
Collective Labour Relations in the Metaverse.

Federico Pisani*

1. Preamble. 2. Information rights and collective bargaining. 3. Trade unions' role in the Metaverse. 4. Conclusions.

Abstract

The essay examines the challenges related to the industrial relations system in the Metaverse. After analysing the current national and European regulatory framework, the Author focuses on collective information rights, as the main tool through which achieving a balance between AI and social rights. In this context, the company-level collective agreements appear the most appropriate tool to ensure an adequate protection. Within such a framework, trade unions are called upon to rediscover their own role of employee representation and also involvement.

Keywords: Metaverse, Collective Labour Relations, trade unions, information rights, collective bargaining

1. Preamble.

There is no doubt that labour law today is struggling with a new reality, whose boundaries we know little about, due to the unprecedented pace of technological innovation.

It is equally clear that it is difficult for a labour law researcher to understand the new challenges that could adversely affect the person of the individual worker,¹ since the work is profoundly different than in the past in terms of the time and manner of performance, the professional content required, the role in the production process, and the power in the economic and social system.²

In effect, in the Metaverse, workers are 'immersed', via holograms or avatars, in a digital, social, virtual dimension, where they perform a part or even their entire work activity.³

* Postdoctoral researcher, Università degli Studi Roma Tre. This essay has been submitted to a double-blind peer review.

¹ Peruzzi M., "*Almeno tu nel metaverso*": il diritto del lavoro e la sfida dei nuovi spazi digitali, in *Labour & Law Issues*, 2, 2022, 65, where the Author emphasises that for labour law researchers attempting to immerse themselves in this new dimension, the sense of confusion is inevitable, facing tentative classifications of cases, the warning of increased risks to workers' rights and freedoms, and the difficulty of assessing the actual realisation and scope of the issues.

² Already back in 1985, at the time of the third industrial revolution, Carinci expressed himself in these terms. See Carinci F., *Rivoluzione tecnologica e diritto del lavoro: il rapporto individuale*, in *Giornale di Diritto del Lavoro e delle Relazioni Industriali*, 1985, 241 ff.

³ Maio V., *Diritto del lavoro e metaverso. Se il lavoro non è un (video)gioco*, in *Labour & Law Issues*, 2, 2022, 42; Martone M., *Prime riflessioni su lavoro e metaverso*, in *Argomenti di Diritto del Lavoro*, 6, 2022, 1131 ff.; about the distinction between "Ancillary Meta-Work" and "Pure Meta-Work", see Biasi M., Murgo M., *The virtual space of the Metaverse and the fiddly identification of the applicable labour law*, in *Italian Labour Law e-Journal*, 1, 2023.

There are many issues that arise in connection with this new reality, where the workplace changes,⁴ and so do the modalities of performance and regulation.

The Metaverse seems to be halfway between the traditional mode of performing work in the presence and the now widespread mode of working remotely, since the regulations envisaged for both modes of work can be (somehow) applied.⁵

Moreover, this technology seems more likely to have an impact on the labour market in the next few years than others, if we consider that companies are potentially able to have virtual offices that increasingly resemble physical ones and use remote workers located all over the world, while also being able to outsource office work to Countries with much lower wages;⁶ this opens up completely new scenarios, also in terms of social dumping, which until now globalisation had only been used to considering with reference to manufacturing.⁷

In this context, the – still, prospective – development of collective bargaining should take into account the new interests.⁸ However, it is difficult to expect such processes to take place in the immediate future, due to the uncertainty surrounding the identification of the subjects and object of bargaining,⁹ as well to the effects of trade union negotiations, also because of the complexity of adjusting the already existing protections overall relating to collective relations in our legal system in light of the changes underway.

This consideration does not rule out that, at the basis of any hypothesis of legal regulation, the ‘compass’ for the legislator, the judge and the trade unions should be the attempt to ‘humanise’ this new reality, where the avatar is not a person, but a ‘virtual object’, created to perform even high-level services, but still the result of processing data produced by a human mind.¹⁰

In the end, it is necessary that the protection and remedies to safeguard the new needs come primarily from the adaptation and updating of the rules already existing in the legal

⁴ Donini A., Novella M., *Il metaverso come luogo di Lavoro. Configurazione e questioni regolative*, in *Labour & Law Issues*, 2, 2022, 12. according to the Authors, it is the human work performed in physical reality that concurs to form, populate and operate the metaverse; Lombardi M., *Il lavoro nel metaverso: uno spazio indefinito del possibile*, in *Labour & Law Issues*, 2, 2022, 35-36, according to the Author, the uses of the metaverse so far appear to be ‘recreational’, rather than generators of multidimensional ‘cyberplaces’ in which energies could be released to imagine more pleasant scenarios in which to carry out work activities; the author is concerned about the lack of regulation of virtual spaces, especially when considering that immersive technologies are a source of enormous power to control individual and collective behaviour, especially when combined with a series of disturbing technologies for privacy and decision-making and collective processes (in fact, they are very powerful tools for surveillance during work performance through tracking, control of facial movements, and behavioural and emotional profiling).

