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Edited by Emanuele Menegatti

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1

Introduction

Regulatory challenges for the changing world of work.

Emanuele Menegatti*

This book is a collection of the papers presented at the two-day Conference "Law, Technology and Labour", held in Bertinoro (Forlì) on 30 June – 1 July 2022, organized by the University of Bologna, in collaboration with the Curtin University Law School (Perth, Australia), within the framework of the Jean Monnet module "EU law for Algorithm". The conference before and now the book aim at contributing to the International and European debate on the impact of algorithms and automation on working conditions from a legal perspective.

In this regard, it is possible to identify three main legal challenges prompted by new technologies dealt with in the book.

They concern the labour market in the first place. Starting from the 1995 provocative Jeremy Rifkin's book, forecasting the end of work,[1] the potential labour displacement involved by automation has raised many concerns. Many other similar gloomy predictions followed, such as the one by Frey and Osborne, according to whom 47 percent of the total US employment is at risk of replacement over some unspecified number of years[2]. However, estimates about possible mass unemployment caused by new technologies are rather conflicting. Some are for example arguing that it might be possible for AI to create jobs, perhaps as many as it will displace. These jobs will be concentrated in sectors different from those currently absorbing most of the workforce and involve new skills. New jobs are already emerging in connection with digitalization, such as big data architects, algorithm analysts, computer scientists specialised in legal knowledge, computational linguists. Moreover, humans will be probably still involved with many traditional jobs. For example, it is hard to

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1 Rifkin J., *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*, 1995, Putnam Publishing Group.

2 Frey C., Osborne M., *The Future of Employment: How Susceptible Are Jobs to Computerization?*, in *Technological Forecasting & Social Change*, 2017, 114, 254-280.

say whether a person will have to be in control of a driverless car, such it happens for planes, or not. The overall impression is that very few jobs can be automated in their entirety.

Secondly, thanks to innovative software solutions, permitting prolific data collection and surveillance of workers, real-time responsiveness decision-making, performance evaluation through rating systems and other metrics, we assisted to a reshape of employment relationships by progressive replacement of the managerial functions. The algorithmic boss permits a higher control over employees and thus an augmentation of the traditional employers' powers. This produces a parallel increase of employees' subordination and imbalance of bargaining power, ultimately leading to a greater precarization and worsening of working conditions. Bias and discriminations, hidden behind algorithmic decisions taken with very little or no transparency, as well as a potential breakdown of the boundaries between workplaces and private lives, negatively impacting on workers' privacy, are on the agenda everytime automated decision making is concerned.

Deterioration of employment conditions can also be the result of an ongoing competition between humans and robots. Humans could be preferred to robots as long as they make themselves available to agree lower wages and working conditions. This may affect workers' income, as an increase of in-work poverty rate seems testifying. Growing unemployment and reduction in the number of hours worked, not properly addressed by the current social security schemes, are perhaps the main drivers of poverty.

National and Supranational legislators, international organization, social partners are much aware of these challenges and their importance. Some legislative solutions have already passed or currently under discussion, especially at the EU level. To mention a few, the concerns about labour displacement and precarization of work in connection to the digital revolution have been at the core of the Recovery and Resilience Facilities, as made clear by the action plan dedicated to the implementation of the Pillar launched in connection to the NextGenEU at 2021 Porto Summit.[3] It sets ambitious targets for the EU, to be achieved by 2030: An employment rate of at least 78%, upskilling e reskilling of 60% of the working population, reducing the number of people at risk of social exclusion or poverty by at least 15 million. The improvement of working conditions and stability of precarious workers is also the main objective of the Directive on transparent and predictable working conditions.[4] The same goal is that of the recent proposal for a Directive on working conditions in platform work,[5] promoting a facilitation of the reclassification of platform workers as "employees", where appropriate, and solutions for the issues concerning algorithmic management.

[3] See https://www.2021portugal.eu/en/porto-social-summit/action-plan/ (last accessed on 15 February 2023).
[4] Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019L1152 (last accessed on 15 February 2023).
[5] Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, available at:
https://ec.europa.eu/social/main.jsp?langId=en&catId=89&furtherNews=yes&newsId=10120 (last accessed on 15 February 2023).

The latter issues are already tackled to some extent by the current rules included in the GDPR.[6] Articles 21.1 and 22.1 provide for a right not to be subject to fully automated decision-making. Article 22.3 recognizes the right to human interface, namely a human intervention on the part of the controller of the data (the employer) and the right for workers to express their point of view, to obtain an explanation about automated decisions and to contest them. Article 15.1.h established the right to obtain information about the existence of (fully) automated decision-making, including profiling, and to receive meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing. The same rights, in view of an implementation and customization to work relationships, are now considered by the already mentioned proposal for a Directive on platform work.[7] They take the form of a right of information on automated monitoring and decision-making systems, a right to human monitoring of automated systems, entailing a review of automated decisions, a right to consultation with workers' representatives on decisions involving automated monitoring and decision-making systems.

As for income support, it must be mentioned the recently enacted Directive on adequate wages in the Union,[8] aimed at stimulating an upward convergence of minimum wage among member states. A proposal for a Council recommendation on minimum income is also under discussion. The overall idea underlying the proposal is that of boosting across the Union national guaranteed minimum income schemes as last-resort income support, since those already existing are clearly not always adequate.

A lot is brewing. The EU Institutions, but not only, are evidently paying close attention to the challenges brought by the digital revolution. This makes even more important the role that labour law scholars should play, both in the identification of the threats put forward by AI and in the assessment of the regulatory solutions which are emerging across Europe and the entire globe.

[6] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, published at https://eur-lex.europa.eu/eli/reg/2016/679/oj (last accessed 15 February 2023).

[7] The original commission proposal dedicated those rules only to platform workers. However, in the amendment proposed by the European Parliament they shall be applied to all work relationships. See the EU Parliament draft report on the proposal for a directive of the European Parliament and of the Council on improving working conditions in platform work (COM(2021)0762 – C9-0454/2021 – 2021/0414(COD)), published at https://www.europarl.europa.eu/doceo/document/EMPL-PR-731497_EN.pdf (last accessed on 15 February 2023).

[8] Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on adequate minimum wages in the European Union, published at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022L2041 (last accessed on 15 February 2023).

2

Homecare and artificial intelligence: a European Human right perspective.

Antunes Théo [*]

1. Introduction. 2. Identifying the challenges of AI based home care under European Human rights Law. 3. Pathways toward a compatible scheme of regulation for AI based homecare under European human rights law. 4. Conclusion.

1. Introduction.

The era of artificial intelligence is upon us as many public authorities use artificial intelligence as a mean to facilitate their relationship with their citizens. In the context of public health, artificial intelligence is already used as a mean to enhance diagnostic, prevent infections or detecting cancers, where these applications occur in hospitals.[1] Artificial intelligence can be framed under a gathering of many sciences: computer sciences, statistics, mathematics… whose main purpose is to process a large quantity of data for a predetermined purpose.[2] Technologies such as Ambient Assisted Living (AAL) or smart houses provide for a wide range of health and care service to elderly or vulnerable persons in their personal home.[3] These technologies comprise sensors, detection of hazard, automatic call to health services in case of emergency with the latest evolution of such technology would also provide

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[1] Tiwari R., Singh S., Tiwari G., *Importance of artificial intelligence in the medical device and Health care sector*, in *Pharma times*, 53, 11, 2021, 21.

[2] Boucher P., *Artificial intelligence: How does it work, why does it matter, and what can we do about it?* in *European Parliamentary Research Service,* 2020, 11.

[3] Singh D., Hanke S., Kropf J., Holzinger A., *Ambient Assisted Living technologies from the perspectives of older people and professionals*', in Holzinger A., Kieseberg P., Tjoa A., Weippl E. (eds.), *Machine Learning and Knowledge Extraction*, Lecture Notes in Computer Science, 10410, Springer international publishing, 2017, 256.

for prevention of danger following data sent from wearable sensors (such as heart rate, blood flow…) requiring for a 24/7 monitoring of the person in its private home.[4]

Such technology may prove to be vital in the future, by offering persons more autonomy in healthcare while decentralizing the flows of persons to hospitals and allowing for more efficient care systems.[5] Nevertheless, one should not forget the necessity to protect and frame such intelligent systems under an appropriate framework of development, deployment and use in order not to forsake human rights on the altar of efficiency.

This paper will thus focus on the question whether: "*At what extent the use of artificial intelligent homecare would be compatible with European human rights law from a Health law perspective*".

Hence, this paper will clarify the extent of the protection of human rights and the use of artificial intelligence as homecare and its applications. In this perspective, it will be necessary to firstly identify the major points of confrontation between human rights and artificial intelligent homecare (II); before determining the pathways toward a compatible use under human rights law (III).

2. Identifying the challenges of AI based home care under European Human rights Law.

As mentioned previously, artificial intelligent home care can deliver high promises in both autonomy and efficiency of the cares. However, the framework under which it would thrive need to be determined to assess the extent of its compatibility under human rights law. Since this protection is only enshrined in the case-law of the ECtHR, one needs to clarify its extent and at what extend would homecare be comprised in it (A). After assessing such extent, one needs to determine the overall functioning of the system and the relationship between such technology and the implied persons (B).

