, non-discrimination and solidarity, and citizens' rights (HLEG, 2019). In addition to this list of fundamental rights, some ethical imperatives are listed to develop a Trustworthy AI: respect for human autonomy, prevention of harm, fairness, and explicability (HLEG, 2019).

Finally, by robust AI is expected a system that "should perform in a safe, secure and reliable manner" (HLEG, 2019; p 9), both from a technical viewpoint, granting no harmful malfunctioning and from a societal perspective, ensuring that its vats scale application causes no undesirable societal effects.

After highlighting the fundamental rights to protect and the ethical imperatives, the HLEG on AI depicts seven key requirements to practically realize the conceptualized system of Trustworthy AI: human agency and oversight, technical robustness and safety, privacy and data governance,

transparency, diversity, non-discrimination and fairness, Societal and environmental wellbeing and accountability (HLEG, 2019; p 16). Such a scheme represents a multi-stakeholder approach in which the HLEG on AI has tried to depict an application model that respects all actors in society, politics, and economics to promote a robust AI application. Each category is therefore divided into more micro subcategories to explain more precisely its aim. Nonetheless, the overall objectives are linked with the first two pillars of EC strategy, prepare society, and form appropriate ethical frameworks.

In the light of the overall research, the shape of such an ethical framework for AI does not appear unpredictable. It is in clear continuity with European ethics tradition. The human-centric approach has a distinct individualist/humanist inspiration. From ancient times it has been accentuated the importance of individual human dignity. In modern thought has emphasized the necessity to ensure citizens' rights and freedom. Lastly, contemporary thought has promoted individual and social rights as summa bona of society, reflected in the Ethical Guidelines. It ensures a high degree of protection to the individuals, dignity, freedom, and rights obtained over centuries of European history, but the risk is that "nonetheless these aims are not weighted equally, with societal and business interests largely subsidiary to improving the wellbeing of individuals" (Cowls, Roberts, Floridi, et al., 2021; p 16).

Finally, it is necessary to grasp what happens in a concrete world situation when AI-related practices have to be assessed in the light of the ethics above developed. The HLEG on AI has already identified five possible problematic circumstances in which an ethical assessment of AI should be performed. They are: identifying and tracking individuals with AI, covert AI systems, AI-enabled citizen scoring in violation of fundamental rights, lethal autonomous weapon systems (LAWS), and potential longer-term concerns (HLEG, 2019; p 33-35). For the sake of the analysis, the first case is selected since it is also a central topic related to the current pandemic crisis. The Commission has already issued a legally non-binding communication on the application of tracking apps to define the "trustful and accountable use of apps". The main concern of the communication is to promote National Health as data controller, ensuring "that the individual remains in control" and providing guidelines for strict and regulated use of data. Moreover, the application of tracking apps is already legally bound by several acts:

-The Charter of Fundamental Rights of the European Union art. 8 provides for personal data protection.

-Regulation (EU) 2016/679 (GDPR) describes the legal framework for the protection of personal data and their movement within e outside the European Union. Art 4 of GDPR states: "The processing of personal data should be designed to serve mankind. The right to the protection of per-

sonal data is not an absolute right; it must be considered in relation to its function in society and be balanced against other fundamental rights, in accordance with the principle of proportionality. This Regulation respects all fundamental rights and observes the freedoms and principles recognised in the Charter as enshrined in the Treaties, in particular the respect for private and family life, home and communications, the protection of personal data, freedom of thought, conscience and religion, freedom of expression and information, freedom to conduct a business, the right to an effective remedy and to a fair trial, and cultural, religious and linguistic diversity".

- the Directive 2002/58/EC (ePrivacy Directive) sets rules for the use of personal data by telecommunications operators.

Although article 4 of the GDPR declares that the right to personal data protection has to be weighted by society's interests, the whole framework appears to be highly individual-centered, and it shows that so far, the main concern has been that of granting the protection of individual fundamental rights. As a consequence, even "in emergency situations, such as the Covid-19 crisis, Member States may impose limitations on certain rights and freedoms in order to pursue quick and effective measures. However, such measures need to comply with fundamental rights standards and EU law" (Dumbrava 2020; 11).

The implementation of tracking policies via national tracking apps during the Covid 19 pandemic is an exemplification. First, those apps were not developed at the European level but by each member state's governments and Health Ministers, resulting in a higher grade of proximity to the population but low coordination and functionality. Also, every state promoted programs with different degrees of internal decentralization, making the realization of a shared European network of tracking impossible. At the present time, each country has its national tracking app[15]. Moreover the use of the app is not made mandatory in any state. It relies on voluntary adherence failing to achieve a sufficient number of citizens using the service to make it is helpful at the country level as "few countries get above 1 in 5 residents to download the contact tracing app" (Hernandez-Quevedo, Scarpetti, Webb, et al. 2020; p 43).

The EU member states policy design and result in the real of the tracking app are a clear example of how the EU is maturing AI ethics and how it links to its ethics tradition. The importance of individualist-centered liberal democracy thought, federalism, codified role, and regulations European AI ethics is much more focused on ensuring each citizen's fundamental rights than directly maximizing aggregate social utility.