⁵ Martone M., nt. (3), 1136-1137. The Author suggests that in the metaverse the performance could in some cases still be linked to the result (as is the case in the regulation of remote work), which would be more easily measurable through technology; in other cases, it could depend on the measurement of time (as in face-to-face work), since the presence of the avatar (as the ‘soul’ of the worker) is required.

⁶ This occurs, for example, in the case of so-called “crowd-workers”, Carinci M.T., Henke A., *Employment relations via the web with international elements: Issues and proposals as to the applicable law and determination of jurisdiction in light of EU rules and principles*, in *European Labour Law Journal*, 12, 2, 2021, 134 ff.

⁷ Biasi M., Murgo M., nt. (3)

⁸ De Stefano V., Aloisi A., Countouris N., *Il Metaverso è una questione di diritto*, 2022, available on www.socialeurope.eu.

⁹ Biasi M., *Il decent work e la dimensione virtuale: spunti di riflessione sulla regolazione del lavoro nel Metaverso*, in *Lavoro Diritti Europa*, 1, 2023, 10.

¹⁰ Romeo C., *L’avatar, il metaverso e le nuove frontiere del lavoro: traguardo o recessione*, in *Il lavoro nella giurisprudenza*, 5, 2023, 476.

system, without the intervention of ad hoc legislation; other measures should instead start 'from the bottom', since the metaverse dimension, far from being a borderline mode of work performance or a new contractual subtype, will increasingly hold a greater attractiveness for multiple workers.

In the following paragraphs, collective information rights, as effective expedients for attempting to make the 'virtual' world of the Metaverse 'human', will be explored in the light of a review of the main provisions within the European legal framework. In particular, it will be examined whether company collective bargaining may be the most suitable instrument to guarantee adequate protection for the new emerging demands. Finally, attention will be focused on the unprecedented role that the trade union will assume in the Metaverse and with it, inevitably, other trade union rights.

2. Information rights and collective bargaining.

On the collective bargaining side, an examination of the current national and European regulatory framework cannot be ignored, with reference to the impact of new technologies on work, as well as the current and potential impact of this global process on workers' individual and collective rights.

In this regard, some preliminary thoughts can be taken from the very recent Proposal for a Regulation of the European Parliament and the Council on AI,¹¹ which is an extremely important step as it is the first at global level on the regulation of artificial intelligence.

In fact, one may assume a direct application of the regulations entailed in the Proposal even to the metaverse world,¹² although some concerns of the first commentators of the AI act have already been expressed.¹³

Furthermore, some provisions even seem to open the door to collective protection for digital workers, through the involvement of workers' representatives.

In particular, according to the transparency obligations governed by Article 52 of the aforementioned Proposal, providers of AI and users (employers) must inform individuals interacting with such IA systems, unless this is clear from the circumstances and context of use.¹⁴

¹¹ The "Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (artificial intelligence act) and amending certain union legislative acts", Brussels, 21 April 2021, COM (2021) 206 final, was adopted by the European Parliament on 14 June 2023 by 499 votes in favour, 28 against and 93 abstentions. Currently, discussions with the EU governments in the Council are ongoing in order to reach a final draft of the regulation.

¹² Amendment 165 to the Draft Regulation (specifically Art. 3(1)), which defines "artificial intelligence system" (AI system) as: an automated system designed to operate with varying levels of autonomy and which, for explicit or implicit purposes, can generate outputs such as predictions, recommendations or decisions that influence physical or virtual environments.

¹³ *Compare* Maio V., report to the conference "*Regolazione del lavoro e proposta di regolamento europeo sull'intelligenza artificiale*", held at the CNEL (National Economic and Labour Council) premises on 7 November 2022, as part of the '2022LABCchain Workshops: *Intelligenza artificiale e mercati digitali: sfide per il diritto del lavoro?*'.

¹⁴ Art. 52, par. 1 of the Proposal for a Regulation of the European Parliament and the Council on AI.

Particularly strict information obligations are imposed on employers of those “emotion” recognition or biometric categorisation systems or systems that generate or manipulate text or audio or visual content that may appear falsely authentic to the individuals involved.¹⁵

An additional reference can also be made to the obligation of human surveillance¹⁶ that falls on the employer as the user of the AI system; this obligation is aimed at managing and containing the risk that may arise from the use of AI systems and must be communicated to the system provider.¹⁷ The proper fulfilment of this obligation is relevant both for the protection of workers health and safety, pursuant to Directive 89/391/EEC, and in terms of the guarantees required in the processing of personal data under the GDPR. In this regard, the participatory dimension may be expanded with reference to the impact assessment of the processing of the relevant data under Article 35 GDPR, given the relevance that the discussion with workers and their representatives may assume, pursuant to paragraph 9.¹⁸

