

# Workers' non-discrimination in the metaverse

Felicia Rosioru<sup>1</sup>\*

<sup>1</sup> Faculty of Law, Babes-Bolyai University, Cluj, Romania

**Abstract.** Technology is evolving and the workplace is radically changing; remote work is possible for activities that we never sought that could be done elsewhere than in a workplace organised by the employer. Digitalization enables automated production lines, but also automated decisions related to the employees, replacing human control and making platform work possible. The impact of innovation on labour law was very important during the pandemic, accelerated by the need of the so-called 'social distance'. Several platforms, like Google Meet, Microsoft Teams, Zoom, Webex Meet were rapidly adapted to allow live interaction for those who could not meet in-person. Online meetings, online lectures, online administration etc. have become quite rapidly the 'normality' of those days. In this context, an old idea has found fertile ground for development: the metaverse. Even if the metaverse doesn't exist yet, work in virtual worlds advertised as metaverses has become a reality, challenging the traditional structures of labour law. One of the concerning issues related to the metaverse is related to workers' discrimination in the virtual world and the possibilities to tackle it.

## 1 From telework to the metaverse. An introduction

When we speak of workers' non-discrimination in the metaverse, several questions come into mind: 'what is the metaverse?'; 'does it really exist?'; 'is it possible to work in the metaverse?' (assuming that the answer to the second question is positive); and, of course, 'why would anyone do that?'; or, even more (for those who are rather sceptical) 'how did we get here?'. Well, the path was rather long and unpredictable, mixing science-fiction literature with technology and the unexpected pandemic.

The pandemic has generated a 'migration' from the typical workplace to work from home or to a mixture of remote and office work. Telework has developed unprecedentedly and many workers whose workplace was organised by the employer had to adapt to the new situation and to work remotely. For some workers, remote work has become a way of life, as it has enabled them to travel to different places or it has simply given them the freedom that they needed. Telework has challenged the traditional structures of labour law and raised many issues, among which monitoring and working time aspects, work-life balance issues and health and safety problems. Sometimes teleworkers are intensively monitored: the obligation to turn their camera on during their working programme is very common. Highly intrusive or extensive monitoring techniques were sometimes reported, such as a software that was permanently monitoring the teleworkers' eyes in order to see whether they are focusing on

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\* Corresponding author email: [felicia.rosioru@law.ubbcluj.ro](mailto:felicia.rosioru@law.ubbcluj.ro).

their work or they are rather absent, leading to work-induced anxiety. Health and safety issues due to isolation were also commonly reported.

However, it seems that telework is here to stay, as many workers and many employers started to prefer remote work. Workers spare time, often enjoy flexible working arrangements and they can manage their family responsibilities better or travel more easily; employers save money for electricity, heating and rent for the office buildings. Some workers are more efficient when they enjoy some flexibility, other need a more organised environment. But the feeling of isolation remains, at least for workers who choose to work remotely for family responsibility reasons; there are limited opportunities to collaborate with team members and these opportunities are more often organised, nor spontaneous and sometimes less effective; in addition, less experienced workers lack the support and/or guidance of their colleagues [1]. In this context, the „VR (Virtual Reality) work environment” is seen as a palliative for the worker's sense of isolation, representing ‘a step change in what is possible when it comes to working at home’ [2], to remote work, more generally.

Virtual Reality (VR) spaces for meeting with colleagues were created since 2021, giving them the illusion of being in the same room. As it is commonly said, a person in VR spaces is not using the Internet, she or he is *in* the Internet. *Horizon Workrooms*, created by Meta and *Webex Hologram*, created by Cisco, were launched in 2021; *Mesh* was created by Microsoft for Microsoft Teams in 2022, but there are also many other VR work environments, created by: Pixel Mat, NextMeet, Gather, Connec2, Glue, Immersed, MeetinVR, Meeting Room, Rumii, and vSpatial [2]. Such virtual reality spaces enable meetings with colleagues offering a similar experience to that of a usual office-meeting. Unlike the small windows, that are typical to *Zoom*, *Google Meet*, *Microsoft Teams*, *Webex Meet* etc. and have the merit of enabling ‘live’ interaction, Virtual Reality spaces combine the flexibility of working from different locations with the feeling of community, of belonging to a team, as the avatars - the person’s representation in virtual reality spaces - are in the same room and around the same table. Just imagine that it would be possible to work in an office built on *Minecraft*, but with a *Fortnite* graphics and sound, to move with the help of your avatar, to chat with colleagues and (eventually) have a virtual coffee instead of working in front of a screen, having a bad hair day, in shorts or pyjama combined with a formal shirt, exposing a part of your home and (eventually) of your family members.

