METAVERSE: DEVELOPMENT PROSPECTS FOR LABOR RELATIONS

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Annotation. The article highlights the main theoretical issues related to the legal regulation of labor relations in the labor market, which are evolving within the new digital reality of the metaverse. It is noted that the metaverse is understood as a specific technological system that utilizes a set of technical tools for virtualizing space. The choice of direction depends on current legislation regarding the potential for developing the labor market through the application of high-tech meta labor platforms. The study argues that the growing trend of influence on the international community and the population of Ukraine by this new digital phenomenon of modern society, the metaverse, is significant in the context of realizing the right to work. This, in the future, will allow the use of IT technologies to identify barriers that limit the development of certain labor markets, directions, and integration in service provision. The author presents a visualization of the search for ways to resolve labor relations issues in the labor market under the conditions of the metaverse. The technologies used to create it are evaluated, which have enormous potential in realizing the right to work but also carry numerous risks. The article explores opportunities for improving the legal regulation of labor relations, especially in understanding the unique characteristics of elements where interaction between people occurs through their digital twins (avatars) using information technologies related to their identification and management of these digital avatars. Using existing research, the article proposes the author's vision of the concept of a meta-labor platform and presents their understanding of meta-labor migration. The article also provides the postulates on which the concept of the modern meta-labor platform is based, indirectly through the ability to work of both meta-employers and meta-employees in the metaverse, given the current necessary technologies and infrastructure. It is suggested that the most crucial factor in transitioning to meta-labor relations is the transformation of the law as a mechanism to help organize renewed social relations. The main method used in the research of this article is the system-structural method, which allows establishing connections between different elements of the meta-labor platform as a complex system and analyzing the patterns generated by the spread of influence on meta-employers and meta-employees. Among the additional ones are used formal-logical, comparative-legal, as well as methods of legal modeling and forecasting.

Key words: metaverse, labor relations, meta-labor platform, meta-employers, meta-employees, avatar, legal regulation.

1. Introduction.

For many employees, the acceleration of virtual work through the use of remote work is becoming increasingly relevant. Modern technological trends have disrupted traditional notions of what a workplace should be. In particular, in the metaverse, the workplace is a virtual reality environment that allows people to work from anywhere in the world. Meta-employees can gather and interact not only as they would on a Zoom or Teams screen, but as avatars, using virtual meeting spaces for collaboration or simply to provide an interactive learning environment. The model of meta-work is built on flexibility, where employees, through their avatars in the metaverse, work together with the employer from different locations on the same tasks and in the same virtual spaces. It is clear that the status of an employee in the metaverse is someone who sits at a virtual desk in front of a virtual keyboard and screen for fully virtual work execution. Immersion in virtual space allows meta-

employees to break down geographical barriers, improve communication and productivity, and achieve a better work-life balance.

The problems expected to be addressed as the metaverse develops and expands in the field of meta-work include the need for a comprehensive regulatory framework, rules, accountability, and laws. A crucial question will be who "creates" this virtual universe and which companies are responsible for it. These factors play a significant role in how individuals, businesses, and governments interact within this digital universe. It is believed that this area can only be realized through the demands placed on the authorities of the metauniverse providers, to the mental property, data security, legislative and judicial systems in the virtual realm, and the rights of users from other countries. In the near future, rules and laws within the metaverse will also need to be established. Just as in the real world, there should be guiding principles and norms of behavior in the metaverse. However, the fundamental principles of labor relations remain valid regardless of the platform. The circumstance of updating the content of the metaverse in labor relations in the labor market will arise at the intersection of various technologies and the creativity of meta-employees and meta-employers.

2. Analysis of scientific publications.

In modern legal literature, the exploration of general aspects of the metaverse, based on the legal nature of this new phenomenon of digital progress, and the analysis of prospects for legal regulation are associated with the names of O.Y. Avramova, I.M. Horodyskyi, O.M. Holovko, O.S. Dniprova, D.V. Zhuravlov, O.M. Kostenko, V.V. Manhora, and others. The process of applying avatars in various spheres of human activity under the influence of digitalization, and identifying the main opportunities the metaverse offers, has been the focus of foreign researchers such as G. Darville, Ch. Anderson-Lewis, M. Stellefson, Yu-Hao Lee, J. MacInnes, R. Morgan Pigg Jr., J. Gilbert, S. Thomas, G. Freeman, S. Zamanifard, D. Maloney, A. Adkins, M. González-Franco, D. Pérez Marcos, B. Spanlang, M. Slater, Dongsik Jo, Ki-Hong Kim, T. Piumsomboon, Gun A. Lee, B. Ens, B. Thomas, and M. Billinghurst.