In this context, the necessary involvement of workers’ representatives in automated decision-making processes and, in general, in the implementation of systems based on algorithms such as artificial intelligence is highlighted,¹⁹ considering that the Proposal itself classifies them according to “risk”; to this end, it is useful to recall the role entrusted to collective bargaining by Article 88 GDPR, for the introduction of more specific rules in the sphere of labour relations, including for the protection of the exercise and enjoyment, individual or collective, of rights.²⁰

A participatory dimension could also be ensured with reference to the risk management inherent in AI systems, as governed by Article 9 of the Proposal, which provides for the communication to employers of any dangers associated with the use of “high-risk” artificial intelligence tools, in addition to information for the use of such tools as provided in Article 13.²¹

The above-mentioned Proposal stimulates a reflection on the presence in multiple provisions of an information right of an individual nature, which on the contrary could be

¹⁵ Art. 52, par. 2-3 of the Proposal for a Regulation of the European Parliament and the Council on AI.

¹⁶ Art. 29, of the Proposal for a Regulation of the European Parliament and the Council on AI. In this sense, interesting is the principle of “human in the loop”, that provides for the need to ensure human control of the process, governed by art. 22 GDPR.

¹⁷ Cf. Amendment 404 to Art. 29 par. 4: “Deployers shall monitor the operation of the high-risk AI system on the basis of the instructions of use and when relevant, inform providers in accordance with Article 61. When they have reasons to consider that the use in accordance with the instructions of use may result in the AI system presenting a risk within the meaning of Article 65(1), they shall, without undue delay, inform the provider or distributor and relevant national supervisory authorities and suspend the use of the system. They shall also immediately inform first the provider, and then the importer or distributor and relevant national supervisory authorities when they have identified any serious incident or any malfunctioning within the meaning of Article 62 and interrupt the use of the AI system.”. Interesting is also Amendment No. 408 to Art. 29, para. 5a according to which “Prior to putting into service or use a high-risk AI system at the workplace, deployers shall consult workers representatives with a view to reaching an agreement in accordance with Directive 2002/14/EC and inform the affected employees that they will be subject to the system.”

¹⁸ Peruzzi M., “*Almeno tu nel metaverso*”: il diritto del lavoro e la sfida dei nuovi spazi digitali, in *Labour & Law Issues*, 2, 2022, 71.

¹⁹ De Torres Bòveda N., *Artificial intelligence and personal data protection in the company: the role of workers’ representatives*, in Menegatti E. (ed.), *Law, Technology and Labour*, Italian Labour Law e-Studies, Bologna, 2023, 61.

²⁰ Peruzzi M., nt. (18)

²¹ Amendment 271 to Art. 9, par. 4, comma 1, lett. c): “provision of the required information pursuant to Article 13, and, where appropriate, training to deployers”.

reconsidered in a collective sense. This was the case, for example, in the Proposed Directive on Platform Work, in which it emerged that the path of building collective information rights can be one of the main tools through which to achieve the balance between AI and social rights.²²

More specifically, the Article 9 of the Proposed Directive states that platforms must inform workers' representatives or workers themselves about algorithmic management decisions; digital workers, whether self-employed or employed, have the right to know how job performance evaluations are made by the algorithm (if the employer knows it; one of the most disturbing dimensions of these technologies is the possibility of getting out of hand of the employer himself, who is often not even aware of the real potential of such tools), how the reputational ranking is formulated, which are the criteria for assignment of tasks, determination of working hours, possible account deactivation by the platform.

Indeed, in order to “humanize” the dimension of the Metaverse, it is essential to build the right to information in a shared way, with the necessary contribution of workers, through their representations, just as, in a comparative perspective, has happened in the Spanish experience.

In particular, the reference is to Royal Decree Law 9/2021,²³ which introduced in Section 4 of Article 64 of the *Estatuto de los Trabajadores* a paragraph (d) that recognizes the right of the “company committee” (“*comité de empresa*”) to be informed and consulted by the employer, on a quarterly basis, including on the parameters, rules and instructions, which concern the algorithms or artificial intelligence systems that regulate decision-making processes, working conditions, access and management of the relationship.²⁴

In other words, what happened in the Spanish legal system has been a true “rediscovery” of information rights.²⁵

Indeed, the aforementioned Decree had the primacy of extending these rights to workers' representative bodies, placing the issue of digital control and management of labor organization in the sphere of collective interest, as workers' representatives have the right to be informed, enabling them to exercise a form of control over employers' decisions made by or through the intervention of algorithmic tools. This is even more relevant considering that the provision has a general application, since it extends to any enterprise that uses tools

²² Loi P., *Il rischio proporzionato nella proposta di regolamento sull'IA, e i suoi effetti nel rapporto di lavoro*, in *Federalismi*, 4, 2023, 251.

²³ Article 1, par. 1, provides regulation aimed to ensure platform workers have the right to be informed and represented in the “digitized” work environment.