But VR work environments are just a part of working in a three-dimensional, virtual world. The next step of remote work is the so-called ‘work in the metaverse’ - an ‘immersive and constant virtual 3D world’ [3,4] where people interact through their avatars. Work in the metaverse (the ‘meta-universe’) – or in a world that shows itself as a part of it – is another aspect of humans working remotely in a virtual world. Initially a science-fiction novel topic, the metaverse is seen as the next generation of Internet, a ‘fully immersive virtual world’ [5], but, at the same time, raising many data protection issues, aspects related to mergers and acquisitions, to competition, cybercrime and workers’ protection, ownership of cryptocurrencies and non-fungible tokens. Will there be a place for small and medium enterprises in a virtual world controlled by giant techs, given the practice of ‘killer acquisitions’ of nascent competitors in order to halt their innovation? For the moment being, there is a great risk that existing anti-competitive practices, such as companies favouring their own products and influencing users' behaviour and decisions, will be perpetuated in the metaverse. Will there be an opportunity for everyone to live and work in the metaverse, given the high chances for big companies to ‘monopolise’ it? Is it a new born democracy, completely self-governed, or the existing rules are also applicable in the metaverse? There is no clear answer, as there is no clear vision of the shape the metaverse will take. The ‘community form’, suggested by the blockchain technology, involves communities that would build and establish the rules of their own worlds. On the other hand,

for the moment being, big companies build their virtual worlds and govern them, as an incipient form of `privatised metaverse` [3]. Even if some of these questions may be answered by the Digital Markets Act, other questions remain to be debated. Among them, the issue of workers' non-discrimination in the metaverse.

## 2 Work in the Metaverse

The metaverse raises a lot of legal questions, related to discrimination, hate speech, harassment and protection of human rights more generally. There are issues related to the applicable law and jurisdiction, as persons residing in several countries work in a virtual world that doesn't seem to be governed by the laws that we are used to. There is also the question if there is any law that could be applicable in the virtual worlds based on blockchain technology, characterised by their decentralization and the lack of a central authority that could establish and enforce rules.

### 2.1 What is the Metaverse and why is it so popular?

Metaverse was initially a literature topic, imagined by Neal Stephenson in *Snow Crash*, a fantasy novel in which the old fairy tales are re-invented, humans are replaced by avatars and dragons by software dragons, all living in the cyberspace. Snow Crash is a cyberdrug and a computer virus, but if taken by the avatar, it infects also the person behind it [6]. `The people are pieces of software called avatars. They are the audiovisual bodies that people use to communicate with each other in the metaverse` [3].

For someone who is not committed to hard science fiction, the novel resembles strongly to a nowadays video game: the main character, Hiro Protagonist, delivers pizza, but he is a warrior prince in the Metaverse. The vision seems quite simple, but one should not forget that the novel is more than 30 years old, at a time when less than one million computers were connected to the Internet. Ever since, Internet and video games have developed unprecedentedly; smartphones are being used widely; three-dimensional (3D) worlds are common in many video games, with multiplayer connected to the same game. A parallel world is created, where people not only play games, but they meet, go to the cinema, to concerts (a livestreamed online concert was held on *Fortnite*), shop or work together. *Second Life* and *Minecraft* are among the first more famous 3D multiplayer video games. Nowadays, Virtual Reality (VR) and Augmented Reality (AR) headsets (such as Google glass and Meta Oculus) and controllers enable computer-mediated interaction in `virtual-physical blended environments` [7]. Virtual Reality spaces are three-dimensional online environments, but in order to `enter` them, a dedicated headset that is connected to a computer or game console is necessary. Augmented Reality (AR) shows computer-generated items in the virtual world [3].