A. Homecare and human rights: Clarifying the framework.

1. An overview of the right to health.

The right to health is not one contained within the provisions of the ECHR. However, the ECtHR included it under the European protection of human rights mainly under article 2 on the right to life[6] and Article 8 on the right to private life.[7]

Article 2 of the ECHR covers the aspects of the right to health related to public health and policy and mainly regards the positive obligations of States when the life of the patient is at stake. Positive obligations of States entail the need to "*make regulations compelling hospitals,*

[4] Eichelberg M., Rölker-Denker L., Helmer A., Doma A., *AAL Joint Programme Action Aimed at Promoting Standards and Interoperability in the Field of AAL Use Cases in the Ambient Assisted Living domain: a selected collection from AAL JP, FP6 and FP7 projects,* in AAL *JP Action on Standards and Interoperability*, 2016, 12.
[5] Kopytko V., Shevchuk L., Yankovska K., Semchuk, Strilchuk R., *Smart Home and Artificial Intelligence as Environment for the Implementation of New Technologies* in *Path of Science*, 4, 9, 2017, 2008.
[6] ECtHR no 47878/08 *Centre for Legal Resources on behalf of Valentin Câmpeanu* v. Romania, [2014], para 130.
[7] ECtHR, no 50772/11 *Erdinç Kurt and Others* v. Turkey, [2017], para 51.

whether private or public, to adopt appropriate measures for the protection of patients' lives".[8] One can see that this positive obligation spans the traditional border between private and public protection of human rights, allowing States to have a general handle over health systems under their jurisdiction. Under such positive obligations, States must provide for procedural obligations and instate efficient remedies in the context of medical negligence that has provoked the death of a person.[9]

Article 8 of the ECHR is the main provision for the development the right to health under the European framework of human rights.[10] In its case law, the ECtHR interpreted Article 8 as a legitimate provision "*for the protection of their patients' physical integrity*" on one hand,[11] and "*to provide victims of medical negligence access to proceedings in which they could, in appropriate cases, obtain compensation for damage*".[12] In this perspective, Article 8 also regroups these positive obligations for hospitals to take appropriate measures for private and public hospitals likewise.[13] Moreover, this provision also applies in the context of dysfunction of the health services as well, where the risk to a patient integrity was known and the proper authorities did not take the appropriate measures to prevent it or from being realized.[14]

Hence, whereas article 2 focuses on the endangering of life, article 8 focuses on the "lesser" extent of gravity, on protection of physical integrity. Taken together, these two provisions aim at giving a full capacity for the right to health to protect persons under Member States jurisdictions.

2. Is there a right to homecare under European human rights law?

The answer of the ECtHR is not clear on such a topic. On one hand in the Shelley case, the ECtHR dismissed an application on the ground that "The Court is not persuaded that any potential threat to health that fell short of the standards of Articles 2 or 3 would necessarily impose a duty on the State to take specific preventive steps. Matters of health care policy, in particular as regards general preventive measures, are in principle within the margin of appreciation of the domestic authorities who are best placed to assess priorities, use of resources and social needs".[15] This assessment clearly states a limit on the extent of obligations, that would not go as far as binding States to take specific policies that would require them to spend their resources.[16]The ECtHR is reluctant to assess positive obligations when it comes to influence allocations of resources, as it mentioned "*The margin of appreciation is even wider when, as in the present case, the issues involve an assessment of the priorities in the context of*

[8] ECtHR, no 32967/96 *Calvelli & Ciglio* v. Italy, [2002], para 49; Schabas W., *The European Convention on Human Rights: A commentary*, 2016, 371.
[9] ECtHR, no 30376 *Jurica* v. Croatia, [2017], 13, para 84; ECtHR no 22750/02, *Benderskiy* v Ukraine, [2007], para 61-62.
[10] ECtHR, no 23796/10, *Vasileva* v. Bulgaria, [2016], para 63.
[11] ECtHR, no 30376/13 *Jurica* v Croatia, [2017], para 84.
[12] ECtHR, no 31675/*Codarcea* v. Romania, [2009], 04, paras 102-103.
[13] ECtHR, no 75725/01 *Trocellier* v. France [2006]; ECtHR, no 25266/05 *Yardımcı* v. Turkey, [2010], paras 55-57.
[14] ECtHR, no 56080/13, *Lopes de Sousa Fernandes* v. Portugal, [2017], para 183.
[15] ECtHR no 23800/06 *Shelley* v the United Kingdom, [2008], 11.
[16] ECtHR no 27677/02 *Sentges* v. The Netherlands, [2003], 7.

the allocation of limited State resource".[17] However, if the Member State had already provided such care but took the decision to reduce the care package, then it could be a violation of Article 8 if the State did not reasonably or proportionally assess such decision.[18]

On the other, one must not forget that the ECtHR expressed that States have "to have in place regulations compelling both public and private hospitals to adopt appropriate measures for the protection of their patients' physical integrity".[19] This terminology implies the need for a case-by-case approach of the person and its medical needs, especially in the context of vulnerable persons, requiring a supplementary care of these patients. It also stated that "*The Court has previously considered a number of cases concerning funding for care and medical treatment as falling within the sphere of possible positive obligations because the applicants complained in substance not of action but of a lack of action by the respondent States*"[20] especially considering "*the applicant's right to autonomy and respect for his dignity*".[21] In this case, the ECtHR also emphasized the previous inadmissible cases and allowed for an exception in the context of vulnerable persons. It asserted that "*Those cases, declared inadmissible by the Court, did not concern a complete loss of autonomy such as that experienced by the applicant in the present case".*[22] Thus, the refusal by the Respondent States to appoint a personal assistant home to this person violated the right to health, "*nearing in mind what was at stake for the applicant, as well as his overall vulnerability – which required enhanced protection from the authorities*".[23] This position taken by the ECtHR entails two perspectives regarding the right to homecare.

Firstly, the ECtHR obliged States to provide health extra protection in the context of persons with "*overall vulnerability*" in the form of homecare. One could therefore emphasize that the margin of appreciation of States does not extend to the cases of vulnerable persons anymore and that the ECtHR has provided an obligation for States to provide homecare combining "*enhanced protection*" and "*appropriate measures*" for vulnerable persons.

Secondly, this path toward a recognition of a right to homecare for vulnerable persons can be highlighted by the recognition by the ECtHR of the "*right to autonomy*"[24] in health, where one of the goals of homecare is to enable these vulnerable persons to retain their autonomy while still being under medical care.[25] Hence, the recognition of such a right to autonomy in the context of the medical care provided by health authorities favourite a further recognition of the right to homecare for vulnerable persons. In this context, the ECtHR asserted that the denial of allowing a personal assistant as provided by national law for care was in breach of the right to health, but the extent of the means is not discussed by the

[17] Brems E., *Rewriting Sentges v The Netherlands*, in *Diversity and European Human Rights: Rewriting Judgments of the* ECHR, Cambridge University Press, Cambridge, 2015, 350.
[18] ECtHR, no 4241/12, *McDonald* v. the United Kingdom, [2014], para 58.
[19] ECtHR, no 56080/13 *Lopes de Sousa Fernandes* v. Portugal, [2017], para 186; ECtHR, no 4864/05 *Oyal* v Turkey [2010], para 54; ECtHR, no 46043/14, *Lambert and others* v France, [2015], para 140.
[20] ECtHR, no 62250/19 *Jivan* v. Romania, [2022], para 41.
[21] *Ibidem,* para 49.
[22] *Ibidem,* para 50
[23] *Ibidem*, para 51.
[24] *Ibidem,* para 49.
[25] Van den Broek G., Cavallo F., Odetti L., Wehrmann C., *Ambient assisted Living Roadmap*, AALIANCE, Berlin, 2010, 18.

ECtHR, meaning that it should still fall within the ambit of the margin of appreciation of States.[26]

If the *Jivan* case represents a milestone in the recognition of a right to homecare for vulnerable persons, the means to achieve such right would still fall to the States. Nevertheless, the right to health expanded its range and afford a more efficient protection of vulnerable persons. However, the question on how to qualify a vulnerable person in the context of medical care might be assessed on a case-by-case basis depending on the facts at hand. The right to homecare derivates from the right to health; and in this perspective both private and public actors act alike should be framed accordingly under European human rights law when establishing new means of techniques of homecare. Thus, when developing artificial intelligent homecare, States and private actors accordingly would be bound under the requirements of the right to health and the right to homecare under European human rights law.

B. Artificial intelligent homecare: Assessing the extent of the technology.

1. What uses for artificial intelligence in homecare?

The example of AAL technology and its evolution demonstrates the impact of artificial intelligence on homecare. In their paper, Blackman and her team differentiates three different generations of AAL technologies applied in the context of old age. They demonstrate that homecare through AAL evolved from an individual burdened monitoring to fully equipped house and surveillance where artificial intelligence can play a role in the prevention of life-endangering situation.[27] In the use of sensorial supervision for fall detection, such technologies enable *"a fall detection and monitoring system based on multiple sensors (presence, floor pressure, cameras and other unspecified sensors), multiple user interfaces (touchscreens) and a connected network of formal and informal caregivers. Daily activities are monitored, and anomalies are reported. In case of an emergency the escalation chain is activated, and a contact person can communicate (audio and video) with the inhabitant until the assistance arrived".*[28] Another use of such systems "*can measure and report sleep quality. It also can detect emergencies like heart attacks or upcoming depression bouts and is then able to activate an emergency call and give first aid advice to the inhabitant. The system also includes a reminder function for medical measurements (blood values) and is able to control some home automation functions like lighting control and wake up calls*".[29]

Firstly, these applications take the form of individuals monitoring through diverse range of tools incorporated within the house that can control some part of it. Secondly, these applications take the form of an autonomous decision-making system when the system thinks that the person is in danger or needs assistance, it takes the form of a communication

[26] ECtHR, no 62250/19 *Jivan* v. Romania, [2022], para 49.
[27] Blackman S., Matlo C., Bobrovitskiy C., Waldoch A., Lan Fang M., Jackson P., Mihailidis A., Nygård L., Astell A., Sixsmith A., *Ambient Assisted Living Technologies for Aging Well: A Scoping Revie*w in *Journal of intelligent system*, 25, 11, 2016, 57.
[28] Eichelberg M., Rölker-Denker L., Helmer A., Doma A., nt. (4), 20.
[29] *Ibidem*, 22.

to health authorities providing for an enhanced protection by member state. While this technology could be a path toward an effective right to homecare; one must remain vigilant, for as described above, these technologies rely on many human rights implications that need to be carefully determined.

2. The implications of AI Homecare on human rights.

To determine the impact on human rights of such technology, one must consider the different steps in its application as above-mentioned. Thus, one can see that the first step, consisting in the monitoring of persons and the collection of data through sensors and other tools can be analysed under the right to data protection and to privacy; while the second approach, where processing the data the artificial intelligence takes the decision to call health authorities can be analysed under the right to health.