²⁴ Under this provision, the works council, with the periodicity appropriate in each case, shall have the right to be informed by the company of the parameters, rules and instructions on which algorithms or artificial intelligence systems are based that affect decision-making that may have an impact on working conditions, access to and maintenance of employment, including profiling (“*El comité de empresa, con la periodicidad que proceda en cada caso, tendrá derecho a: (...) d) Ser informado por la empresa de los parámetros, reglas e instrucciones en los que se basan los algoritmos o sistemas de inteligencia artificial que afectan a la toma de decisiones que pueden incidir en las condiciones de trabajo, el acceso y mantenimiento del empleo, incluida la elaboración de perfiles*”).

²⁵ Navarro Nieto F., *Los derechos de participación de los trabajadores en el nuevo escenario del Derecho del Trabajo en España*, Tirant Lo Blanch, Valencia, 2015, 18: According to the Author, only a profound renewal of the strategy of the subjects of labour relations and a political-institutional framework favourable to a culture of participation (and state support for business policies based on innovation, training and competitiveness) can contribute to changing the inertia.

governed by artificial intelligence. In this sense, the trade unions can exercise control over the “neutrality” of the criteria and parameters used by AI itself in decision-making processes on the organization of work.²⁶

Moreover, the recognition of this right might be expressed within the company dimension, which means that sectoral agreements could use this instrument to identify the general principles within which company bargaining could further operate²⁷. Similarly, collective bargaining could also define the requirements for access to work on the Metaverse and the related protections, with reference to – borrowing again from the taxonomy enhanced by Marco Biasi – “Ancillary Meta-Work” and not to “Pure Meta-Work”; this is along the lines of what happened in the regulation of remote work (of which, as mentioned above, ancillary work on the Metaverse should constitute an evolution)²⁸ in which collective bargaining was entrusted with identifying the working activities and the methods of personnel selection.²⁹

In addition, the workers’ right to information should have the effect of limiting the information asymmetry accentuated by the employer’s use of digital tools based on encrypted codes and algorithms; indeed, the vulnerability that ontologically characterizes the situation of the worker as a weak contractor seems today to be accentuated not only by the increasingly pervasive use of artificial intelligence systems, but also and above all by a kind of loss of collective identity and class consciousness of workers.³⁰

It is therefore indispensable that digital transformation be approached as a shared social process, within which to develop participatory dynamics that project the phenomenon, with its complexity, into the inherently collective dimension of work.³¹

To this end, the recognition of information rights would be relevant, even though it represents the weakest level of collective participation given that, just as is evident in the Spanish case, it is limited to the mere duty of the employer to provide data to the company committee, with the exclusion of a real obligation to initiate a consultation process with the committee itself (as in hypotheses such as, modification of working conditions, company transfers, company succession or collective dismissals).³²

²⁶ Pisani F., *La proposta di direttiva UE per i lavoratori delle piattaforme digitali e il Real Decreto-Ley 9/2021 spagnolo*, in *Lavoro e Previdenza Oggi*, 1-2, 2022, 90.

²⁷ *Ibid.*, 92.

²⁸ Maio V., nt. (3); Martone M., nt. (3).

²⁹ M. Biasi, nt. (9), 11.

³⁰ Bini S., “*Industry 5.0*” and digital information at the workplace: reflections from Spain, in Menegatti E. (ed.), *Law, Technology and Labour*, Italian Labour Law e-Studies, Bologna, 2023, 35.

³¹ Bini S., *Introduction to Blockchain: Between “Autonomisation” and Automatisation, Challenges and Risks for Labour Law*, in Addabbo T., Ales E., Curzi Y., Fabbri T., Rymkevich O., Senatori I. (eds.), *Defining and Protecting Autonomous Work. A Multidisciplinary Approach*, Palgrave MacMillan, London, 2022, 123-158.

³² Compare F. Pisani, nt. (26); Baylos Grau A., *A vueltas con el algoritmo: derechos de información y negociación colectiva*, in Baylos Grau A., *Según Antonio Baylos. Información, discusión y propuestas sobre las relaciones de trabajo y la ciudadanía social*, 20 May 2021, <https://baylos.blogspot.com/2021/05/a-vueltas-con-el-algoritmo-derechos-de.html>, last accessed on 16 October 2021. According to the Author, the recognition of this right at the weakest level of participation, which refers to the right to information, without any attempt having been made to establish a duty to initiate a consultation process on this matter, as is the case in more important cases such as the modification of working conditions, transfers of undertakings, succession of undertakings or collective redundancies.

The absence of supranational provisions on the protection of personal data when artificial intelligence is used in the work environment, and in any case the lack of collective guarantees, makes collective bargaining, and in particular company- level collective bargaining, the most appropriate tool for covering this legislative gap, the benefits of which have been widely recognized,³³ adapting easily to the needs of each context,³⁴ as well as generally to changes in the labor market and actively involving the parties concerned in negotiation.³⁵

In this context, it could be useful the involvement of workers' representatives in the procedures for implementing and modifying algorithmic systems, especially when they are a source of artificial intelligence; the enhancement of training on new technologies for both workers and their representatives so that they can understand and exercise their rights in a qualified manner; the establishment of internal protocols or rules on the protection of personal data; the establishment of an internal complaints channel at the service of workers.³⁶

Obviously, it would be necessary to avoid, especially in such a technical matter, the so-called "bureaucratization" of information, as was the case of GDPR, whose amount of data pouring into those who should control it is inversely proportional to the effectiveness of the control itself.³⁷

Here, of course, the problem would be even more pronounced, given the complexity of the tools used to make the Metaverse perform, so that the situation could arise whereby neither the worker nor the trade unions is able to understand the meaning of the information shared.