Actually, nobody knows what the metaverse is, as it doesn't exist (yet). The question still remains if the metaverse is a simple trendy buzzword, amplified by the severe sense of isolation that many people have witnessed during the pandemic, or the future of Internet, transformed from a `task-oriented work and entertainment platform in a place to spend our lives happily` [8]. For the moment being, there is no metaverse as such, as it supposes a single virtual world, immersive and universal; there are rather several 3D virtual worlds, focusing on gaming and leisure, but also on commercial and professional interactions, as well as on financial transaction. After the success of non-fungible tokens, one of the most profitable investments seems to be buying a piece of (virtual) land in the virtual world (a person has bought a virtual plot for €396 000, because he or she wanted to be the virtual neighbour of Snoop Dog [3]) or building offices and opening shops, cinemas and even law offices. There is a whole virtual world based on consumerism, in which one can buy almost everything,

from land to eyebrows, make-up, hair-cut or clothes for his/her avatar or from Messi's World Cup T-shirt's representation to a (virtual) Antique Oriental Buddha.

There are (still) some technical problems related to the opened and universal character of the metaverse, as well as to the interoperability of the different virtual `worlds` that exist and are controlled by different entities [7]. Or, the metaverse is conceived as an immersive cyberspace and it should be universal, a single cyberworld and not a network of 3D virtual spaces, as the situation seems to be today. Unlike the Web, which is opened and interoperable, the Metaverse is built on the model of a massive multiplayer online game, such as the French *Deuxième Monde*, the `first European metaverse` [9], enabling interaction in a virtual Paris, or *Second Life*, advertised as `an inclusive haven of self-expression` [10]. The blockchain technology, used by *Decentraland* [11], for example, is seen as a solution for decentralisation and interoperability of the metaverse, the content being stored on distributed servers. In addition, blockchain involves a democratic process, as users have rights, they establish and vote on the rules related to allowed and forbidden behaviours in the virtual world. But even in this democratic world, discrimination could reign when rules are established by the majority, if the world is dominated by certain groups of people.

Furthermore, blockchain technology still depends on a parent company and it has the disadvantage of going against the `right to be forgotten` [7, for arguments against 12], guaranteed in the EU by Article 17 of the GDPR Regulation and Article 8 of the EU Charter of Fundamental Rights. The Court of Justice of the European Union has had the opportunity to protect the right to be forgotten and stated that any information that is considered to be `inaccurate, inadequate, irrelevant, no longer relevant or excessive for the purposes of data processing` should be `erased` by search engine operators by removing links to web pages, in the list of results of a search carried out for a certain name [13]. The respect of the person's private life prevails both over the economic interest of the search engine operator and the general interest of the public to have access to such data, unless the protected person has played an important role in public life [13]. The right to be forgotten applies to search engines with domain names associated with EU Member States [14].

Many companies already use the term `metaverse`, but they only offer virtual 3D worlds that look more like a game and that have the great disadvantage of lacking to be interconnected. They are more like `incompatible closed gardens` [8]; one can visit *Decentraland* metaverse, *Second Life* metaverse, eventually *Meta* metaverse, but not the promised integrated world created for fun and leisure – and also for work. Work in the existing `close gardens`, as well as in the future metaverse, raises a lot of challenges. If the metaverse is the next step of the Internet, work in the metaverse is the next step of digital work and of the labour issues that are related to it.