Under European human rights law, the data protection framework is shared between Article 8 of the ECHR; and the General Data Protection Regulation (GDPR) in the European Union. One should notice however that these frameworks are not impervious to each other, for other the Council of Europe has developed data protection documents like the GDPR[30] while the ECtHR also quotes the GDPR as a mean of interpretation for personal data protection.[31]The challenge in this context lies on the A.I technology, where the next regulation would apply instead of the GDPR.[32] But the question lies: At what extent AI homecare could undermine the right to data protection and privacy? The answer to this question lies twofold, regarding the monitoring on one hand and the processing of data on the other.

The incorporation of artificial intelligence in homecare requires a 24/7 monitoring of the individual via sensors, cameras, and other tools. Under Article 8 of the ECHR, everyone is entitled to the right to a private life, it is of a paramount importance in the protection of human rights and incapable of exhaustive definition.[33] This provision is however not absolute, and the right can be limited *"in accordance with the law*" for a precise purpose listed in paragraph 2; among these purposes, "*the protection of health".*[34] As an illustration, such legitimate aim was recently interpreted in the case for public health policy of compulsory vaccination for children.[35] The wide margin of appreciation that States enjoy in public health

[30] Modernised Convention for the Protection of Individuals with Regard to the Processing of Personal Data Convention 108 +, CETS 108, adopted on 18 May 2018.
[31] ECtHR, no 70078/12 *Ekimdzhiev and Others* v. Bulgaria, [2022], paras 234-238.
[32] So far, the GDPR can apply on artificial intelligence systems through the provision on automated processing of data for decision-making: Regulation (EU) 2016/679 on General Data Protection Regulation, of 27 April 2016, Article 22.
[33] European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by protocols Nos. 11 and 14, adopted on 4 November 1950, ETS 5, Article 8; ECtHR, no 44647/98, *Peck* v the United Kingdom, [2003], para 57; P.G and ECtHR, no 44787/98, *J.H* v. the United Kingdom, [2001], para 86.
[34] European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by protocols Nos. 11 and 14, adopted on 4 November 1950, ETS 5, Article 8(2).
[35] ECtHR, nos. 47621/13, 3867/14, 73094/14, 19298/15, 19306-15 and 43883/15, *Vavřička and Others* v. the Czech Republic, [2021], para 284.

policy could be a basis toward applying artificial intelligence in homecare. But the question lies whether such a measure would be proportionate under Article 8, whether Member states can impose such technology on its citizens for the legitimate aim of protection of public health; or whether it should remain in the domain of voluntary basis for the citizens.

Thus, States enjoys the wide margin of appreciation regarding public health policy and the allocation of their resources; moreover, concerning vulnerable persons, they have the obligation to provide for an effective and enhanced protection without endangering their autonomy. Artificial intelligent homecare could thrive in such margin of appreciation; by facilitating homecare and providing with an individual monitoring of their health.[36] On the other hand, artificial intelligent homecare remains an extremely intrusive technology, where constant surveillance and monitoring is required.[37] Moreover, this technology collects and store the data that it monitors as it is made to monitor health condition of persons and their daily life to provide for care and call health authorities in cases of emergency. This feature of the technology remains controverse especially if such advanced techniques of homecare are imposed on citizens. Indeed, the State has the legitimacy to do so, has the margin of appreciation to do so; the appropriateness of the incorporation will thus be decided on the proportionality and the safeguards needed for a compatible approach of the technology. The mere collection of data being an interference in one's private life;[38] appropriate legal and practical safeguards need to be setup to make such measures compatible with Article 8.[39]

Another challenge of artificial intelligent homecare raises the question of its automated decision making under the right to health. The main purpose of artificial intelligent homecare is to enable an individual care for persons; but also, to provide for a rapid and preventive action in case of emergencies.[40] As previously demonstrated, Member States are under an obligation to safeguard life and physical and psychological integrity; this encompasses an obligation to provide for an adapted answers to emergencies and in case of failure, to provide for procedures and compensations for medical negligence. Hence, the question arises in case of artificial intelligent homecare on the extent of its functioning and where a disfunction could cause an impairment to the right to health under its life or physical integrity aspects, if

[36] Golubnitschaja O. and Costigliona V., *Common origin but individual outcomes: time for new guidelines in personalized healthcare, in Personsalized Medicine*, 7, 5, 2010, 561-568.

[37] Barrett M, Boyne J, Brandts J, Brunner-La Rocca HP, De Maesschalck L, De Wit K, Dixon L, Eurlings C, Fitzsimons D, Golubnitschaja O, Hageman A, Heemskerk F, Hintzen A, Helms TM, Hill L, Hoedemakers T, Marx N, McDonald K, Mertens M, Müller-Wieland D, Palant A, Piesk J, Pomazanskyi A, Ramaekers J, Ruff P, Schütt K, Shekhawat Y, Ski CF, Thompson DR, Tsirkin A, van der Mierden K, Watson C, Zippel-Schultz B., *Artificial intelligence supported patient self-care in chronic heart failure: a paradigm shift from reactive to predictive, preventive and personalized care,* in *EPMA Journal*, 10, 2019, 455.

[38] ECtHR, no. 9248/81, *Leander v Sweden*, [1987], para 48.

[39] ECtHR, no. 58170/13, no. 62322/14 and no. 24960/15, *Big Brother Watch and Others v. the United Kingdom*, [2021], para 331.

[40] Barrett M, Boyne J, Brandts J, Brunner-La Rocca HP, De Maesschalck L, De Wit K, Dixon L, Eurlings C, Fitzsimons D, Golubnitschaja O, Hageman A, Heemskerk F, Hintzen A, Helms TM, Hill L, Hoedemakers T, Marx N, McDonald K, Mertens M, Müller-Wieland D, Palant A, Piesk J, Pomazanskyi A, Ramaekers J, Ruff P, Schütt K, Shekhawat Y, Ski CF, Thompson DR, Tsirkin A, van der Mierden K, Watson C, Zippel-Schultz B., nt. (37), 451.

the camera or sensor fails to prevent a cardiac arrest or misinterpret the signs of it leading to the loss of life of a person.

The right to health under European human rights law would frame it in order to have a risk-based approach of such technology as to limit the potential errors[41] but also to provide for adequate safeguards in the context of errors. The human rights implications of such a technology span wide under the right to health, from life to private life and data protection. Identifying these implications allow to approach this technology under the angle of regulation, to assess pathways toward establishing a compatible use of artificial intelligent homecare under European human rights law.

3. Pathways toward a compatible scheme of regulation for AI based homecare under European human rights law.

Artificial intelligence as homecare provider entails several challenges under the European human rights framework. Nevertheless, Member States, if they decide to instore in their public health policy an artificial intelligent homecare, must ensure that technology comply with the right to health and its requirements. The above-mentioned challenges do not intrinsically constitute a barrier toward an implementation of such technology, and there needs to be a balanced approach between human rights and the artificial intelligent homecare. Firstly, one needs to focus on the human rights protection of patients under such a unique framework; thus, focusing on the rights derivative from the use of artificial intelligence and under the right to health (A). Secondly, one would need to focus on the medical negligence arising from the working of the technology and the necessity to map the liability mechanisms to provide for an efficient right to health enforcement (B).

A. Assessing the human rights protections of patients under AI homecare.

1. Artificial Intelligent homecare: What path to ensure a human right approach of the technology.

Artificial intelligence is a unique technology and thus calls for a unique response. In the context of the artificial intelligent homecare, the human rights approach would take the form of a risk-based approach of the development focused on the protection of fundamental rights.[42] However, such a technology could also find itself in colliding frameworks; for artificial intelligence only relies on algorithm, that is an automated data processing, hence falling under the framework of the GDPR.[43] Nevertheless, the forthcoming of the Artificial intelligence act (AIA) by the European Union would also apply a special framework for the

[41] Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, recital 14.
[42] *Ibidem*, 1.
[43] Regulation (EU) 2016/679 on General Data Protection Regulation, of 27 April 2016, Article 22.

incorporation of artificial intelligence in homecare.[44] Hence, until the AIA being not yet implemented, the appropriate framework would remain the GDPR, but the AIA would also play a critical role in the coming years for such a technology. To assess the human rights, this paper will focus on the chronological life-cycle approach of the technology.

a. A human right risk-based approach for artificial intelligent homecare.

Firstly, the AIA sets forth three qualifications for artificial intelligence: Unacceptable risk, high risk and low or minimal risk.[45] The Commission asserted that high rights AI *"are those that have a significant harmful impact on the health, safety and fundamental rights of persons in the Union*".[46] It also held that high-risk" AI *systems that pose significant risks to the health"*. Thus, it makes little doubt that such technology would be qualified as high risk under European Union law.

Secondly, one what does such qualification entails on a human rights perspective? Under such a qualification, the developers of this technology must answer to stricter legal frameworks[47] that is mainly focused on risk-assessment before it is released on the market.[48] This consists in a three-step approach: The first one is the "*elimination or reduction of risks as far as possible through adequate design and development",*[49] it requires a training of the artificial intelligence during the development phase, to make sure that it will function according to its purpose without endangering the life of the persons it monitors.[50] Hence, in the homecare case, this could take the form of assessing whether artificial intelligence can recognize the symptoms and signs of cardiac arrest; whether it can contact the appropriate emergency authority and the threshold of doing so based on the events it is monitoring. Such phase test is also necessary on the point of human rights obligations for Member states to make sure their health system is not dysfunctional. The ECtHR asserted that structural deficiencies of health services that would cause a risk for the physical integrity or to the life of persons would trigger a violation of the right to health if there can *"be objectively and genuinely identifiable as systemic or structural […] and must not merely comprise individual instances"*.[51] One could emphasize that artificial intelligent homecare if deployed without such risk-assessment and ultimately commit a wrong interpretation on several instances, could fit into such dysfunction.