The scientific problem posed by the authors of this study is driven by the lack of a unified terminological understanding and substantive content of the definition of "metaverse," which only recently entered scientific circulation in 2021. Among domestic scholars, the scientific works of O.V. Kostenko and V.V. Manhora deserve attention. They define the metaverse as a distinctive post-reality environment with an unlimited number of users, transforming the physical world into a virtual one.[1,c.102]. Ukrainian scholar O.Y. Avramova emphasizes that the metaverse is a complex online virtual network that uses virtual and augmented reality technologies, as well as blockchain and digital assets, to create a sustainable, immersive digital world where users can interact without physical presence [2, c. 130]. According to a group of foreign scientists, the metaverse is interpreted as a computer-simulated world [3], where people, as avatars, interact with each other and with software agents in a three-dimensional space that reflects the real world [4], but without its limitations[5]. However, a significant number of questions remain insufficiently explored and require further in-depth study. These include, for example, establishing a systematic connection between the metaverse and labor relations based on an analysis of the concept and content of the metaverse as a global trend, and the study of its specific characteristics, advantages, and disadvantages.

3. Therefore, **the aim of the work** is to propose the author's vision of the concept of a meta-labor platform, to explore ways to resolve labor relations issues in the labor market within the metaverse, focusing on the identification of the characteristic features of this phenomenon. The article seeks to specify the features of elements related to the identification of physical and digital subjects and objects. By leveraging current research, the author presents their own understanding of meta-labor migration and analyzes the specific readiness of both meta-employers and meta-employees to work in the metaverse, given the necessary technologies and infrastructure.

Using a system-structural method, the article presents the postulates on which the concept of a modern meta-labor platform is based and identifies the drivers of metaverse development

in the labor market through the algorithmic organization of labor and the management of the key active element–avatars. Additionally, there is a lack of clear understanding of the legislative changes to expect, as the metaverse is already generating new labor relations challenges. These circumstances underscore the relevance of this article's topic and determine its scientific and practical significance.

4. Review and discussion.

In labor relations the metaverse in labor relations will become a "workplace" for many employees, including those who currently work remotely. Meta-employers will gain remote access to a global workforce, enabling them to outsource more work than ever before. While these processes spread gradually in the pre-internet era, the development of algorithmic surveillance, under which many remote workers already operate, represents a true breakthrough. Today, the labor market is undergoing a transformation in employment, where not only is artificial intelligence displacing representatives of various professions, but the conditions of work, and even the forms and rules of service provision, are changing. Specialists with digital competencies and management skills in related professional fields, such as time brokers, foresighters, corporate anthropologists, robotic systems engineers, mind-fitness trainers, startup mentors, IT doctors, and network physicians, will be in high demand. It is becoming evident that these changes will impact many sectors of the economy, increasing the share of the virtual economy and contributing to the transformation of the social landscape.

Since employees in the metaverse can be physically located anywhere in the world, determining the applicable law governing the employment relationship and contract may become more challenging. Generally, the applicable law will continue to be based on where there is the strongest connection, typically the employee's physical location. For example, meta-labor platforms based on positioning direct workers to provide local services, such as in transportation (Uber, Lyft), food delivery (Foodora, Deliveroo), home repair (Task Rabbit), and domestic services (Care.com), Deliveroo, a food delivery company, employs over 35,000 riders in 200 cities, but only about 2,000 of them work directly for the company [6]. Today, under the influence of scientific and technological progress and the latest advancements in technology, virtual labor migration is emerging. This type of work crosses national borders through online capital, labor, and information flows. Offshore labor thus integrates local, national, and global contexts [7]. At the same time, it is worth noting that virtual migration demonstrates that the essence of the global economy lies not only in transnational corporations but also in the fact that the global economy is shifting from physical space to information space [8]. It should be noted that virtual migration can no longer be considered solely from the perspective of physical movement of people; it is also necessary to take into account the virtual dynamics of this flow [9], and the online workforce changes over time depending on the country and profession. In the near future, virtual workplaces will allow people with disabilities to perform tasks that would be impossible in real life. By utilizing digital technologies, virtual employers can provide changes in work or work environments needed for people with disabilities to apply, perform, advance in positions, or undergo training.

Moreover, there is no clear understanding of what changes to expect regarding employment, which are already starting to emerge. Employers today must consider key employment and staffing issues, offering jobs in the context of the formation and development of the metaverse. To address the goal outlined in the article, it is necessary to focus on analyzing one important aspect of readiness for working in the metaverse, specifically, the availability of necessary technologies and infrastructure. This includes software for virtual meetings, collaboration tools, and secure networks. One of the major obstacles, given the need for advanced technology and fast internet connectivity, is that not all remote workers may have access to these resources. Meta - employers are required to provide information about the nature of the new technology, the factors justifying its implementation, and the nature of the social consequences it entails. The most important factor is the inclusion of a norm in Directive 89/391/EEC [10] stating that the employer must take measures for the prevention of occupational risks and provide information and training, as well as ensure necessary organization and resources. In such conditions, the meta- employer must

inform, consult, and engage in consultations with employer representatives regarding the social consequences of implementing new technology.