## **2.2 Labour law in the Metaverse**

Due to the fact that the existing 3D virtual worlds look more like a game, some people are not aware that they are actually working. In this situation, it might be difficult to define what work is: where does playing stop and where does work begin? In some other cases, the work performed is obvious: employers organise meetings of their employees in Virtual Reality spaces, apparently moving work from the `zoomiverse` [15] to the `metaverse`; *Decentraland* hires persons to work, through their avatar, in virtual casinos, and they are being paid in the platform's cryptocurrency, which is Mana. Ideally, with the use of Artificial Intelligence (AI), avatars will work independently in the virtual world, performing repetitive or rather boring jobs, so that humans can perform more creative or complex work. For the moment being, avatars represent in the virtual world human beings who perform work.

*Decentraland*'s workers are being paid in Mana, the currency used in this virtual world and they can spend it only in *Decentraland*, to buy land, buildings or items for their avatar,

as there is a fashion also in the virtual world, not just on Earth. They are captive in this virtual world, contrary to the International Labour Organisation Convention no 95 on the protection of wages, prohibiting any payment `in the form of promissory notes, vouchers or coupons, or in any other form alleged to represent legal tender` (Article 3 § 1). Or, in this case, Mana is alleged to represent the legal tender in Decentraland, but it enables the worker to buy items only in this virtual world, not in the country where he or she lives. According to the same international instrument, `the term *wages* means remuneration or earnings, however designated or calculated, capable of being expressed in terms of money and fixed by mutual agreement or by national laws or regulations, which are payable in virtue of a written or unwritten contract of employment by an employer to an employed person for work done or to be done or for services rendered or to be rendered`. Is there a possibility to convert Mana in `real` money – that is, to a currency that can be used in the physical reality? Apparently, yes [16]. Are the common standards also applicable in the virtual world? The question is still debated as to which rules and how many regulations are applicable in these worlds, as their creators often advertise them as democracies where the rules are set and voted by the users, so that the majority decides. Therefore, especially in virtual worlds built on blockchain technology, there is no central authority to establish or to enforce rules.

The situation of employees working in Virtual Reality spaces, in meetings organised by their employer is radically different than work performed for a `virtual employer`, even if, in both cases, the person is represented through his or her avatar. When there is an employment contract signed by the employee and his/her physical employer, the Earthly laws will apply and the parties may regulate some aspects through their contract. Even in these cases, there might be issues related to the applicable minimum wage, jurisdiction, as well as to working time and the worker's possibility to enforce his or her rights.

Work in the virtual space has raised or it might raise multiple issues related to discrimination and the appropriate means to tackle it. Workers are represented in the metaverse (for the moment being, in the virtual world) through an avatar, thus one might claim that the avatar is the victim of discrimination, not the person behind it. A very complex question will arise when (ideally), as a consequence of the use of Artificial Intelligence, only the avatars shall work, without any human being backing them. Until then, the reality is that, behind the avatars that move and work in the virtual world, there are humans. The existing virtual worlds accommodate many discriminatory situations, that may be perpetuated in the future metaverse. Human dignity and equality are fundamental rights that must be protected anywhere, in this universe or beyond it, in the metaverse (as the literal meaning of the metaverse is `beyond universe` [3]).

### **2.3 Workers' non-discrimination in the Metaverse**

One of the most important aspects of work (in)equality in the metaverse is related to disability discrimination. In order to participate in the virtual work environment, the person has to wear a headset, placed over the eyes, but also to use stereoscopic lenses, in order to make images appear three dimensional [2]. Their use is not always easy, as VR helmets are bulky and they induce nausea to some users [17], raising additional health and safety issues. Eye, head and neck fatigue may also become rather common. Depending on the type of disability, some workers might be excluded of the labour market, even if they could perform work in a physical environment. In addition, some employers might find too burdensome to make the necessary accommodation in order to enable disabled workers to participate in the virtual work environment. In the field of employment, the existing EU equality rules, set by Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation, aim to grant equal access, participation in and advancement in employment for disabled persons. Under Article 5 of this directive, employers have to take the appropriate

measures for that purpose, unless such measures would impose a disproportionate burden on the employer. Recital 21 of the above-mentioned directive establishes the main criteria for the assessment of the disproportionate burden, by taking into account the financial and other costs entailed by the accommodation measures, the scale and financial resources of the employer, as well as the possibility to obtain public funding or other form of assistance. If the disability policy of the Member State concerned provides for measures to assist employers in adapting the working place or in taking any other necessary measures of reasonable accommodation for persons with disability, including public funding, if necessary, the burden is not considered to be disproportionate. Currently, the financial burden might be real, as adapted VR headsets and gloves are still at early stages and rather experimental and expensive. Motion capture gloves are also necessary, 'to accurately capture your expressions, body language, and the quality of (...) voice' [Bill Gates quoted by 17].

