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NEW BILL OF RIGHTS OF THE QUASI-HUMAN. COMPANY MANAGEMENT IN THE ERA OF TECHNOLOGICAL LIFE

1. THE FIRST EXECUTIVE ROBOT IN HUMAN HISTORY

In 2017, Alibaba's founder and CEO, Jack Ma, predicted: "A robot will probably be on the cover of Time Magazine as the best CEO in 30 years"¹. That may happen much sooner than he thought. On 25 August 2022, NetDragon Network Holdings Limited (HKEx stock code: 777)² – a mobile and online gaming developer announced appointing Ms. Tang Yu, an AI-powered virtual humanoid robot, as the Rotating CEO. The media release explained the decision as follows:

"All departments of NetDragon and its subsidiaries:

¹ <https://money.cnn.com/2017/04/24/technology/alibaba-jack-ma-30-years-pain-robot-ceo/index.html> [24.10.2022].

¹ NetDragon Network Holdings Limited (HKEx stock code: 777) was established in 1999 and is headquartered in Fuzhou, Fujian, China. It ranks among the top 2,000 Forbes global companies and is a crucial software company planned by the state and a national cultural industry demonstration base. National cultural export critical enterprise, selected as one of the top 30 national cultural enterprises for three consecutive years, and ranked third in the list of top 100 high-growth listed companies in the Chinese version of "Forbes" Chinese version of "China's Potential Enterprises", and ranked among the "Top 100 Internet Enterprises in China" for nine consecutive years list". In addition, NetDragon is also included in the Hang Seng Composite Large Mid Cap Index and Hong Kong Internet ETFs, as well as the constituent stocks of Shenzhen-Hong Kong Stock Connect and Shanghai-Hong Kong Stock Connect. NetDragon employs over 6,000 people and has twice been awarded "Excellent Employer" by Fortune magazine. NetDragon has created a well-known online game portal in China – 17173.com; independently developed well-known flagship games "Magic Domain" and "Conquer", which are widely welcomed by players; created a highly influential and user-friendly smartphone service platform – 91 Wireless. In 2013, NetDragon sold 91 Wireless to Baidu for US\$1.9 billion, <http://www.nd.com.cn/> [10.10.2022].

After the company's research and decision, Tang Yu is now appointed as the rotating CEO of NetDragon, responsible for organizational management affairs and strategy execution. By constructing a metaverse organization, the organization model will be continuously optimized, management efficiency will be improved, and talent strategy will be deepened.

As the company's first digital executive, Tang Yu started to work for NetDragon on 6 September 2017. She used to be the vice president of NetDragon. She was deeply involved in the company's AI+ management, Metaverse organizational strategic planning and projects. Give full play to your strengths and create success together!

The above appointments are effective from 25 August 2022. NetDragon”.

Although Ms. Tang Yu is, in fact, an algorithm, she is introduced on the company's website, and there is even her bio, which is as follows: “Ms Tang is the Group's first digital executive and is currently the rotating CEO. She is responsible for organizational management affairs and strategy execution. By building a metaverse organization, she continues to optimise the organizational model, improve management efficiency, and deepen talent strategies. Ms Tang worked for NetDragon in September 2017. She was the vice president of NetDragon and was deeply involved in the company's AI+ management, Metaverse organizational strategic planning and projects”³. The new CEO -Ms. Tang Yu will streamline process flow, enhance the quality of work tasks, and improve the speed of execution. By putting a virtual humanoid at the top of its C-suite, the Netdragon company aims to pioneer the use of AI to transform corporate management and take operational efficiency to a new level.