Moreover, such positive human rights obligations also bind Member States to impose such risk assessment under the right to health if "the authorities knew about or ought to

[44] Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, recital 3.
[45] *Ibidem,* Article 5, Article 6, 12.
[46] *Ibidem*, Recital 27.
[47] *Ibidem,* Articles 16 to 23.
[48] *Ibidem*, Article 9.
[49] *Ibidem*.
[50] *Ibidem*, 11.
[51] ECtHR, no 40448/06, *Aydoğdu* v. Turkey, [2016], para 87: ECtHR, no 32146/05, *Eugenia Lazăr* v. Romania, [2010], paras 69-70.

have known about that risk and failed to undertake the necessary measures to prevent that risk from materializing, thus putting the patients' lives, including the life of the particular patient concerned".[52] Thus, one could cross-read these obligations under the AIA and right to health, Member States have a positive obligation to provide a risk assessment on the development of artificial intelligence in service of homecare. Hence, such obligations would entail the necessity to make sure that the artificial intelligence would function properly. Thus, the risk assessment of Artificial intelligence homecare represents a dire step for a human right's compatible framework of artificial intelligent homecare. Nevertheless, for this framework to be compatible with European human rights, one needs to focus also on the functioning of artificial intelligent homecare.

b. A data protection approach for artificial intelligent homecare.

The data protection approach for artificial intelligent homecare is of a major importance considering a human rights compliance approach. The data protection framework originally stemmed from the right to private life,[53] before becoming an autonomous right under European Union law,[54] and afforded enhanced protection for the processing of personal data under the GDPR.[55] To assess the data protection framework for artificial intelligence homecare, one would need to rely on two main features: the collection of data on one hand the automated data processing on the other and the decision making. Since artificial intelligent homecare needs to rely on intrusive means for private life such as cameras or sensors, the question lies whether such collection and storage of personal data would be compatible with actual data protection frameworks.

The GDPR states that personal data shall be "*collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes*"[56]. The legitimate purpose is to frame the process of collection of data, both as the triggering and the limit of such collection. In the context of health data, the ECtHR maintained that they are of high importance.[57] Such paramount importance is demonstrated by the mechanism under which the only possibility of overriding such confidentiality is the requirement of public interest.[58] In the context of protection of health, this demonstrates that the authorities in charge of storing health data must take extra care in ensuring of their security.[59] The collection of data must answer to a precise legal framework that will enable not only to have a secure storage of data but also surrounding the overall adequacy and quality of the data. Such framework

[52] ECtHR, no 24109/07, *Asiye Genç* v. Turkey, [2015]; ECtHR, no 56080/13, *Lopes de Sousa Fernandes* v. Portugal, [2017], para 192.
[53] ECtHR, no 931/13, *Satakunnan Markkinapörssi Oy and Satamedia Oy* v. Finland, [2017], para 137.
[54] Charter of Fundamental Rights of the European Union, 2000/C 364/01, adopted on 18 December 2000, Article 8.
[55] European Parliament and Council, General Data Protection Regulation, Regulation (EU) 2016/679 of 27 April 2016, Article 1.
[56] *Ibidem*, Article 5.1.(b).
[57] ECtHR, no 14461/88, *Yvonne Chave née Julien* v. France, [1991], para 75; *L.H.* v. ECtHR, no 52019/07 Latvia, [2014], para 56.
[58] ECtHR, no 22009/23, *Z* v. Finland, [1997], para 96.
[59] ECtHR, no 42788/06, *Surikov* v Ukraine, [2017], para 93.

should comprise effective safeguards against arbitrary use of medical data established through law. In the context of homecare, the data sent by the algorithm based on artificial intelligence through the cameras and sensors can be stored to assess an individual track of the person that would be in line with the obligation for States to provide for adequate and individual measure for patients and for that aim only. The ECtHR and the GDPR follows the same purpose; the minimisation of processed and collected data.[60] In this perspective, the assessment of the adequate amount of data collected will ultimately depend on the purpose of the collection.[61]

Following the collection, the data needs to be processed to interpret the flow of incoming data. It is important that the algorithm based on artificial intelligent followed a period of test and developing that is adequate for such processing to be correct and avoid any mistakes. The processing of data as well as the decision-making is made by the artificial intelligence, meaning that the processing and the choice of calling the emergencies is delegated to the technology.[62] In this perspective, Article 22 of the GDPR states that "*The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her*"[63] as a rule. However, two exceptions are relevant in the context of homecare. The first one being if it *"is authorised by Union or Member State law to which the controller is subject, and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests"*.[64] The second one applies if it "is *based on the data subject's explicit* consent".[65] In this case it is an upstream horizontal approach where persons would abide to the setting up of such technology. Whether decided by the State or consented by the persons; one could see that such artificial intelligent homecare could thrive under the GDPR.

2. Can artificial intelligent homecare commit a medical negligence?

Medical negligence arises in the context of a wrongdoing medical intervention in the context of "acts and omissions of the authorities in the field of health care policy".[66] Nevertheless, the ECtHR also set a limit to such a responsibility under human rights law "where a Contracting State has made adequate provision for securing high professional standards among health professionals and the protection of the lives of patients, it cannot accept that matters such as error of judgment on the part of a health professional or negligent co-ordination among health professionals in the treatment of a particular patient are sufficient of themselves to call a Contracting State to account from the standpoint of its positive obligations under Article 2 of the Convention to protect life".[67] Hence the securing

[60] Regulation (EU) 2016/679 on General Data Protection Regulation, of 27 April 2016, Article 5.1.c.
[61] ECtHR, no 25527/13, *Vicent Del Campo* v. Spain, [2019], para 51.
[62] Eichelberg M., Rölker-Denker L., Helmer A., Doma A., nt. (4), 163.
[63] Regulation (EU) 2016/679 on General Data Protection Regulation, of 27 April 2016,, Article 22.
[64] *Ibidem*, Article 24.
[65] *Ibidem*.
[66] ECtHR, no 45305/99, *Powell* v. the United Kingdom, [2000], 18; ECtHR, 11562/05, *Byrzykowski* v. Poland, [2006], para 104.
[67] *Ibidem*.

of high professional standards for health professionals and adequate provision for the protection of the lives of the parents can avoid States responsibility. Medical negligence seems to concern negligence caused by "*health professional"* the question lies on how to qualify a health professional? And can artificial intelligence cause a medical negligence the same as a health professional would?

The ECtHR asserted that "However, there is no reason why the requirement to regulate the activities of public health institutions and afford remedies in cases of negligence should not encompass such staff, in so far as their acts may also put the life of patients at risk, the more so where patients' capacity to look after themselves is limited, as in the present case." when assessing whether a technical auxiliary staff in hospital could cause a medical negligence.[68] The ECtHR does not focus on the actual professionality of the staff but on the possible consequences of its functions on patients' life when they lack autonomy to care for themselves. One could theorize that artificial intelligent homecare could gather these two criteria; for its omissions can put the life of patients at risk in the context where these persons the artificial intelligence is monitoring do not have the capacity to look after themselves pursuant to a loss of autonomy.

Hence one could reasonably argue that artificial intelligence in homecare can commit a medical negligence according to the criteria set forth by the ECtHR, with an attribution to States being the ultimate responsible for the flaws of the technology.[69] With such a risk on the health of persons, whether physical integrity of life, would open the obligation for State to provide for remedies under its positive obligations under the right to health.

B. Framing the human rights enforcement: Procedural approach toward a compatible framework.

1. Designing procedural frameworks under human rights law (Ex-post).

Under human rights law, persons are entitled to certain procedural rights to make their substantive rights effective for violations committed by public entities and private entities.[70] Thus, in the context of artificial intelligent homecare, these procedural rights would apply concerning both public and private health actors; depending on which one incorporated the technology in person's home.

Following the ECtHR case-law, these procedures should be effective in the aftermath of the wrongdoing to provide efficient remedies.[71] The effectiveness of these procedures should assess the cause of the violation of the right to health by an independent authority consisting

[68] ECtHR, no 59548, *Dodov* v. Bulgaria, [2008], para 81.
[69] Such attribution remains relevant in the context of the case *S v. Marper* of the ECtHR, that established that States bear extra responsibility when striking a fair balance of the development of new technologies.: ECtHR, no 30562/04, *S v. Marper*, [2008], para 112.
[70] ECtHR, no 56080/13, *Lopes de Sousa Fernandes* v. Portugal, [2017], para 186; ECtHR, no 4864/05, *Oyal* v Turkey [2010], para 54; ECtHR, no 46043/14, *Lambert and others* v France, [2015], para 140.
[71] ECtHR, no 10941/12, *İbrahim Keskin* v. Turkey, [2018], para 68; ECtHR, no 54969/09, *Mehmet Ulusoy* and others v. Turkey, [2019], para 90.

of medical expert to assess the facts at hand.[72] However, in the case of artificial intelligent homecare, a medical expert would unlikely be aware of the technology inner working. Thus, to assess the cause of the medical negligence; whose source might be traced back to the wrongdoing of the technology; it would be necessary for the artificial intelligence to disclose its log according to the AIA.[73] Moreover, one could emphasise on the necessity to assess the extent of the transparency for technical experts to assess the overall functioning of the technology. In this sense, it would not be relevant for the technology to be publicly disclosed; but rather, an independent expert that would be able to pinpoint the cause of the artificial intelligence algorithm and what was its extent in the medical negligence.[74]

The AIA states that *"An appropriate type and degree of transparency shall be ensured, with a view to achieving compliance with the relevant obligations of the user and of the provider"*;[75] one of these obligations is the corrective action obligations under which "*Providers of high-risk AI systems which consider or have reason to consider that a high-risk AI system which they have placed on the market or put into service is not in conformity with this Regulation shall immediately take the necessary corrective actions to bring that system into conformity, to withdraw it or to recall it, as appropriate*".[76] Transparency should thus be ensured in cases where artificial intelligence would not accordingly to its functioning.

Thus, one can see that this procedural human rights obligations on assessing the cause of the negligence opens the way toward establishing appropriate remedies concerning the artificial intelligence and its inner workings. Procedural human rights hold the legitimacy to assess every step of the medical negligence, from the possible non-recognition of the danger to the call of emergency services. However, States are also under an obligation to take pre-emptive measures to make sure the technology will be tested and developed in the framework of the right to health.[77] Nevertheless, to bring a compatible human rights framework for such technology, one needs to assess more than the procedural approach of remedies; but also establishing a responsibility framework.