On the other hand, one of the initiatives aims to develop technology AI-powered avatars for people with motor disabilities, who would be able to navigate the Virtual Reality world with the use of their eye movements and not through 'the typical motion sensors' [2] (most commonly by the use of VR controllers or, most recently, by VR gloves, that capture the moves of hands and fingers) [19]. For example, after being diagnosed with motor neuron disease, Dr. Peter Scott-Morgan has converted into Peter 2.0, the 'first human cyborg in the world' for scientific purposes, in order to adapt technology to the needs of persons with severe disabilities [18]. Peter 2.0 DXC Technology has concluded a partnership with Scott Morgan Foundation to use advanced technologies in order to help people with extreme physical disabilities, as well as 'other life challenging conditions' to overcome them [18]. VR contact lenses were successfully used at the end of 2022, but their cost is very high and they cannot be purchased yet. If there is a hope for persons with motor disabilities, workers with intellectual, sensory or learning disabilities, who should be fully integrated in social life and participate in the life of the community, including through employment, according to Article 15 paragraphs 2 and 3 of the revised European Social Charter, among other international instruments, might simply be excluded from the labour market and replaced by AI powered avatars, 'trained' to perform less complex or rather repetitive work. Or, persons with disabilities have the right to work on an equal basis with others, in a 'labour market and work environment that is open, inclusive and accessible' (Article 27 paragraph 1 of the UN Convention on the Rights of Persons with Disabilities) to them. Genuine social inclusion also means the right to the opportunity to gain a living by means of work that is freely chosen or accepted by the persons with disabilities, reasonable accommodation being also provided by Article 27 paragraph 1 i) of the UN Convention on the Rights of Persons with Disabilities). Given the effects on the health of some persons of VR headsets, work in the virtual world may enhance long term impairments and might lead to a new category of persons with disabilities from a social and work environment perspective. According to the settled case-law of the Court of Justice of the European Union, the concept of disability is not medically defined, by placing the person in a certain degree of disability established according to medical scales. The EU has ratified the United Nations Convention on the Rights of Persons with Disabilities (by Council Decision 2010/48/EC of 26 November 2009). Following this event, the Court of Justice of the European Union has adopted a broad concept of 'disability', understood as a limitation that results from long-term physical, mental or psychological impairments, hindering 'the full and effective participation of the person concerned in professional life on an equal basis with other workers' [20, 21, 22], in interaction with various barriers that exist in the social environment [23]. Constant neck and head pain, due to the use of VR helmets, would significantly reduce the possibility of the person to work in the VR work environment, leading to a disability in the European sense of the concept. It is irrelevant whether the person has contributed or not to the onset of his or her disability, which must be



understood as a hindrance to the exercise of a professional activity and not only to the impossibility of exercising it [23].

Disability discrimination is – for the moment being – obvious in the emerging metaverse. Some people who can perform work in the `real` world will simply be excluded of the virtual labour market. But, also, age discrimination should be a hot topic when speaking of the metaverse or of work in the virtual world. Elder workers might face genuine challenges in keeping up with the ever-developing technologies. Age gap, which is already a feature of platform work, will simply be transposed in the virtual world. Children protection would be another problem, as they might perform work under the appearance of an adult avatar, affecting their mental and intellectual development and the completion of compulsory schooling, contrary to the International Labour Organisation's Convention no 1973 on minimum age (1973).