The need to implement information rights with respect to the potentially detrimental effects of the use of technology at work also emerged in the European Framework Agreement on Digitalisation³⁸, in which the European trade unions argued in favour of strengthening not only information rights, but also trade union consultation rights, with particular reference to the design and organisation logic of new technologies. Moreover, this Agreement highlighted the need for the installation of information technologies to be the subject of collective

³³ De Stefano V., *Masters and servers': collective labour rights and private government in the contemporary world of work*, in *International Journal of Comparative Labour Law and Industrial Relations*, 4, 36, 2020, 442; Mercader Uguina J., *Algoritmos: personas y números en el Derecho Digital del Trabajo*, in *La Ley*, 2394, 3, 2021, 11-12; Garrigues Giménez A., *La respuesta negocial al uso de algoritmos en la relación de trabajo: bases, previsiones, presencias y ausencias*, in Rivas Vallejo M. P. (ed.), *Discriminación algorítmica en el ámbito laboral*, Aranzadi Thomson Reuters, Cizur, 2022, 635-668; Wood A. J., *Algorithmic management. Consequences for work organisation and working conditions*, in *JRC Working papers series on Labour, education and technology*, European Commission, Seville, 7, 2021, 14; UNI Global Union, *Top 10 principles for workers' data privacy and protection*, 2017, available on http://www.thefutureworldofwork.org/media/35421/uni_workers_data_protection.pdf

³⁴ Ferri V., Ricci A., Scicchitano S., Tesauro G., *Lavoro da remoto, contrattazione aziendale e innovazione: un'analisi empirica per l'Italia*, in *SINAPPSI*, 3, 2021, 126 ff.

³⁵ De Torres Bòveda N., nt. (19), 62-63.

³⁶ De Torres Bòveda N., *ibidem*, 62-63.

³⁷ Compare Nogueira Guastavino M., Mangan D., *The metaverse matrix of labour law*, in *Italian Labour Law e-Journal*, 2023, 1, who focuses on the collection and processing of data in the metaverse that would change legal concepts such as proportionality because every movement or expression would be captured within a system capable of processing this volume of data.

³⁸ European Social Partners Framework Agreement on Digitalisation, signed on 22 June 2020 between the ETUC (European Trade Union Confederation) and employer organisations at European level (Businesseurope, Ceep, Sme United). Smisman S., *The European Social Dialogue in the Shadow of Hierarchy*, in *Journal of Public Policy*, 2008, 28(1), 161-180: the author sees this contract as a "self-initiated and self-implemented collective agreement".

bargaining, especially when the company has at its disposal a large amount of information (so-called big data), which obviously cannot be the subject of a form of indiscriminate collection, free storage or processing³⁹. Therefore, this Agreement emphasised the importance of introducing stricter rules through collective bargaining, as well as to allow workers' representatives to access data, examine issues related to their use and request information on the different stages of their management, echoing the principles already set out in the GDPR on the minimisation of data collection and transparency⁴⁰.

Last but not least is Directive 2002/14/EC on informing and consulting employees (which was also the basis for the proposal for a directive on employees working through digital platforms). Information rights appear here to be subordinate to consultation rights⁴¹, as information is understood as the transmission of data by the employer to the employees' representatives to enable them to take knowledge of the issue at hand and to examine it⁴², whereas the right to consultation is to be understood, according to the Directive, as the exchange of views and the establishment of a dialogue between the employees representatives and the employer⁴³.

3. Trade union's role in the Metaverse.

The advent of the digitization of work in every type of enterprise also induces reflection on the new guise that the trade union will take on and the instruments through which it can concretely exercise the freedom and activity of participation in the life and decisions of the company, bearing in mind that, for example, the discipline in this regard in Italy largely dates back to the 1970s and is governed by the Workers' Statute, which was evidently designed for a pre-computerized labour reality; in other words, the reference is to the necessary adaptation that the moment of assembly, referendum and in general union rights will have to undergo as a result of the current changes.⁴⁴

However, the reconstruction of the statutory regulations, which require the presence of workers in a "physical" workplace (for example, the provisions on assembly, referendum and posting), now "virtual," cannot disregard the function of these regulations and the "rationale" behind them.⁴⁵

³⁹ Rota, A., *Sull'Accordo quadro europeo in tema di digitalizzazione del lavoro*, in *Labour & Law Issues*, 2020, 2, 6, 39, 42.