Moreover, Tang Yu will also act as a real-time data hub and analytical support for making rational decisions in daily operations, as well as enabling more effective risk management decisions. The company also expects Tang Yu to play a critical role in developing talent and ensuring a fair and efficient workplace for employees. She will be responsible for overseeing operations valued at nearly \$10 billion in the company. Dejian Liu, chairman of NetDragon, said that they believe AI is the future of corporate management, and the appointment of Ms Tang Yu represents the company's commitment to truly embrace the use of AI to transform how they operate the business and drive future strategic growth. Netdragon will continue to expand algorithms behind Tang Yu to build an open, interactive and highly transparent management model as we gradually transform to a metaverse-based working community, which will enable us to attract a much broader base of talents worldwide and put the company in a position to achieve bigger goals⁴.

¹ <http://www.nd.com.cn/about/management-team.shtml> [18.10.2022].

¹ <https://www.prnewswire.com/news-releases/netdragon-appoints-its-first-virtual-ceo-301613062.html> [13.10.2022].

The appointment of the algorithm as CEO is a move to pioneer the use of AI to transform corporate management and take operational efficiency to a new level. The company plans to continue to build on its algorithms under Tang Yu to create a highly transparent management model – allowing them to draw in a much wider pool of talent globally. The virtual robot CEO represents NetDragon’s “AI+management” strategy and is seen as a milestone in the company’s mission to be a “Metaverse organisation”. The Netdragon company also released a physical image that represents Ms Tang Yu⁵. The Netdragon Chairman of the Board - Mr. Liu, sees his new robot CEO as a key workforce attractor at a time when tech workers are in demand nearly everywhere. Ms. Tang Yu “will enable us to attract a much broader base of talents worldwide and put us in a position to achieve bigger goals”, he said⁶.

2. THE LEGAL FRAMEWORK – THE METAVERSE AND THE USE OF ALGORITHMS IN CHINA

In July 2017, China’s State Council released the country’s strategy for developing artificial intelligence (AI), entitled ‘New Generation Artificial Intelligence Development Plan’ (新一代人工智能发展规划). This strategy outlined China’s aims to become the world leader in AI by 2030. The goal is to monetize AI into a trillion-yuan industry, as well as emerge AI as the driving force in defining ethical norms and standards⁷. On 31 December 2021, the Cyberspace Administration of China, the Ministry of Industry and Information Technology, the Ministry of Public Security, and the State Administration of Market Supervision and Administration jointly promulgated the Provisions on the Administration of Algorithm Recommendation for Internet Information Services (hereinafter, the “Provisions”), which went into effect on 1 March 2022⁸. The Provisions apply to the application of algorithm recommendation technology in China to provide Internet information services. The Cyberspace Administration of China coordinates the governance and related supervision and administration of the Algorithm Recommendation Services nationwide. Local authorities for telecommunications, public security, market supervision, etc., will be responsible for supervising and administrating the Algorithm Re-

¹ https://wjdown.99.com/games/nd/video/nd_0930_1.mp4 [13.10.2022].

¹ <https://dallasinnovates.com/chinas-netdragon-has-a-new-robot-ceo-and-north-texas-ties/> [10.10.2022].

¹ H. Roberts, J. Cows, J. Morley, M. Taddeo, V. Wang, L. Floridi, *The Chinese approach to artificial intelligence: an analysis of policy, ethics, and regulation*, AI Society: Knowledge, Culture and Communication, 2021, 36, pp. 59–77, <https://doi.org/10.1007/s00146-020-00992-2> [18.10.2022], p. 1.

¹ <https://www.chinalawtranslate.com/en/algorithms/> [20.10.2022].

commendation Services within their administrative regions to fulfil their respective responsibilities. The algorithm services shall comply with laws and regulations, respect social morality, conform to business and professional ethics, and follow the principles of justice and fairness, openness and transparency, science and reason, and sincerity and trustworthiness. Although, currently, China does not have specific regulations that define ownership of data⁹.