Access to metaverse is based on a technology which, for the moment being, is rather expensive. There are several VR headsets models, with a variety of prices, but the more immersive experience is given by the more expensive headsets (Google Cardboard has the lowest price and HTC Vive Pro has the highest price [2]. There are many VR headsets available, such as: PlayStation's VR helmets, Microsoft's HoloLens, Facebook's Oculus). Even if there is no specific regulation at EU level, many European States prohibit discrimination based on socioeconomic status. Poverty, as well as important family responsibilities may hinder access to work in the metaverse. If the employer is organising meetings in virtual spaces, it is important to provide the same technology to all employees, otherwise they will have different experiences depending on the type of VR headsets and gloves they can afford.

There is, of course, also the issue of gender discrimination, as the tech industry is dominated by male employees. In the US, the proportion of women holding tech-related jobs is of only 26.7% [24]. Besides role models and stereotypes, managers have the tendency to recruit persons who are culturally similar to them [25], or the great majority of managers in tech companies are male. The same concerns raised by algorithmic discrimination in platform work may be perpetuated in the metaverse. An algorithm `used` only to male avatars will automatically declassify women, reflecting societal biases if it was trained only on certain demographic groups [26]. Of course, in this case, discrimination could be avoided by choosing a male avatar, but do we want a metaverse populated only by certain demographic groups?

Workplace biases often lead to workplace harassment. Telework has already raised multiple workplace harassment issues, as it had opened a window on the worker's work environment (often his/her home) and family members, revealing them accidentally, as well as on different personal objects (for example, with religious connotations). Besides of the protected grounds at EU level, digital harassment may be linked to the worker's family responsibilities, socioeconomic status or `quarantine fashion`. These can be transposed also in the metaverse, even if the worker will not directly expose his or her home anymore. As there is a virtual world fashion, workers with important family responsibilities or those with a low income will not afford to buy a virtual Prada bag for his or her avatar, nor to buy eye-brows or different hair-cuts, being less fashionable and stylish than other avatars. In this context, the in-office unwanted conduct, related to a protected ground and having the purpose or effect of violating personal dignity and of creating an intimidating, hostile, degrading, humiliating or offensive environment may easily be transposed online, where less rules seem to be applicable, as it is often an informal work environment. In addition, the victim might encounter difficulties to report incidents, as a face-to-face conversation is not always possible and the `digital alternative` is to address e-mails or other messages. Thus, the victim lacks moral support and might fear that his or her complaint is not taken seriously or that it will be made public [27]. Tackling digital workplace harassment might force the employer to

increase surveillance and monitoring of workers, leading to a vicious circle, as their personal data and private life would be threatened in this case.

Three-dimensional work environments and work in the metaverse (more generally) bring new challenges, as workers perform work in virtual offices, but without the constraints of a face-to-face interaction. A researcher has raised the issue of sexual harassment, her avatar being the victim during an online meeting in a 3D work environment. A person testing the *Meta Horizon Worlds* has reported that she had been groped by a stranger in the virtual world. Meta has enabled a tool called 'Safe Zone', a protective bubble that users can activate when they feel threatened. The disadvantage of the tool is that, once activated, the avatar cannot interact with others, until they lift the 'Safe Zone' ('A woman was sexually harassed on Meta's VR social media platform. She's not the first—and won't be the last' [28]). The debate caused by this fact was quite vivid: can we assimilate the human behaviour in the augmented reality with the one in the physical, 'real' reality? Is it possible to claim that there was a form of harassment if the avatar was actually the victim? In this context, it has to be reminded that sexual harassment is not limited to a physical conduct, but it encompasses any other form of unwanted conduct, verbal or non-verbal, of a sexual nature. The effect or the purpose of such conduct consists in violating the dignity of the victim, in particular by creating an intimidating, hostile, degrading, humiliating or offensive environment [Article 2 paragraph 1 d) of Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast)]. Could it be accepted that the degrading, humiliating or hostile environment can also be virtual? If we start from the idea that VR workspaces give you the impression of actually being in that space, then we must admit that there may be harassment also in the virtual world. Furthermore, at least some avatars are to be trained to perform work autonomously. Who can be held reliable for the avatar's unwanted conduct and how can it be stopped? The person for whom the AI powered avatars work will be held reliable, but do we have to search for it on Earth or there will also be virtual courts and authorities? These are just some of the shades of digital workplace harassment, entailing complicated issues related to applicable law and jurisdiction.