⁴⁰ Framework Agreement on Digitalisation, 7: It might be necessary to provide workers' representatives with "such facilities and information as necessary to effectively engage in the different stages"; Battista L., *The European Framework Agreement on Digitalisation: a tough coexistence within the EU mosaic of actions*, in *Italian Labour Law e-Journal*, 1, 14, 2021, 115.; *Compare* <https://www.etuc.org/en/pressrelease/gdpr-being-misused-employers-hinder-trade-unions>; See Senatori I, *The European Framework Agreement on Digitalisation: a Whiter Shade of Pale?*, in *Italian Labour Law e-Journal Issue*, 2, 13, 2020, 159-173.

⁴¹ Loi P., *Il rischio proporzionato nella proposta di regolamento sull'LA, e i suoi effetti nel rapporto di lavoro*, in *Federalismi*, 4, 2023, 251

⁴² Art. 2(f) of Directive 2002/14/EC.

⁴³ Art. 2(g) of Directive 2002/14/EC.

⁴⁴ Trojsi A., *Sul ruolo del sindacato e sulle funzioni dell'autonomia collettiva aziendale: dallo Statuto dei Lavoratori al blocco dei licenziamenti economici*, in *Lavoro Diritti Europa*, 3, 2021, 3-4.

⁴⁵ Di Meo R., *I diritti sindacali nell'era del caporalato digitale*, in *Labour & Law Issues*, 2019, 2, 5, 72.

As has been argued, trade union is called upon to rediscover “its own role, of representation and participation, autonomous and original, in the community re-engineered work organization”.⁴⁶

For example, with specific reference to the reality of the Metaverse, trade unions could be within it to protect workers’ rights and future avatar demands, blockchain tools could be used to hold union elections, collect union dues, and finally the metaverse will be used as a mechanism for communicating and holding meetings.⁴⁷

Based on a reading of the new changes in labour relations, it has been pointed out, for example, that the virtual dimension could, in some cases, facilitate the exercise of union rights, considering that virtual places are immediately accessible and easily facilitate the exchange of information.⁴⁸

Thus, these new arrangements could offset the inevitable difficulties for unionization resulting from the “dispersal” of workers who are no longer physically in the company.

Similarly, it has been noted that new modalities of collective self-defence are also matched by new defensive strategies of employers, who may, for example, replace the avatar of a striking worker with an automated avatar, resorting in this sense to so-called technological strike-breaking.⁴⁹

Even if it takes place in a 'virtual place', a strike by workers in the Metaverse will still have to take the form of non-implementation of a service⁵⁰; indeed, new forms of trade union action could occur in this context, aimed at suspending the performance of workers or slowing down, for example, the functionality of a service⁵¹; which could reintroduce the problems regarding the legitimacy of such industrial action, arising in connection with anomalous forms of strike, such as, for example, the strike of duties or even boycotts.

Finally, as mentioned in par. 2, it should also be emphasized here the need for trade union to acquire technical skills, in order to be able to both fully understand the operation of AI systems⁵², and to develop global framework agreements on rights for Meta-workers or, in the national perspective, to enter into ad hoc collective agreements for these workers.

⁴⁶ Caruso B., Del Punta R., Treu T., *Manifesto per un diritto del lavoro sostenibile*, 20th May 2020, 53-54.

⁴⁷ Nogueira Guastavino M., *Metaverso e legislazione applicabile al contratto di lavoro*, in *Argomenti di Diritto del Lavoro*, 3, 2023, 457.

⁴⁸ D’Andrea A., *Il ruolo dell’innovazione tecnologica nella trasformazione dei diritti dei lavoratori*, in *Revista Direito Das Relações Sociais E Trabalhistas*, 8, 1, 2022, 69-70; compare it with Forlivesi M., *Alla ricerca di tutele collettive per i lavoratori digitali*, in *Labour & Law Issues*, 2, 2022, 40-42; Lassandari A., *Problemi di rappresentanza e tutela collettiva dei lavoratori che utilizzano le tecnologie digitali*, in *Quaderni Rivista giuridica del lavoro e della previdenza sociale*, 2, 2017, 68-69, who, in relation to platform workers, highlights the rise of collective interests globally opening new spaces for collective action and conflict.

⁴⁹ Maio V., nt. (3), 52.

⁵⁰ Giugni G., *Diritto sindacale*, Cacucci, Bari, 2014, 266.

⁵¹ Maio V., *Sciopero e conflitto nel lavoro digitale. Osservazioni in tema di net strike, twitter storm e off simultaneo degli smart workers*, in *Federalismi*, 17, 2022, 151-153. In fact, here the author examines the recent phenomena of the net strike and the twitter storm, which occurred in the context of remote work; these reflections, by analogy, could also be dropped into the context of the Metaverse.