2. *Framing the responsibility scheme under human rights law.*

To assess the overall perspective of such a technology under human rights law; one needs to identify the responsible entity or entities under such a use. This identification answers to a complex number of mechanisms represented both by the numbers of actors involved and the complexity of the technology.[78]

[72] ECtHR, no 54969/09, *Mehmet Ulusoy and others* v. Turkey, [2019], para 93.
[73] Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, Article 20.
[74] Larsson S., Heintz F., *Transparency in Artificial intelligence*, in *Internet policy review*, 9, 2, 2020, 10.
[75] Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, Article 13.
[76] *Ibidem*, Article 21.
[77] *Ibidem*.
[78] Moreover, the numerous frameworks: Human rights, GDPR, AIA… add more complexity in assessing the relevant provisions and obligations of each of these actors.

In the developing of the technology, the main actors involved are private entities who design and develop the algorithm, qualified as providers.[79] Under the AIA, providers must answer to multiple obligations in the design and development phase before the release of the technology[80] and during the functioning of the technology.[81] These provisions bound providers to demonstrate that their artificial intelligence software is in conformity with the Regulation and fundamental rights set forth by the European Union.[82] In this perspective, such obligations comprise documentations,[83] automated generated logs for the monitoring of the technology[84] or assessing a conformity of the artificial intelligence technology.[85]

Moreover, parallel to these developers' obligations, one can see that States also bear responsibility; indeed, the ECtHR held that "*any State claiming a pioneer role in the development of new technologies bears special responsibility for striking the right balance in this regard*".[86] Nevertheless, the extent of this responsibility is not defined under human rights law. One could determine that since developers holds substantive and precise obligations on the development and design of the technology; States would be responsible for the monitoring of such obligations; such monitoring obligation would still be in line with the logic of human rights obligations for State ensuring a respect of human rights for private entities.[87]

Moreover, one should also focus on the functioning of the technology and to focus on the definition of a user. The AIA provides that *"'user' means any natural or legal person, public authority, agency or other body using an AI system under its authority*"[88] comprising both private and public entities. Thus, health services, whether private or public, have monitoring obligations on the coming flow of data artificial intelligent homecare will process.[89] They must have access to these data; and that the artificial intelligence must make them readable for human persons for them to assess a qualitative interpretation of the data. Users also monitor whether the functioning is still compatible with the purpose of the technology.[90] They are also responsible to prevent the functioning of such technology in the suspicion of non-compatibility and report such disfunction to the developers of the artificial intelligence.[91]

[79] Even if the AIA does not make such difference between private and public entities, the main provider of Artificial intelligence remains private entities; Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, Article 1.
[80] Proposal for a Regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, Articles 9, 10, 15, 17, 18, 19.
[81] *Ibidem*; Articles 11, 12, 13, 14, 21.
[82] *Ibidem*, 11.
[83] *Ibidem*, Article 11.
[84] *Ibidem*, Article 20.
[85] *Ibidem*, Article 19.
[86] ECtHR, no 30562/04, *S v. Marper*, [2008], para 112.
[87] Akandji-Kombe J.F., *Positive Obligations under the European Convention on Human Rights: A Guide to the Implementation of the European Convention on Human Rights*, in *Human Rights Handbook*, 7, 72, 5.
[88] Proposal for a regulation 2021/106 on laying down harmonized rules on artificial intelligence (Artificial intelligence act) and emending certain union legislative acts, published on 21st April 2021, Article 3, (4).
[89] *Ibidem.*
[90] *Ibidem*, Article 29, 4.
[91] *Ibidem.*

Both human rights procedural obligations and rights as well as the AIA provisions encompass the design, the development, and the use of the technology under which responsible actors have been identified and their obligations narrowed. Thus, allowing for a responsible framework for the use of artificial intelligent homecare.

4. Conclusion.

To the question "*At what extent the use of artificial intelligent homecare would be compatible with European human rights law from a Health law perspective?",* one can see that the answer lies on multiple frameworks beyond the class human right one. The unique features of the technology, the autonomy of its decision making and its relationship with health makes it necessary to use other frameworks of law, the GDPR, the forthcoming AIA. However, this paper demonstrated that these are mostly the substantive obligations that are framed by these special regulations whereas human rights obligations emphasize *ex-ante* and *ex-post* obligations, from the right to have homecare establishing the foundations, to procedural rights aiming at offering persons with remedies and justice for potential wrongdoings.

Substantive obligations aim at serving human rights without directly taking their source from it; for instance, the transparency requirements serve the needs for assessing whether the technology was working adequately that can aim at providing adequate remedies in the context of artificial intelligent homecare. The approach of the European Union of artificial intelligence aims at serving procedural human rights in a larger extent.

Nevertheless, one could still be reluctant with the use of a technology capable of constantly monitoring and intruding private life at this large extent and its compatibility with the right to a private life. The question on whether it could be imposed by States on its citizens remains delicate and if some legal provisions would give legitimacy to do so; one could still question on the adequacy of such a path. States must balance the efficiency of such a system with the right to private life but also the possible aversion and defiance of citizens regarding artificial intelligence. At what extent the trust of persons can play in the artificial intelligence states policy? One could also counterbalance this argument by providing that this technology can be the solace toward preserving autonomy to vulnerable persons and thus allowing them to stay home and receiving appropriate care, one could emphasize that such system would at the contrary, provide an enjoyment of the right to private life while being under care for vulnerable persons.

The decentralization of care through artificial intelligence would also stretch further the human rights limits. One has seen in this paper that the framework to properly establish an artificial intelligent homecare span multiple frameworks on multiple legal systems, without assessing the national systems. Human rights cannot be the Alpha and the Omega for striking a compatible framework for such a technology, although it frames it in a certain manner.

Theoretically speaking, human rights were framed in a manner that it would contain States obligations; with the rise of private companies, human rights evolved to encompass States obligations to provide obligations to private companies. The question lies however whether human rights could stretch as to provide substantive obligations directly to artificial

intelligence? To provide States obligations to provide Private companies obligations to provide obligations to artificial intelligence. Can substantive human rights stretch this far without losing their content? And more important, can they be translated to artificial intelligence language?

Hence, for the protection of substantive human rights, one needs to leave the human rights framework and emphasize that such the provision for regulating artificial intelligence remains the most appropriate path to serve human rights such as the right to dignity, the right to private life and the right to homecare in a more ever digital society.

3

"Industry 5.0" and digital information at the workplace: reflections from Spain.

Stefano Bini*

1. Preliminary remarks. 2. Trustless technologies and automated decision-making systems. 3. The digitalization of work and the "industry 5.0" model. 4. The Spanish Reform of article 64.4, letter d) of the Workers' Statute. 5. Final remarks.

1. Preliminary remarks.

The so called "deep learning" algorithms challenge the labour law scholar, posing unprecedented questions, as confirmed by the recently expressed need for regulation of these tools, also -and in particular- at the workplace.

A concrete demonstration in this regard, can be found both in the "Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act)", as well as in the recent (RDL 9/2021) Spanish Reform of article 64.4 d) of the Workers' Statute (*Estatuto de los Trabajadores*), that recognizes to the workers' representatives an information and consultation right at the workplace, specifically concerning 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.

The latter example of regulation -object of critical consideration in the pages that follow- offers, in particular, interesting food for thought, enhancing significantly the collective dimension of representation in the digitalisation of work.

In fact, in the light of the empirical evidence emerging from the contemporary productive reality, the digitalisation of socio-economic paradigms appears as disruptive enough to determine -among other things- the apparent eclipse of the collective dimension of work, as a result of an important push towards the individualization of and in the work itself (in this

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sense, blockchain and distributed ledger systems are emblematic archetypes of disintermediation).

In such a context, the research intends to propose a reasoning around a fundamental question: how can this trend be reversed, re-evaluating the role of intermediate bodies?

The thesis presented in the study can be summarized as follows. The digitalisation of work should be considered as a constantly evolving transition to build inclusively, according to an anthropocentric vision -consistent with the development of the European model of "industry 5.0"- and with the indispensable participation of workers' representative organisations.

Digitalisation cannot be considered as a phenomenon fulfilled, inexorable, implacable, which workers and social partners can only interpret and "suffer" passively, but as a "partnership process between employers and workers and representatives" (European Social Partners Framework Agreement on Digitalisation).[1]

In this sense, fundamental precondition for this partnership process to be effective and fruitful is represented by an essential sharing of information and a basic transparency, especially with reference to obscure technical issues, of crucial importance for people working in a digitally disrupted scenario.

2. Trustless technologies and automated decision-making systems.

Precisely the widespread use of the adjective "disruptive",[2] to describe the essence of digital change, which characterizes the contemporary productive, economic and social scenario, does not seem frankly exaggerated: it looks really appropriate, especially if we consider some of the key elements that typify and symbolize digital transformation.[3]

Among the many, we note the automation of decision-making as emblematic and paradigmatic epiphenomenon of a general trend that identifies in the "machine" and "deep learning" algorithms the core of digital complexity:[4] by simplifying, algorithms capable of learning autonomously, through processes that recall and resemble the human brain and that are based on big data processing.[5]

[1] Battista L., *The European Framework Agreement on Digitalisation: a tough coexistence within the EU mosaic of actions*, in *Italian Labour Law e-Journal*, 2021, 1, 105-121: *"the European Social Partners prescribed a methodological approach, based on the partnership between workers and enterprises, to assess the effects of digitalisation on the work organization and on its four implicit facets: work content skills, working conditions related to the employment contract and work-life balance, work relations and environmental working conditions with a clear reference to health and safety at the workplace"*, 109.

[2] Cruz Villalón J., *Las transformaciones de las relaciones laborales ante la digitalización de la economía*, in *Temas Laborales*, 2017, 138, 13-47.

[3] Schwartz J., Riss S., *Work Disrupted. Opportunity, resilience and growth in the accelerated future of work*, Wiley, Hoboken, 2021.

[4] Among others, Padial J.J., *Técnicas de programación "deep learning" ¿Simulacro o realización artificial de la inteligencia?*, in *Naturaleza y libertad*, 2019, 2, 191-210.

[5] Schwab K., *La quarta rivoluzione industriale*, Franco Angeli, Milan, 2016, 180 highlights how artificial intelligence *"può trarre le informazioni necessarie da situazioni già avvenute per automatizzare processi decisionali complessi, in modo da facilitarli, velocizzarli e permettere di giungere a soluzioni concrete basate su dati ed esperienze precedenti"*. *See* also Bini S., *La dimensión colectiva de la digitalización del trabajo*, Bomarzo, Albacete, 2021.