In China, the protection of computer software is governed and regulated by Regulations on Computer Software Protection¹⁰. According to these Regulations, the AI algorithm developed through programming language is subject to copyright and can be registered. If the AI algorithm is trained and will evolve through machine learning, the developed version will be the subject of separate copyrights. The integrity of automated decision-making is one of the key issues regarding introducing AI into companies. According to Chinese Company Law, directors, supervisors, and senior management personnel are responsible for complying with the laws and provisions and the articles of association and bear duties of due diligence. Therefore, to minimize the risk, they have to assess potential risks¹¹.

China algorithms are used in various technologies – from facial recognition to social media platforms¹², the Cyberspace Administration of China (CAC) published a list of 30 algorithms used in some of the country's most popular apps, including Alibaba's (9988. HK) Taobao, Tencent's (0700. HK) WeChat, Meituan (3690. HK) and ByteDance's Douyin, with brief descriptions of their use and gave them classification numbers. The list was published after passing the new regulations for algorithm recommendation services. The new regulations introduced the filing system requiring companies to disclose algorithms used in their apps¹³. The new regulations require that the services abide by business ethics and principles of fairness. The algorithms must not be used to create fake user accounts or other false impressions. Moreover, the users should be provided with the ability to turn off algorithm recommendations

¹ <https://www.globallegalinsights.com/practice-areas/ai-machine-learning-and-big-data-laws-and-regulations/china#chaptercontent9> [19.10.2022].

¹ Regulations on Computers Software Protection promulgated by Decree No. 339 of the State Council of the People's Republic of China on 20 December 2001, and effective as of 1 January 2002; <http://www.china.org.cn/english/DAT/214781.htm> [19.10.2022].

¹ Article 180 Company Law of the People's Republic of China, <https://npcobserver.com/wp-content/uploads/2021/12/Company-Law-Draft-Revision.pdf> [12.10.2022].

¹ Stanford University's AI Index, which assesses AI advancements worldwide across research, development, and economic metrics, ranks China among the top three countries for global AI vibrancy. "Global AI Vibrancy Tool: Who is leading the global AI race?" Artificial Intelligence Index, Stanford Institute for Human-Centered Artificial Intelligence (HAI), Stanford University, 2021 ranking; https://aiindex.stanford.edu/wp-content/uploads/2022/03/2022-AI-Index-Report_Master.pdf [23.10.2022].

⁹ <https://www.globallegalinsights.com/practice-areas/ai-machine-learning-and-big-data-laws-and-regulations/china#chaptercontent9> [19.10.2022].

quickly. Moreover, the companies which provide algorithms which have the power to influence public opinion or mobilize the citizens need approval from the CAC¹⁴. As was mentioned above, the legal representatives of the company are responsible for the data security of their company, but they are also required to establish internal registration and approval mechanisms for processing important data and core data¹⁵.

The metaverse is a virtual world that exists in parallel to the physical world. In the metaverse, more significant overlap of our digital and physical lives is possible – in the work, socialization, productivity, shopping, and entertainment domains – and is enabled by certain advanced technologies, such as VR, AR, and MR¹⁶. Businesses, investors, and developers predict it could form the next generation of the Internet. The metaverse is an immersive virtual world that allows people to have real-time interactions and experiences across distances and locations¹⁷. Virtual Reality (VR) and Augmented Reality (AR) technologies remain fundamental to the development of the metaverse but blockchain technology is essential for the metaverse to function in a decentralized, safe and transparent way with concrete applications¹⁸.

According to Mr Liu Minghua (the deputy chief executive officer of Deloitte China), it is expected that the metaverse market in China will hit 40 trillion yuan (\$5.79 trillion) by 2030, equivalent to 20 per cent of China's GDP. The metaverse's electronic products and wearable devices will be worth \$100 billion¹⁹. The global Metaverse market value is expected to reach around \$1.8 trillion by 2030, growing at an annual rate of around 45.8 per cent from 2022 to 2030, according to a report by Acumen Research and Consulting²⁰.

¹ http://www.cac.gov.cn/2021-08/27/c_1631652502874117.htm [21.10.2022].

¹ <https://www.natlawreview.com/article/china-newsletter-h1-2022issue-no-54> [19.10.2022].