⁵² Maio V., *Il diritto del lavoro e le nuove sfide della rivoluzione robotica*, in *Argomenti di Diritto Lavoro*, 6, 2018, 1439, which refers to Article 9, par. 3, of the Directive of the European Parliament and of the Council on improving working conditions in platform work makes the expenses (as long as they are proportionate) incurred by the trade union for consulting a computer expert borne by the platforms when they have more than five hundred employees; Lassandari A., *La tutela collettiva del lavoro nelle piattaforme digitali: gli inizi di un percorso difficile*, in *Labour & Law Issues*, 4, 2018, 15-16 that, with regard to platform workers, highlights the trade union's difficulty in

4. Conclusion.

There are many challenges currently related to the industrial relations systems: one of the most important goals will be to make transparent such an obscure and complex process as the digitization of the organization of work, with respect to which there is a strong risk of an increased power of the employer.

Therefore, a crucial role might, in the first place, be played by the expansion of the right to information and its recognition in a “collective” sense, since “in labor relations, especially when connoted by relations of authority and subjection to legal powers of the employer, information is considered a tool aimed at redefining the balancing and coordination of the interests at stake, to protect the weaker contractor”.⁵³

Secondly, transparency should be represented by the sharing of the data and related processes that led to a given entrepreneurial decision, because this is the only way to ensure that decisions based on algorithms can be syndicated and reviewed humanely, on equal terms.

This could lead to a kind of digital “*Mitbestimmung*”, which could meet strong resistances from the entrepreneurial side, because it would give labor organizations access to the so-called “control room”.

Such data management could also prove to be a useful tool for conflict management, as an algorithm might be able to presage the consequences of a proclaimed strike, based on the information in its possession.⁵⁴

Bibliography

Battista L., *The European Framework Agreement on Digitalisation: a tough coexistence within the EU mosaic of actions*, in *Italian Labour Law e-Journal*, 1, 14, 2021

Baylos Grau A., *A vueltas con el algoritmo: derechos de información y negociación colectiva*, in Baylos Grau A., *Según Antonio Baylos. Información, discusión y propuestas sobre las relaciones de trabajo y la ciudadanía social*, 20 May 2021, available on <https://baylos.blogspot.com/2021/05/a-vueltas-con-el-algoritmo-derechos-de.html>, last accessed on 16 October 2021

Biasi M., Murgo M., *The virtual space of the Metaverse and the fiddly identification of the applicable labour law*, in *Italian Labour Law e-Journal*, 1, 2023

ensuring adequate protections both because it does not fully know the activity carried out, given the loss of the element of territoriality and physical proximity of the worker; and because of their weakness before entrepreneurial interlocutors; and because of their inability to fully understand the needs of workers, due to their distance from them. To this end, the Author calls for the intervention of structured organizations that inaugurate new forms of representation and build more complex supranational organizations.

⁵³ Perulli A., Treu T., *“In tutte le sue forme e applicazioni”*. *Per un nuovo Statuto del lavoro*, Giappichelli, Torino, 2022, 81.

⁵⁴ Maio V., *Sciopero e conflitto nel lavoro digitale. Osservazioni in tema di net strike, twitter storm e off simultaneo degli smart workers*, in *Federalismi*, 17, 2022, 158.