Of course, digital transformation deserves to be conceived as a complex and composite phenomenon, in constant evolution, animated by a plurality of trends, that outline a multidimensional trajectory of digital complexity, based on a plurality of technological manifestations and forms, all united by having at the core of their operational logics a multifaceted set of algorithms.

In particular, the so called "trustless" technologies seem to play an absolutely central role representing, in a certain way, the archetype of a model of digitalization that seems to escape the centrality of the human being: instruments that do not, that is, in any way need human intervention for its functioning and that totally prescind from human intermediation and regulation.

Blockchain is an emblematical example in this regard:[6] it consists of a *""trustless technology", ciò significa che, con o senza intervento delle regole di un ordinamento statale, esiste un sistema privatistico transnazionale che, avendo permesso il download di un determinato dato in forma digitale, lo rende veritiero, per tutti gli operatori, sempre monitorabile, immodificabile, senza che vi sia il contributo o il controllo di un'autorità pubblica terza"*.

Simplifying, it is a technology (or, better, a digital infrastructure), capable of functioning in full autonomy, resulting completely insensitive to human intervention, as to the need for a system of rules governing its operation: the set of algorithms that allows its operation is capable of making decisions in complete autonomy.

Certainly, this is not the place to propose a thematic deepening on the topic, however it seems appropriate to briefly introduce such technologies, since they require to be carefully considered, to actually understand what is meant by "automated decision-making".[7]

In this regard, in fact, we fully share the hermeneutical contribution recently offered by authoritative doctrine, which clarified that,

"affinché possa parlarsi di sistema decisionale automatizzato (…) appare, dunque, necessario: a) che vi sia un mezzo tecnologico (sia esso definito algoritmo, intelligenza artificiale, etc.); b) che tale mezzo tecnologico possa compiere tutte le operazioni per le quali è stato 'programmato' senza intervento umano (sia pertanto automatizzato); c) che il mezzo tecnologico abbia, soprattutto, la capacità di prendere decisioni. È proprio la capacità di prendere decisioni il profilo qualificante dei 'sistemi decisionali automatizzati' (non fosse che la mera automatizzazione è orami comune alla generalità dei sistemi tecnologici). In altri termini, è necessario che il mezzo tecnologico, senza alcun intervento umano, compia una scelta tra le varie possibilità di azione o di comportamento possibili e sia, in ciò, 'autonomo'".[8]

[6] 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, 123-141.

[7] *See* also article 22, Regulation (EU) 2016/679 (General Data Protection Regulation): "The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her".

[8] Marazza M., D'Aversa F., *Dialoghi sulla fattispecie dei "sistemi decisionali o di monitoraggio automatizzati" nel rapporto di lavoro (a partire dal decreto trasparenza)*, in *Giustizia Civile.com*, 11, 2022, 7-8.

This means that we can talk about automated decisions when an artificial intelligence system is programmed in such a way that it is fully automated, being able to make autonomous decisions, without human intervention and/or conditioning.

This peculiar characteristic raises concerns and questions, which revolve primarily around a fundamental theme: the compatibility of these technical peculiarities with an axiological vision that conceives digital transformation according to a human-centric approach. How can this "human insensitivity" be corrected, in order to prevent the autonomous functioning of the digital technologies from becoming anti-human?[9]

This question, which may appear to be theoretical and almost philosophical, is instead absolutely concrete and particularly relevant, especially if we take into account intrinsically human contexts, such as the working one, in which the vulnerability of the person is physiologically accentuated by the bond of subordination, that characterizes the relationship.

3. The digitalization of work and the "industry 5.0" model.

Focusing the attention on the productive and working scenario, in fact, the incorporation of artificial intelligence systems into the dynamics of human resource management within the company, poses new questions to the labor lawyer, as the profile of decision-making itself (and, therefore, the practical attitude of the employers' powers) is affected by transformation.

As highlighted in doctrine, *"desarrollos de inteligencia artificial y algoritmos se incorporan, progresivamente y de una manera casi natural, al proceso de toma de decisiones en el ámbito laboral, para afectar al conjunto de eventos que configuran la dinámica de las relaciones laborales. Las decisiones en materia de contratación, promoción, modificación de las condiciones de trabajo y extinción del contrato pueden ser adoptadas por la empresa a partir de los datos obtenidos por medios automatizados"* o *"sin intervención humana"*.[10]

In other words, digitalization can get to completely pervade the working relationship, affecting and necessarily impacting on the worker, whose identity profile is also affected by a significant evolutionary trend: a "new role for the industry worker" is emerging, in a deep and unexpected integration with machines:[11] a "smart and skilled operator who performs not only cooperative work with robots but also work aided by machines as and if needed by

[9] Kaplan J., *Le persone non servono. Lavoro e ricchezza nell'epoca dell'intelligenza artificiale*, LUISS University Press, Rome, 2016.

[10] Gómez Gordillo R., *Algoritmos y derecho de información de la representación de las personas trabajadoras*, in *Temas Laborales*, 157, 2021, 162.

[11] Breque M., De Nul L., Petridis A., *Industry 5.0. Towards a sustainable, human-centric and resilient European industry*, European Commission, Directorate-General for Research and Innovation, Bruxelles, 2021; Faioli M., *Mansioni e macchina intelligente*, Giappichelli, Turin, 2018, 195: *"Il lavoratore in molti casi coadiuva la macchina intelligente; in altri, la macchina intelligente coadiuva il lavoratore, coordinandone le attività; in altri contesti, il lavoratore svolge attività che la macchina non sa ancora fare. Ma ciò non basta (…): la macchina intelligente, nei luoghi di lavoro, può anche decidere. Cioè, ci sono decisioni robotiche o algoritmiche che, nei luoghi di lavoro, sono manifestazione di un modo di organizzare il lavoro".*

means of human cyber-physical systems, advanced human-machine interaction technologies and adaptive automation towards achieving human-automation symbiosis work systems".[12]

Faced with such a reality, which seems intrinsically "governed" by digital technologies, it seems urgent to develop a reflection around the need to seek a balance so that this integration "person-algorithm", previously unimaginable, can be considered effectively sustainable.

In this regard, it is considered worthy of careful attention a specific model developed at European level, built around the innovative concept of "industry 5.0": "an open and evolving concept, providing a basis for further development of a collaborative and co-creative vision of the European industry of the future".[13]

The model "recognises the power of industry to achieve societal goals beyond jobs and growth to become a resilient provider of prosperity, by making production respect the boundaries of our planet and placing the wellbeing of the industry worker at the centre of the production process".[14]

In other terms, it is a paradigm based on an integral vision of the industry, projected in its being a protagonist co-invested in the responsibility of contributing to the achievement of strategic social objectives in the reference community; a vision based on three fundamental concepts: sustainability, resilience, humanity.

Without deepening here each of the three pillars of the model in question, it is worth highlighting that, overall, they contribute to giving an axiological direction of meaning to the industry's digital transformation.

It is precisely in this that lies the essence of "industry 5.0": the transition from a digital development model "technology-driven" ("industry 4.0"), to a "human-centric" one (precisely, "industry 5.0"), transposing the focus from the algorithm to the person and reaffirming the instrumental relationship of the first compared to the second. So, in an industry conceived as a "provider of true prosperity", "aiming not to leave anyone behind", "technology serves people".[15]

In other words, a fully human-centric vision of digitalization of work is affirmed.

But how this theoretical model can be concretely implemented, if we witness an unprecedented protagonism of algorithms totally insensitive to human intervention?

In this regard, we strongly believe that such an "anthropocentric" vision of digitalization of work and industry must represent the guiding approach of a process of paradigm change, that only a joint governance of the phenomena can achieve.

[12] Romero D., Stahare J., Wuest T., Noran O., Bernus P., Fast-Berglund A., Gorecky D., *Towards an operator 4.0 typology: a human-centric perspective on the fourth industrial revolution technologies*, in Aa.Vv., *Proceedings of the International Conference on Computers and Industrial Engineering*, 2016, 1-9.
[13] Breque M., De Nul L., Petridis A., *Industry 5.0. Towards a sustainable, human-centric and resilient European industry*, European Commission, 2021, 14.
[14] *Ibidem*.
[15] *Ibidem*, 13.

In this sense, digital transformation should be approached as a *"proceso social en construcción",*[16] *"cuyos límites y efectos están aún por explorar en toda su profundidad",*[17] in the framework of which the participation of workers -at a collective level and not just at a merely individual one -[18] constitutes the foundational methodological cornerstone.[19]

As highlighted by authoritative doctrine, *"los procesos de automatización no pueden desarrollarse sobre la base de un impulso empresarial exclusivo y excluyente"*: it is *"necesario garantizar la presencia del sindicato en la gestión de los procesos de innovación tecnológica"*.[20]

In short, in order for digital innovation processes to be effectively human and people-centred, it is essential to build them in a shared way, with the necessary contribution of workers, through their representatives: but, in order to achieve such a strategic participatory objective, the effective realization of the basic perspective of democratization at work, which is based on a timely, complete and effective access to information on the same algorithms that generate impacts on the employment relationship, is essential.

In fact, many are the questions that digital transformation poses with specific reference to the work dimension, expressing in this way, a widespread need for information, knowledge and transparency: what are the digital codes and parameters that govern the operational mechanisms at the basis of algorithms? How does the automatization process affect decision-making with impact on work and industrial relations?

In this sense, the need for information which has just been mentioned in general terms meets, from a legal and labour point of view, with interesting answers -in particular- in a legal system, which is briefly taken into account in the following pages: Spain.