¹ Metaverse requires artificial intelligence; the storage and authentication protocols require blockchain; the data processing requires AI, cloud computing, and cloud storage; the network environment requires 5G, and the virtual interactions require [virtual reality] software and hardware.

¹ <https://www.forbes.com/sites/deborahlovich/2022/05/11/what-is-the-metaverse-and-why-should-you-care/?sh=26e8dec52704> [31.10.2022].

¹⁴ http://www.cac.gov.cn/2021-08/27/c_1631652502874117.htm [21.10.2022].

¹⁵ <https://www.natlawreview.com/article/china-newsletter-h1-2022issue-no-54> [19.10.2022].

¹⁶ Metaverse requires artificial intelligence; the storage and authentication protocols require blockchain; the data processing requires AI, cloud computing, and cloud storage; the network environment requires 5G, and the virtual interactions require [virtual reality] soft-

In April 2022, Guangzhou Huangpu District and Guangzhou Development Zone released Measures for Promoting the Innovation and Development of the Metaverse, which was the first policy regarding the metaverse. Some of the highlights include promoting innovation agglomeration and encouraging enterprises to form clusters and become “highly specialized”, supporting technological leadership, where institutions and businesses should work hand in hand to solve technical bottlenecks, strengthening the protection of intellectual property rights, increasing talent acquisition, and establishing a “Metaverse Industrial Fund” to attract social capital, the most extensive valuation of the metaverse is to synergize with the real economy²¹.

The Chinese Ministry of Industry and Information Technology (MIIT) published a 12-page plan for developing the virtual reality (VR) sector and integrating VR with industrial applications like manufacturing²². The document is China’s first national-level development plan for the VR sector. Previously, official efforts to direct state resources towards developing a metaverse occurred at the city level (i.e., the Guangzhou Huangpu District and Guangzhou Development Zone Measures). The Plan for the Integration and Development of Virtual Reality and Industrial Applications (2022–2026) is a vital frontier direction of the new generation of information technology and a major forward-looking field of the digital economy. The aim is to achieve by 2026 breakthroughs in key application fields of virtual reality such as industrial production, cultural tourism, integrated media, education and training, sports health, business creativity, and smart cities, carry out ten types of virtual audio-visual production application demonstrations, create 10 “virtual reality +” integrated application pilot cities and parks, and form at least 20 characteristic application scenarios and 100 integrated application pioneer cases²³.

3. THE NEW MANAGEMENT STRATEGY. AN ATTEMPT AT SYNTHESIS.

The development of a virtual organization will undoubtedly contribute to developing a new synthesis and strategy in the big business²⁴. The appearance of NetDragon in the industry and on the international market will undoubtedly

¹ <https://www.china-briefing.com/news/metaverse-in-china-trends/> [31.10.2022].

¹ https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2022/art_775aaa3f77264817a5-b41421a8b2ce22.html [2.11.2022].

¹ MIIT did issue a set of “guiding opinions” on developing the VR industry back in late 2018, but that document predated mainstream discussions of the metaverse, which did not take off until Facebook (now Meta) and Microsoft began publicly discussing the concept in 2019; <https://qz.com/china-is-bringing-industrial-policy-to-the-metaverse-1849736425> [2.11.2022].

¹ On this strategy see B. de Wit, R. Meyer, *Synteza strategii: tworzenie przewagi konkurencyjnej przez analizowanie paradoksów* (the title of the original: Strategy Synthesis: Managing Strategy

ly have a significant impact on the process, content and context of the management strategy and, at the same time, will contribute to the creation of many paradoxes in the process of strategy creation (the paradox of logic and creativity), strategy formation (the paradox of deliberation and spontaneity) and strategic change (the paradox of revolution and evolution).