### **3 Tackling discrimination in the Metaverse**

Tackling discrimination in the Metaverse is strongly related to how the person is represented in the virtual world by his or her avatar. For the moment being, a person participating in virtual world activities can choose an avatar from an existing list and the customizable human depictions are similar to a cartoon character. In this case, the Metaverse should be built as an inclusive heaven, where everyone can find a proper representation for his or her avatar, and not just the most common category of users (in order to allow a proper representation of every persona, Meta has many options of avatar features – more than one quintillion different combinations –, including assistive devices for people with disabilities [29]). The main idea of Meta avatars is that 'your avatar is a digital expression of your personality (or personalities)'. Surprisingly, they are called 'MetaHuman Avatars' [30]). But, as the virtual worlds are not so popular as advertised and the technological costs are still prohibitive, 3D avatars are now available on *Facebook*, *Instagram* and *Messenger* for users in the United States, Mexico, and Canada. A *Facebook* user may be represented as an avatar in the profile picture, as well as in comments, stickers or stories [29]. It might be a step taken by Meta in order to attract more *Facebook* and *Instagram* users in the virtual world, as, for the moment being, 'I don't see someone strapping a frigging screen to their face all day and not wanting to ever leave' [31].

In other cases, the person may create an avatar after 'buying' body shapes, haircut, eyebrows etc. for his or her virtual representation (for example, in *Decentraland*). It means



that the avatar doesn't (have to) look like the person behind it and this situation may complicate equality protection. For example, if a white male chooses a female avatar and the avatar is discriminated on grounds of gender, can he argue that he is the victim of discrimination? Furthermore, a person belonging to a discriminated group might choose an avatar having features of the majority; for example, an older worker may choose an avatar representing a young person; a Muslim woman might choose to be represented as a white male, in order to overcome the barriers of the labour market. But forcing people to hide their identity is definitely not a form of protection of human dignity and of non-discrimination.

Non-human avatars are also available for users (although we have to mention that the 'Metahuman Avatars' are created starting from the person's profile picture). Non-human avatars might enhance merit-based evaluations in the workplace, putting more weight on the person's work than on his or her appearance. This way, both 'mirrortocracy' (an unconscious favourable evaluation for similar colleagues [2]) and or the so-called grooming gap, where the worker is discriminated based on appearance (disproportionately affecting women in case of telework) would be avoided. Beyond the advantages, the question remains whether we would like a virtual world populated only by animals, such as cats and dogs, performing human work. In case of an affirmative answer, such a 'dehumanised' world might lead to the multiplication of discriminatory and harassing behaviours, considering that there is no appearance of violating the dignity of a human being. By definition, harassment is an unwanted behaviour, creating an intimidating, hostile, degrading, humiliating or offensive environment, directed towards a person (Article 2 paragraph 1 c) of Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation, recast). On the other hand, using 'non-human' avatars would affect one of the main functions of work as a source of social identity [32, 33]. The use of avatars leads to a dilemma, as an avatar that looks similar to the person behind it raises many issues related to personal data protection, but using 'non-human' avatars would deprive work of its social and moral value.