4. The Spanish Reform of article 64.4, letter d) of the Workers' Statute.

In terms of workers' rights to information and consultation, in fact, the Spanish legal system offers interesting food for thought, since a recent relevant and emblematical reform: the so-called *"Ley Rider"* (Royal Decree Law 9/2021). Amending the Workers' Statute (*Estatuto de los Trabajadores*), the reform brings -among other things -[21] a significant innovation,

[16] Rodríguez Ramos P. (Dir.), *Transición digital en Andalucía: realidades y desafíos. Informe*, Consejo Económico y Social de Andalucía, Seville, 2020, 30: *"la digitalización de la economía es un proceso social en construcción, con un ritmo vertiginoso, que puede y debe de ser gobernado con la participación activa de las Administraciones Públicas y los interlocutores sociales, con el objeto de impulsar una transición justa e inclusiva que favorezca la creación de puestos de trabajo en todos los ámbitos y contribuya a prever y mitigar los riesgos de segmentación y exclusión social"*.

[17] Prieto J.F. and Boto Gil R., *Introducción*, in *Guía Negociación Colectiva y Digitalización 2020 – Cuadernos de acción sindical de CC.OO.*, 9, 2020, 7.

[18] Sáez Lara C., *Gestión algorítmica empresarial y tutela colectiva de los derechos laborales*, in *Cuadernos de Relaciones Laborales*, 40, 2022, 283-300.

[19] Goerlich Peset J.M., *Innovación, digitalización y relaciones colectivas de trabajo*, in *Revista de Traball, Economía i Societat*, 92, 2019, 1-26.

[20] *Ibidem*, 6. *See* also Rodríguez Copé M.L., *El difícil papel del sindicato de clase en la gig-economy: viejas y nuevas fórmulas para crear comunidad ante la dispersión, la diversificación y el conflicto*, in J.M. Gómez Muñoz (Dir.), *Sindicalismo y capitalismo digital: los límites del conflicto*, Bomarzo, Albacete, 2021, 227-272.

[21] It should also be noted the introduction of a presumption of subordination in the field of digital delivery platforms (additional provision 23ª, Workers' Statute: *"Presunción de laboralidad en el ámbito de las plataformas digitales de reparto"*).

providing a new workers' right to "digital" information, introducing a new letter d) in article 64.4 of the same Statute.

With reference to this specific profile, the purpose of the *"Ley Rider"* reform is represented by an extension of the perimeter proper of the workers' rights to information and consultation, including expressly *"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"*.[22]

In other terms, the new right to "digital" information relates to codes, rules, parameters, instructions underlying algorithms or artificial intelligence systems affecting decision-making with an impact on working conditions, access and maintenance of employment, including profiling.

In this way, the dark and apparently inscrutable side of the complex functioning mechanisms of digital technologies is located at the centre of a beam of light: a reform that does not seem exaggerated to define crucial and paradigmatic, emblematic of the complexity with which Labor Law is called to confront.

We are talking about a pioneer regulation in the European framework,[23] which gives workers' representatives the right to be informed and, therefore, to exercise a form of control over the employers' decisions, taken by means of or through the intervention of algorithmic instruments.

By extending the scope of the information obligation, the Spanish Legislator decided to intervene on the employee participation instruments, contributing to a sort of *"levantamiento del velo: es decir a la disolución del halo de misterio que envuelve, en general, el fenómeno 'inteligencia artificial' en la empresa"*.[24]

Indeed, the recent legislative intervention in the Spanish legal system can be considered as an important contribution in the direction of making transparent an obscure and complex process such as the digitalisation of the organization of work, with reference to which strong is the risk of a widening of the perimeter of the unilateral employer's domain.[25]

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[22] Article 64.4, letter d), Spanish Workers' Statute: *"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"*.

[23] Ginès I., Fabrellas A., *El derecho a conocer el algoritmo: una oportunidad perdida de la "Ley Rider"*, in *IUSLabor*, 2, 2021, 3: *"el derecho de información que se reconoce a la representación legal de la plantilla en la 'Ley Rider' resulta una regulación pionera en Europa, que permite conocer y controlar la legalidad de las decisiones laborales adoptadas por la empresa. El acceso a información sobre las métricas o variables utilizadas por el algoritmo permite a la representación legal evaluar su adecuación para adoptar decisiones automatizadas en materia de condiciones laborales, acceso o mantenimiento del empleo"*.

[24] Bini S., *Digitalización, información, democratización*, in *Revista del Ministerio de Trabajo y Economía Social*, 2022, 153, publication pending. *See* also Baylos Grau A., *A vueltas con el algoritmo: derechos de información y negociación colectiva*, in *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. As the II explanatory statement of the RDL 9/2021 clarifies *"Los algoritmos merecen nuestra atención y análisis, por los cambios que están introduciendo en la gestión de los servicios y actividades empresariales, en todos los aspectos de las condiciones de trabajo y, sobre todo, porque dichas alteraciones se están dando de manera ajena al esquema tradicional de participación de las personas trabajadoras en la empresa (…)"*.

[25] Baylos Grau A., nt. (24): *"dominio unilateral por parte del empleador de las medidas de control del proceso de producción y la determinación de las condiciones de trabajo"*. *See* also Todolí Signes A., *Nueva "Ley Rider". Texto y un pequeño comentario a la norma*, in *Argumentos en Derecho Laboral*, 12 May 2021, https://adriantodoli.com/2021/05/12/nueva-ley-rider-texto-y-un-pequeno-comentario-a-la-norma, last accessed on 31 October 2021.

In this regard, the opinion that we can express on the regulatory innovation is broadly positive: the new standard seems, in fact, fully suitable to encourage a change of logic and to promote a collective approach to digital transformation at the workplace.[26]

In fact, only the involvement of the collective dynamics can effectively overcome the dangerous expansion of the individualist tendency towards disintermediation, driven by the same logic that governs the functioning of digital technologies.[27]

Workers' representatives' information on the "dark" side of digitalisation, emblematically represented by algorithms, can be considered also as the main way to achieve a renewed approach to democracy at work; a renewal that necessarily implies a correction and a rebalancing of the accentuated information asymmetry, characteristic of the digital labour relationship.

5. Final remarks.

In conclusion, precisely the critical element of information asymmetry -significantly accentuated by the use, by the employer, of digital tools based on encrypted codes and algorithms - [28] deserves to be considered, in practice, and appropriately limited through the legal instruments available and, among them, through the workers' right to information.

In fact, only an effective information - adequate, timely and complete - can contribute to the rebalancing of the structural information asymmetry that connotes ontologically the employment relationship: *"nei rapporti di lavoro, specie se connotati da relazioni di autorità e assoggettamento a poteri giuridici del datore di lavoro, l'informazione è considerata uno strumento volto a ridefinire il bilanciamento e il coordinamento degli interessi in gioco, a tutela del contraente debole"*.[29]

Precisely the vulnerability that characterizes ontologically the situation of the worker as a weak contractor, seems today accentuated, as well as by the pervasive use of artificial intelligence systems, also by a sort of loss of workers' collective identity and class consciousness, accompanied by the crisis of the intermediate bodies.

This critical loss seems to represent one of the archetypes of the contemporary social scenario, animated by inanimate intelligent things (IoT)[30] and technologies, based on disintermediation and trustless patterns, and "fueled" by big data.

In this sense, the Spanish choice to project "digital" information in the collective dimension and not in the essentially individual one, is considered of great impact.

[26] Baylos Grau A., nt. (24).
[27] Bini S., nt. (6), 123-141.
[28] Crouch C., *Se il lavoro si fa gig*, Il Mulino, Bologna, 2019, 161: *"Il risultato generale della digitalizzazione sarà perciò l'ulteriore espansione del potere di controllo dei datori sui lavoratori, accentuando l'asimmetria del contratto di lavoro"*.
[29] Perulli A., Treu T., *"In tutte le sue forme e applicazioni". Per un nuovo Statuto del lavoro*, Giappichelli, Turin, 2022, 81.
[30] Among the many references on the subject, it is particularly noteworthy: Za S., *Internet of Things. Persone, organizzazioni e società 4.0*, LUISS University Press, Rome, 2018.

In fact, the multiform possible expressions of trade union participation in the company's decision-making processes play a central role in the management of change and in helping to give direction to the digital transformation of work and its organization.[31]

As widely argued in a recent monographic study on the theme,[32] it seems crucial and essential to approach digital transformation as a shared social process, in the framework of which developing participatory dynamics that project the phenomenon, with its complexity, in the intrinsically collective dimension of work.

Above all in the light of the individualistic tendencies that characterize the contemporaneity, it seems indispensable to restart from a "rediscovery" of the workers' right to information, in the framework of an authentic participatory culture.[33]

Despite representing, objectively, the weakest level of participation,[34] not accompanied by the obligation, for the company, to activate a consultation with workers' representatives, the new Spanish right to information based on digital matters seems to be fully suitable to contribute to the correction of the "digitally augmented" information asymmetry.

It seems, in fact, clear that the legislative provision here in consideration strengthens the role and the centrality of workers' representatives, also and above all in the optical to facilitate and to strengthen the successive collective bargaining:[35] information on the operating dynamics of the algorithms used in human resource management is, actually, functional and prodromic precisely to a stronger collective bargaining and, so, to a more conscious workers' participation in the regulation of employment relation.[36]

[31] Sepúlveda Gómez M., *La participación sindical en las decisions empresariales y su influencia en la gestión del cambio laboral*, in *Documentación Laboral*, 109, 2017, 213-226.
[32] Bini S., nt. (5), 123-158.
[33] 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: *"sólo una profunda renovación de la estrategia de los sujetos de las relaciones laborales y un marco político-institucional favorable a una cultura de la participación (y un apoyo estatal a políticas empresariales basadas en la innovación, la formación y la competitividad) pueden contribuir a modificar la inercia"* which characterizes the theme of participation.
[34] Baylos Grau A., nt. (24): *"el reconocimiento de este derecho se sitúa en el nivel de participación más débil, el que se refiere a los derechos de información, sin que por consiguiente se haya intentado establecer un deber de iniciar un proceso de consultas sobre este particular, como sucede en supuestos más importantes como la modificación de condiciones de trabajo, traslados de empresa, sucesión de empresas o despidos colectivos, por ejemplo"*.
[35] Testoni A., *Manuale di tecnica di relazioni industriali*, ADAPT University Press and Giuffré, Milan, 2014, 29: *"Per fare un'analisi edotta delle questioni che dovremo affrontare nel negoziato, è necessario raccogliere tutte le informazioni possibili, pur sapendo che molte altre, ugualmente rilevanti, potremo averle solo in sede di trattativa"*.
[36] Pérez Amorós F., *¿Quién vigila al algoritmo?: los derechos de información de los representantes de los repartidores en la empresa sobre los algoritmos de las plataformas de reparto*, in *e-Revista Internacional de la Protección Social*, 1, 2021, 173-187.