The range of knowledge available to the human brain is limited regarding information retrieval capacity, information processing capacity, and information storage. Experts in strategic thinking try to overcome the deficiencies of human reasoning by working on cognitive maps²⁵. They refer to their hidden knowledge, or “intuition”, which is the opposite of analytical thinking. The disadvantage of cognitive maps is their high resistance to changes; they need help to go beyond the framework of the adopted paradigm.

For this reason, NetDragon will have an advantage over traditional management concepts. Ms. Tang Yu’s cognitive abilities are impressive, far exceeding those of the human brain. This advantage manifests itself at the software level (reasoning), the operating system level (mental models), and the hardware level (mental powers). Her logical thinking helps to control the emotions that usually disturb the perception of opportunities and threats for the company in every phase of strategic reasoning, giving reasonable answers based on the question during identification (“what is the problem”), diagnosis (“what is the essence of the problem?”), implementation (“What actions should be taken?”) and creation (“How to deal with the problem?”). The emphasis on logical thinking does not have to overshadow creative thinking, based on induction and imagination, unconventionality and innovation, judgment and treating strategy as art²⁶. One can find out about it during an in-depth study of mathematics. The queen of science is a more creative field than many people think, and her creativity shares many features with art and innovation in the age of artificial intelligence²⁷.

The characteristic of a virtual enterprise is reasoning in terms of “getting the best of both sides”. By implementing the idea of dialectical thinking, NetDragon will certainly use all the advantages of the archipelago of artificial intelligence²⁸. Using artificial neural networks, genetic and Ant Colony Optimiza-

Paradoxes to Create Competitive Advantage), translated into Polish J. Sawicki, PWE, Warsaw 2007, *passim*; hereinafter referred to as the synthesis of the strategy.

¹ Also called “cognitive schemas” “thought models”, and “explained reality”.

¹ Synteza strategii..., p. 76. The authors compare the perspectives of rational and creative reasoning.

¹ See: M. du Sautoy, *Kod kreatywności, Sztuka i innowacje w epoce sztucznej inteligencji* (the title of the original: The creativity Code. Art and Innovations in the Age of AI), translated into Polish T. Chawziuk, Copernicus Center Press, Cracow 2020, *passim*. The Author looks at algorithms which, although by definition, seem to contradict any creativity, are behind the modern successes of AI. The same goes for neural networks.

¹ See: R. Tadeusiewicz, *Archipelag sztucznej inteligencji*, EXIT, Warszawa 2021, *passim*.

tion (ACO), having ready tools to build learning decision trees, knowing the secrets of programs that play strategic games with people and having natural language processing skills, the virtual CEO will certainly use the advantages of the strategic planning perspective (optimal allocation and resource coordination) and the perspective of strategic gradualness (experimenting and undertaking various initiatives at the same time)²⁹.

The scale of the change made by NetDragon is difficult to imagine, as the emergence of the first robot CEO in a global company is a proverbial swallow that marks gradual transitions from cultural life to technological life³⁰. Against this background, we can observe the paradox of revolution and evolution. It is dominated by the perspective of the non-gradual renewal (radical, comprehensive and strenuous scale of change, shock therapy), although it can also show elements of the fluid renewal perspective (continuous improvement, continuous learning and flexibility)³¹.

During in-depth studies on the strategy prepared by NetDragon at the corporate level, the perspective of an integrated organization dominates. This is evidenced by its composition (consolidation), integration of resources, activities and positions, building of a common strategy and the coupled position of organizational units (interdependence). This does not mean underestimating cash flow optimization and risk dispersion, financial control and capital allocation, and performance control³².

¹ *Synteza strategii...*, p. 107.

¹ See: M. Tegmark, *Życie 3.0. Człowiek w erze sztucznej inteligencji* (the title of the original: Life 3.0. Being Human in the Age of Artificial Intelligence), translated into Polish T. Krzysztoń, Prószyński i S-ka, Warszawa 2009, *passim*.

¹ *Synteza strategii...*, p. 138.

¹ *Synteza strategii...*, p. 214.