- Biasi M., *Il decent work e la dimensione virtuale: spunti di riflessione sulla regolazione del lavoro nel Metaverso*, in *Lavoro Diritti Europa*, 1, 2023
- Bini S., *“Industry 5.0” and digital information at the workplace: reflections from Spain*, in in Menegatti E. (ed.), *Law, Technology and Labour, Italian Labour Law e-Studies*, Bologna, 2023
- Bini S., *Introduction to Blockchain: Between “Autonomisation” and Automatization, Challenges and Risks for Labour Law*, in Addabbo T., Ales E., Curzi Y., Fabbri T., Rymkevich O., Senatori I. (eds.), *Defining and Protecting Autonomous Work. A Multidisciplinary Approach*, Palgrave Macmillan, London, 2022
- Carinci F., in *Rivoluzione tecnologica e diritto del lavoro: il rapporto individuale*, in *Giornale di Diritto del Lavoro e delle Relazioni Industriali*, 1985
- Carinci M.T., Henke A., *Employment relations via the web with international elements: Issues and proposals as to the applicable law and determination of jurisdiction in light of EU rules and principles*, in *European Labour Law Journal*, 12, 2, 2021
- Caruso B., Del Punta R., Treu T., *“Manifesto per un diritto del lavoro sostenibile”*, 20th May 2020
- D’Andrea A., *Il ruolo dell’innovazione tecnologica nella trasformazione dei diritti dei lavoratori*, in *Revista Direito Das Relações Sociais E Trabalhistas*, 8, 1, 2022
- De Stefano V., Aloisi A., Countouris N., *Il Metaverso è una questione di diritto*, 2022, available on www.socialeurope.eu.
- De Stefano V., *Masters and servers’: collective labour rights and private government in the contemporary world of work*, in *International Journal of Comparative Labour Law and Industrial Relations*, 4, 36, 2020
- De Torres Bòveda N., *Artificial intelligence and personal data protection in the company: the role of workers’ representatives*, in Menegatti E. (ed.), *Law, Technology and Labour, Italian Labour Law e-Studies*, Bologna, 2023
- Di Meo R., *I diritti sindacali nell’era del caporalato digitale*, in *Labour & Law Issues*, 2, 2019
- Donini A., Novella M., *Il metaverso come luogo di Lavoro. Configurazione e questioni regolative*, in *Labour & Law Issues*, 2, 2022
- Ferri V., Ricci A., Scicchitano S., Tesoro G., *Lavoro da remoto, contrattazione aziendale e innovazione: un’analisi empirica per l’Italia*, in *SINAPPSI*, 3, 2021
- Forlivesi M., *Alla ricerca di tutele collettive per i lavoratori digitali*, in *Labour & Law Issues*, 2, 2022
- Garrigues Giménez A., *La respuesta negocial al uso de algoritmos en la relación de trabajo: bases, previsiones, presencias y ausencias*, in Rivas Vallejo M. P. (dir.), *Discriminación algorítmica en el ámbito laboral*, Aranzadi Thomson Reuters, Cizur, 2022
- Giugni G., *Diritto sindacale*, Cacucci, Bari, 2014, 266.
- Lassandari A., *La tutela collettiva del lavoro nelle piattaforme digitali: gli inizi di un percorso difficile*, in *Labour & Law Issues*, 4, 2018
- Lassandari, A. *Problemi di rappresentanza e tutela collettiva dei lavoratori che utilizzano le tecnologie digitali*, *Quaderni Rivista giuridica del lavoro e della previdenza sociale*, 2, 2017
- Loi P., *Il rischio proporzionato nella proposta di regolamento sull’IA, e i suoi effetti nel rapporto di lavoro*, in *Federalismi*, 4, 2023
- Lombardi M., *Il lavoro nel metaverso: uno spazio indefinito del possibile*, in *Labour & Law Issues*, 2, 2022
- Maio V., *Diritto del lavoro e metaverso. Se il lavoro non è un (video)gioco*, in *Labour & Law Issues*, 2, 2022

- Maio V., *Il diritto del lavoro e le nuove sfide della rivoluzione robotica*, in *Argomenti di Diritto Lavoro*, 6, 2018
- Maio V., *Sciopero e conflitto nel lavoro digitale. Osservazioni in tema di net strike, twitter storm e off simultaneo degli smart workers*, in *Federalismi*, 17, 2022
- Martone M., *Prime riflessioni su lavoro e metaverso*, in *Argomenti di Diritto del Lavoro*, 6, 2022
- Mercader Uguina J., *Algoritmos: personas y números en el Derecho Digital del Trabajo*, in *La Ley*, 2394, 3, 2021
- Navarro Nieto F., *Los derechos de participación de los trabajadores en el nuevo escenario del Derecho del Trabajo en España*, Tirant Lo Blanch, Valencia, 2015
- Nogueira Guastavino M., *Metaverso e legislazione applicabile al contratto di lavoro*, in *Argomenti di Diritto del Lavoro*, 3, 2023
- Nogueira Gustavino M., Mangan D., *The metaverse matrix of labour law*, in *Italian Labour Law e-Journal*, 1, 2023
- Perulli A., Treu T., *“In tutte le sue forme e applicazioni”*. Per un nuovo Statuto del lavoro, Giappichelli, Torino, 2022
- Peruzzi M., *“Almeno tu nel metaverso”: il diritto del lavoro e la sfida dei nuovi spazi digitali*, in *Labour & Law Issues*, 2, 2022
- Pisani F., *La proposta di direttiva UE per i lavoratori delle piattaforme digitali e il Real Decreto- Ley 9/2021 spagnolo*, in *Lavoro e Previdenza Oggi*, 1-2, 2022
- Romeo C., *L’avatar, il metaverso e le nuove frontiere del lavoro: traguardo o recessione*, in *Il lavoro nella giurisprudenza*, 5, 2023
- Rota A., *Sull’Accordo quadro europeo in tema di digitalizzazione del lavoro*, in *Labour & Law Issues*, 2020, 2
- Senatori I, *The European Framework Agreement on Digitalisation: a Whiter Shade of Pale?*, in *Italian Labour Law e-Journal Issue*, 2, 13, 2020
- Smisman S., *The European Social Dialogue in the Shadow of Hierarchy*, in *Journal of Public Policy*, 2008, 28, 1
- Trojsi A., *Sul ruolo del sindacato e sulle funzioni dell’autonomia collettiva aziendale: dallo Statuto dei Lavoratori al blocco dei licenziamenti economici*, in *Lavoro Diritti Europa*, 3, 2021
- UNI Global Union, *Top 10 principles for workers’ data privacy and protection*, 2017, available at http://www.thefutureworldofwork.org/media/35421/uni_workers_data_protection.pdf
- Wood A. J., *Algorithmic management. Consequences for work organisation and working conditions*, in *JRC Working papers series on Labour, education and technology*, European Commission, Seville, 7, 2021

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