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[15] (https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/travel-during-coronavirus-pandemic/mobile-contact-tracing-apps-eu-member-states_en)

CONCLUSION

As it has been examined in this research, the digital revolution is about to cause an epoch of massive transformation across various realms. Culturally speaking, it is the fourth revolution in human history, following the Copernican, Darwinian, and Freudian ones. At the same time, in the industrial sphere, it is the natural culmination of the process triggered by the three previous industrial revolutions. Also, it is taking place in a particular and very delicate historical period, as the pandemic is putting under stress global equilibria and cultural paradigms. The world is experiencing a period of intense transformation, and a new criterion of interpreting and chiefly planning our society, economics, and politics is urgently required. Even if the outlined scenario is harsh, the twin transformation fostered by green economy with its sustainable energy and the digital revolution represents a way out of the disorder to build up an innovative sustainable, and smart future. Artificial intelligence (intertwined with Big Data) has been acknowledged as its primary driver. Their combined application will increase the possibility of turning information into precise quantified data and then analyzing it with a proper artificial intelligence system, causing a shift in human perception of social phenomena and people's decision-making power as it is likely to become increasingly automated.

In economics, the ascent of artificially intelligent systems, being a General Purpose Technology with disruptive power, is likely to cause a radical transformation both in the industrial and the labor paradigm. The former will be less linked to ownership of physical resources, while the second will experience a dramatic evolution because many cognitive jobs will be threatened by automation, and still, new jobs are not forecastable. In addition, because giant hi-tech private firms most develop AI, the balance of power between the private and public domain is probable to shift in favor of the former.

As far as politics is concerned, AI is pushing states to assess and promote national strategy and increase competition in international relations. AI is now central to international competition because it could restructure world equilibria and reshape geopolitical balances. However, the most significant challenges will be faced in the reality of domestic policies, especially in governance and state-citizens relationship. AI technology may highly empower surveillance power by the state over citizens and decrease politicians' control over the decision as it could be constantly quantified and delegated to AI systems. Transforming human-driven political decisions into merely technical AI-driven could mean the end of politics has always been perceived and conceptualized.

Besides, governments in collaboration with private companies may engage in Big Nudging. Thanks to the ubiquitous electronic internet-connected devices and the massive spread of social media platforms, their owner have the actual capability to stimulate public opinion consciousness and inclinations. Because each netizen in the world is provided with personal smart devices and social media and as the majority of them uses them to obtain (political) information, thanks to social media platform's algorithms, they become personalized and targeted, causing a reinforcement of personal beliefs, and possible subsequent political polarization and weakening democratic political debate. Besides, the government may become empowered with surveillance power, which involves regularly controlling individual beliefs, tendencies, online and offline activities to surveil the population's reaction and possibly interpose when unwanted consequences are forecasted.

As the research has shown, the digital revolution and AI pose a possibility of transformation to society and states while contemporarily putting them at high risk if this transition is not handled correctly. As a matter of fact, the most important future challenges of digital technologies will not be to enhance further innovation but rather develop a proper ethics system and governance model, precisely a political philosophy. The research aims to demonstrate how each society and state develop an AI political philosophy and that public ethics is linked to its ethics and political theory background. In order to do so, Europe and China have been taken as case studies. They have been selected not only because they represent two of two central economic and political players of the current environment but also because they embody two poles of human civilization. All the above information supplied, what the research intends to confirm is that how any society conceives AI strategies, ethics and applications is not culturally neutral but historically and logically conditioned by each civilization's political philosophy and public ethics, rejecting any thesis of cultural neutrality of philosophy of technology. The aim is to develop a cross-cultural digital and AI political philosophy and ethics to lessen narrative polarization and spread the urgency of dialogue and mutual acknowledgments in the world community and between China and the EU.

Results have been demonstrated to be consistent with the hypothesis above quoted. Chinese National Strategy for AI and the public ethics it is developing around have proven to be grounded on Confucianism and Socialism with Chinese characteristics. Confucianism stressed the concept of harmony over equality, and its relational nature makes it almost impossible for an individualist thought to rise. Socialism with Chinese characteristics has provided the superiority of politics over private economic interest, a centrally democratic governance model, and a collectivistic thought. As a result, the Chinese AI national strategy has been developed with solid governmen-

tal planning and strict cooperation with private sectors and attention to each province's specificity, following democratic centralism and *tiao/kuai guanxi* principles. This has allowed the Chinese AI national Strategy to be conceived for a long-term period and fill China's gap years ago with higher technological countries. Also, Confucian traits are openly visible in AI application public ethics priorities. Taking as example CTAs' application, the ethical rationale appears clear: Chinese policy-makers and society have opted for a digital-AI correlated application and ethics, which constraints to some extent personal freedom and privacy while ensuring a societal utility maximization that was crucial in such a critical juncture such as the Covid-19 pandemic to grant collective safety and unity.

The analysis of European ethics political philosophy history has provided very different results. First, the European tradition based on Greek-Roman legacy, modern and Enlightenment thought, contemporary post-totalitarian and federalist thought have generated different outcomes. The state's role has never been conceptualized as strongly as in Chinese political theory, but rather as the regulator of the various independent group of interest that composes a country. At the continental level, the natural outcome has been the creation of a federalist union-like governance model, the EU, and a core sets of values that are officially empowered and defended by the EU: human rights, personal freedom, liberal democracy, the rule of law, privacy, separation of power, and individual autonomy. Such an ethical framework has as focal point the well-being and utility maximization of the single citizen rather than society as a whole. Such an individual-centered approach has directly influenced the concept of Trustworthy AI developed by the High-Level Expert Group on AI summoned by the European Commission. Moreover, the EU member states policy design and results in the tracking apps' experience are a clear example of how it is linked to its ethics tradition. The importance of individualist-centered liberal democracy thought, federalism, codified role, and regulations European AI ethics is much more focused on ensuring each citizen's fundamental rights than maximizing social utility. Moreover, the UE federalist background has ensured creativity and diversification among member states, thus jeopardizing continental coordination and the creation of a real long-term coordinated strategy.

In conclusion, it has been shown that any political choice or ethics developed for technology issues (AI specifically in the analysis) is never culturally neutral but directly linked to each state's or institution's political theory and ethics background.

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