Meta-employers should address the issue of providing specialized training and guidelines on how employees should conduct themselves while in the metaverse, as well as the consequences of non-compliance, to avoid any legal implications. This pertains to virtual inappropriate behavior in the metaverse, and some employers are taking measures to establish virtual boundaries and distancing protocols. Numerous studies on working in the emerging metaverse have shown that a defining feature of meta-work platforms is algorithmic management of the workforce, where "assignment, optimization, and evaluation of employees are carried out using algorithms and data that are continuously monitored" [11]. Algorithmic organization is a key factor for the success of collaboration between employees and service delivery to clients, as it involves constant monitoring of employees, with payment linked to productivity [12]. This is combined with highly flexible employment relationships: meta-employers are required to care for their employees to ensure a safe working environment and to consider the impact of remote work on employees' well-being and mental health. Meta-workers, by creating a sense of identification with their avatars (as idealized self-representations) and the lack of physical contact with people (social isolation) at work, highlight the expression of identity.

Managing digital avatars involves identifying individuals and linking them to their digital personality, customizing avatars with clothing and appearance, tracking and implementing user movements in the virtual environment. However, numerous issues arise related to managing identification, such as verifying virtual entities and tracking illegal activities to ensure that no one can hide behind a virtual avatar. Additionally, questions arise about the effective connection between physical and virtual identities, including privacy concerns, fundamental the supremacy human rights principles, and guarantees of digital security for both the individual and their "digital avatar," which require further investigation.

At the same time, the manifestation of identity impacts users' self-esteem, potentially reducing stress related to managing impressions, or conversely, contributing to stress and fatigue in the workplace. The disinhibitory effect of virtual reality and avatar interfaces can lead to fatigue and a blurring of the boundaries between work and personal life. This will necessitate the development of a robust regulatory framework for managing this meta-labor platform, which will exist in parallel with our physical world.

Several international studies show that "zoom fatigue" or fatigue from virtual meetings is a phenomenon of physical and psychological exhaustion caused by video conferencing or other virtual meetings [13]. One of the primary mechanisms and positive predictors of fatigue is mirror anxiety—a negative psychological effect caused by excessive self-monitoring during video calls [14]. Potential injuries from overuse of equipment to access the metaverse could lead to compensation claims from meta-workers.

In the near future, there is a need at the legislative and institutional level for employers to review issues related to working conditions, wages, safety, and health. Existing labor laws may need to be adapted to cover this area. A major challenge for metaverse platforms will be ensuring adequate occupational health and safety for meta-workers. As stated in Directive 89/391/EEC [10], employers have a duty to ensure the safety and health of employees in every aspect related to work. Meta-employers must adhere to these principles, and the absence of regulation or mechanisms to avoid negative consequences could pose legal risks.

Additionally, meta-employers need to pay attention to the maximum usage time and encourage breaks, as the boundaries between work time spent on avatar-based tasks and personal time continue to blur. It appears that working in the metaverse will lead to new methods of employee payment and compensation. The metaverse generally relies on cryptocurrency for in-program transactions and asset purchases, but salary payments in our country are made in cash or via card. This could pose problems related to the use of cryptocurrency as a means of earning and compensating, including issues with exchange rates between cash and cryptocurrency. Employers will need to ensure compliance with tax requirements, minimum wage, vacation pay,

social insurance, and other benefits. Confidentiality remains a crucial factor in transitioning to meta-work.

The use of the metaverse will generate a significant amount of new data. In such conditions, meta-employers must have the ability to adopt a balanced approach to monitoring employees that is justified and proportional. They must also implement security measures to prevent misuse of this data. Transparency and trust are essential tools in this regard. We are already witnessing that excessively intrusive monitoring can lead to claims of breach of mutual trust and confidence between employers and employees.

In this context, meta-employers should also consider whether meta-workers have the right to refuse the collection of their personal data or to consent to the sale of such information. Additionally, there remains an issue with surveillance between employers and employees. Employers implementing workplace surveillance systems must respect employee privacy, and employees should be informed about surveillance in advance [15]. The European Parliament has highlighted this issue, urging the European Commission to ensure that companies operating in the metaverse comply with requirements by updating the existing General Data Protection Regulation (GDPR) [16].

A likely outcome is that biometric data could conflict with recorded working hours, creating responsibility for wage payments. Meta-employers face the challenge of understanding how data breaches and risks of corporate espionage, associated with unauthorized access to confidential information, could be used as evidence in legal proceedings.

5. Conclusions.

In summary, it is evident that we are already witnessing how the concept of the metaverse is anticipated to transform our way of life through virtual reality, personalized avatars, and virtual offices, which potentially shape the work of the future. The metaverse, in effect, introduces new dynamics into labor relations. It envisions a framework where meta-labor relations allow for the creation of fundamentally new opportunity chains provided by the meta-labor platform, along with the legal uncertainties it generates.

Based on the arguments presented in this article, I propose the following definition of a meta-labor platform: it is a virtual platform utilizing digital technologies that facilitates interactions between participants—on one side, the meta-employer needing a specific service, and on the other side, the meta-worker willing to provide that service—where they can interact with each other in the form of digital avatars.

The meta-labor platform is grounded in classical social relations, where traditional legal regulatory methods can still be applied. However, a new set of norms will become part of the regulatory framework for these relations within the metaverse. Accordingly, some modernization of existing legal mechanisms will be required. The phenomenon of the metaverse in labor relations represents a response to contemporary societal demands, necessitating a reevaluation of various issues related to labor legislation.

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