There is, of course, the issue of the applicable rules on equality and non-discrimination. Do the EU legal framework and the national legislations apply? We have relied in our analysis on the long-established concepts of discrimination and harassment, but can they be transposed in the metaverse? It would be a mistake to believe that the metaverse can function without or with other rules than the 'real' universe. We should distinguish between two situations. The first hypothesis is rather simple: when the employer organises meetings in virtual spaces, it is responsible for tackling non-discrimination. Therefore, precise procedures and rules should be established by the employer's internal regulation and discriminatory acts should be sanctioned. In this case, the Labour Codes and other regulations apply as such, according to the law governing the employment contract. For example, if a Romanian worker has concluded an employment contract with a Romanian employer, there is no reason to disapply the Romanian Labour Code, even if work is performed in virtual spaces. Article 2 of the Romanian Labour Code establishes the applicable legislation and, specifically for the discrimination cases, article 5 of the Labour Code, as well as the Government's Ordinance no 137 of 2000 on preventing and sanctioning all forms of discrimination would apply. The second situation is more complicated, as for workers who are hired online and perform work only in the metaverse there will be a question of establishing the applicable law to the contract, as well as the applicable jurisdiction. The international Conventions and the EU regulation tend to establish the law of the country where the work is performed and, since there is no specific country in the metaverse, it should normally be the country from which the worker performs work (according to Article 8, paragraph 2 of Regulation (EC) No 593/2008 on the law applicable to contractual obligations - Rome I). It should also be noted that, for harassment, hate speech and other forms of discrimination, some virtual world creators undertook the task to develop rules to metaverse content moderation [34]. The EU is

also trying to shape the future metaverse and the use of artificial intelligence on ethical principles [3].

#### **4 Metaverse and the Future of Labour Law. Some conclusive remarks**

In this paper, we have highlighted the risks and weaknesses of the existing virtual worlds, that may be perpetuated in the metaverse. It is not sure that the metaverse will ever be created, the only reality is that there is a great interest of tech companies to invest in what seems to be the future and only the future will tell if the metaverse will ever exist. Until then and if the metaverse is going to be created, one should not forget that people will still actually live on Earth and that we would still need persons to work in hospitals, schools, supermarkets, restaurants, factories etc.

For the moment being, virtual worlds have proven their utility, mainly in training and customer support. In the healthcare sector, the metaverse (actually, virtual working spaces) were used to perform virtual therapy and remote surgeries: for example, *Medivis*, which is a surgical technology company, started using Microsoft's HoloLens technology and has established procedures to train medical students on 3-D anatomy models; other technologies (such as Embodied Labs) have used 360-degree video in order to train medical workers to establish a proper diagnose of Alzheimer's Disease and age-related audio-visual impairments; augmented reality was used for testing learning nurses' skills in specific scenarios. Oculus Quest headsets were used for training technicians on electric vehicle maintenance at *Bosch* and *Ford Motor Company* [35]. The US Army is also taking into consideration to use virtual environments for soldiers' training; consultation and civil service can be provided as avatars by public administration (such as the city of Seoul, planning to open a 'Metaverse 120 Center' in 2023) [3].

Virtual work can also replace the trial period in the employment contract: at MGM Resorts, candidates may try out a specific job in the VR work environment before accepting an offer. This way, the employee doesn't spend time with a job that is not suitable for him or for her; the employer doesn't spend money by training persons who will shortly leave [35]. The metaverse provides real-time feed-back and it encourages conversations and cooperation in a team or even between different teams working on a same project; it can replicate the 'in-person brainstorm sessions' [35]. The use of virtual worlds broadens the scope of potential candidates for a certain job, as work in the metaverse it is basically a form of remote work, but it risks to perpetuate the problems and inequities of platform work, occasioning 'evermore invasive and relentless forms of algorithmic surveillance' [36].

For the moment being, metaverse seems to be built as the democracy of the majority, but its distributed architecture, which is essential to cyber-democracy, entails security and privacy threats [37]. A huge volume of data is collected and used in the metaverse, raising questions related to user content, but also to cyber security, such as the protection against identify theft of the avatar [3]. One should not imagine, however, that the metaverse is 'the wild west', especially in terms of labour protection [36]. Many issues have to be regulated, but many regulations have already been adopted and many proposals are being debated [3]. In terms of labour protection, in many situations the 'Earthly' laws would be applicable. There is, however, the risk of workers misclassification and complicated issues related to the applicable law and jurisdiction may arise, aspects that are also specific to platform work. Shall we be forced to imagine a Labour law of the virtual space? Only the future will tell...

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