4

Tackling with Risks Regarding Employee's Right to Privacy in Teleworking, Stemming from Surveillance Methods of Algorithmic Management.

Yiğitcan Çankaya*

1. Introduction. 2. Concepts. 2.1. Teleworking. 2.2. Employee's Right to Privacy. 2.3. Algorithmic Management. 3. Practices. 4. Risks. 4.1. Risks on Lawfulness of Surveillance Methods. 4.1.1. General Remarks on Lawfulness of Surveillance Methods. 4.1.2. How Practices Risk the Lawfulness of Surveillance Methods. 4.2. Risks on Employee's Right to Disconnect. 4.2.1. General Remarks on Employee's Right to Disconnect. 4.2.2. How Practices Risk Employee's Right to Disconnect. 4.3. Risks on Gender Equality. 4.3.1. General Remarks on Gender Equality. 4.3.2. How Practices Risk Gender Equality. 5. Conclusion.

1. Introduction.

At the hand of the latest technologies and the events on a global scale, the concept and understanding of the workplace expanded and shifted from material aspects such as buildings and offices, to employee's home, and even further to a digital working environment. In this matter, teleworking became almost compulsory for employment relations to survive, while mitigating the loss of productivity, enabling more flexible working arrangements and most importantly protecting jobs.[1] Over the course of two years, the number of teleworkers in the EU countries skyrocketed from 5% to 40%,[2] with a similar pattern in the US from %17 to

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[1] Trindade C. M., *Opinion of the European Economic and Social Committee on 'Challenges of teleworking: organisation of working time, work-life balance and the right to disconnect' (Exploratory opinion at the request of the Portuguese Presidency)*, in *Official Journal of the European Union*, C 220, 1, 9 June 2020, para. 3.1, 3.2.

[2] Milasi S., González-Vázquez I., Fernández-Macías E., *Science for Policy Briefs – Telework in the EU before and after COVID-19: where we were, where we head to*, The European Commission's Science and Knowledge Service – Joint research centre, 2020, 1-2.

%44.[3] Teleworking, being a part of digital labour, is generally carried out under employer's algorithmic management. These management methods are various, including but not limited to prolific data collection and surveillance, automated or semi-automated decision-making and real-time data responsiveness that affects performance evaluations. While the post-pandemic economic and social recovery policies signal a rise in permanent teleworking, the algorithmic management of such employment poses significant risks on employee's right to privacy. Therefore, it becomes necessary to identify and resolve these risks based on labour law instruments.

In this paper, first, concepts of teleworking, employee's right to privacy and algorithmic management will be examined. Teleworking will be taken at hand, along with remote working, home working and home-based working. Respectively, EU's recent policies regarding teleworking and the digitalization of the labour will be briefly showcased. Then, employee's right to privacy will be explained by contemplating on its elements and how it is legally protected in employment relations. Consecutively, the concept of algorithmic management will be taken at hand, by deliberating its recent history and management methods that are deployed.

Second, the surveillance methods that are used in several sectors under algorithmic management will be exhibited in relation with teleworking practices. These examples will be given from certain companies that operate in the field; namely, Connecteam, Work Examiner, DeskTime and Ekran.

Third, the risks regarding employee's right to privacy that are caused by surveillance methods in the algorithmic management of teleworking will be studied. These risks will be demonstrated on the lawfulness of the surveillance methods, employee's right to disconnect and gender equality. The lawfulness of the surveillance methods will be conferred under the general principles and limits of these methods, as well as relevant articles of GDPR. Employee's right to disconnect will be explained in a comparative law perspective, by exhibiting the French Code du Travail Arts. L. 2242-8 and 2242-17, along with the labour law regulations of Italy, Spain, the Philippines and Chile. Furthermore, occupational health and safety will be discussed while focusing on the rising psycho-social risks. Afterwards, the implications on gender equality will be examined.

Last, in order to offer certain solution proposals regarding the demonstrated breaches of employee's right to privacy; ILO Instructions, Recommendations and Opinions and Recommendations of the Council of EU and the Economic and Social Committee of EU will be analyzed.

[3] Marshall J., Burd C., Burrows M., *Working from Home During the Pandemic: Those Who Switched to Telework Have Higher Income, Education and Better Health*, in *United States Census Bureau*, March 2021, available at https://www.census.gov/library/stories/2021/03/working-from-home-during-the-pandemic.html.

2. Concepts.

2.1. Teleworking.

Teleworking is closely related with other types of work such as remote working, home working and home-based working. In order to conceptualize and demarcate this type of work, its relationship with other concepts should be examined briefly.

First, remote or home working is; remunerated and permanent work carried out as a part of employer's business organization, for a product or service specified by the employer, but out of employer's premises, whether at home or somewhere else, whether by using ICTs (information and communications technologies) or not.[4] Second, home-based work is carried out by remote or home working employees and independent workers who are not employees who work for a product or service specified by the contractor.[5] Finally, teleworking is a form of remote or home working. It is a remunerated and permanent work, carried out as a part of employer's business organization, for a product or service specified by the employer, but out of employer's premises, whether at home or somewhere else, by using ICTs.[6]

In brief, telework is done with the use of ICTs, such as smartphones, tablets, laptops, and desktop computers, for work that is performed outside the employer's premises. In other words, telework implies work achieved with the help of ICTs and conducted outside the employer's locations. It is generally carried out on a permanent basis; however, in certain situations it may be occasional. This difference simply affects the criterion on being home-based or not.

Teleworking is mostly practiced by employees such as translators, social media managers, banking and insurance representatives, customer representatives, accounting clerks and data managers. It is popular in types of work where employees work on a digital and online platform, where they can be constantly in touch. These working forms are currently expanding, while new modes of work arise such as platform working, crowdworking and microworking.[7]

[4] Art. 1, ILO Convention No. 177, defines "home-work". However, based on the definition, home-work can also be regarded as remote work due to the fact that this type of work is not required to be carried out at home.
[5] Williams, C. C./ Lapeyre, F., *Dependent self-employment: Trends, challenges and policy responses in the EU*, Employment Policy Department, International Labour Organization, Geneva, 2017, 27-33.
[6] Bostrup P., Ettrup S.*, Teleworking - A New Form of Work and a Number of Legal Questions*, in *EDI Law Review*, 3, 1, 1996, 1. *See* also Art. 2, European framework agreement on telework, 2002.
[7] Eurofound, *New forms of employment*, Publications Office of the European Union, Luxembourg, 2015, 107; Jäger G., Zilian L.S., Hofer C., Füllsack M., *Crowdworking: working with or against the crowd?*, in *Journal of Economic Interaction and Coordination*, 14, 4, 2019, 763-764. For more information regarding microworking, Eurofound, nt. (7), 107-108.

2.2. Employee's Right to Privacy.

Right to privacy is conceptualized and dynamically shaped on human rights jurisprudence, mostly based on the rulings of Supreme Courts of the countries[8] or human rights mechanisms such as European Courts of Human Rights,[9] along with the ongoing legal, social, economic, political and technological developments. In this regard, its elements have been depicted as a person's name; image and sound; gender identity, sexual orientation and sexual relationships; family relationships; dignity and reputation; abortion and other reproductive rights; ethnic identity; domicile; communication and personal data.

This right has been a prominent aspect of employee's rights, especially as a human rights matter. Its legal protection during the employment relation varies, starting from the recruitment process to the dismissal of the employee. Based on comparative labour law, this right is protected with regards to searching employee's body and belongings, interfering with employee's life inside and outside of the workplace, interfering with employee's sexual orientation and sexual relationships, employee surveillance and employee's right to disconnect. Although the scope of employee's right to privacy and its protection during the employment relation is relatively wide, this paper will only focus on the protection of this right regarding employee surveillance methods.

2.3. Algorithmic Management.

Algorithmic management is as a relatively new concept that has arisen with the digitalization of labour. Before demonstrating how it is utilized in employment relations with surveillance methods, it is necessary to demystify and conceptualize this new type of management that is currently being used by a rising number of mid-size and big companies.

Algorithmic management can be defined as (i) the use of descriptive, predictive or prescriptive algorithms (ii) on collected, prolific and machine readable Big Data of workers or customers (iii) in order to render automated or semi-automated decisions on management; such as recruitment, scheduling, nudges, penalties, performance evaluations, real-time data responsiveness, designation of salaries and dismissals.[10] Therefore, in algorithmic

[8] For instance, the case of *Marion Manola v. Stevens&Myers* in the USA or the cases of *Pope v. Curl* and *Youatt v. Winyard* in England helped shape the conceptualization of privacy as a right. This right, then, started to be discussed as an independent concept in early human rights jurisprudence. Speed J.G., *The Right of Privacy*, in *The North American Review*, 163, 476, July 1896, 66; Warren S.D., Brandeis L.D., *The Right to Privacy*, in *Harvard Law Review*, 4, 5, December 1890.

[9] Some of the rulings of the ECHR that conceptualize and recognize right to privacy under Art. 8 of European Convention on Human Rights; *Rees v. United Kingdom*, 9532/81, 1986; *Marckx v. Belgium*, 6833/74, 1979; *Niemietz v. Germany*, 13710/88, 1992; *Kroon v. Holland*, 00018535/91, 1994; *Kopp v. Switzerland*, 23224/94, 1998; *Sabanchiyeva et. al. v. Russia*, 38450/05, 2013; *Von Hannover v. Germany*, 59320/00, 2004; *Pfeifer v. Austria*, 12556/03, 2007.

[10] Meijerink J., Bondarouk T., *The duality of algorithmic management: Toward a research agenda on HRM algorithms, autonomy and value creation*, in *Human Resource Management Review*, November 2021, 2-4; Mateescu A., Nguyen A., *Algorithmic Management in the Workplace*, Data & Society Research Institute, February 2019, 3, 4; Ponce Del Castillo A., Naranjo D., *Regulating Algorithmic Management*, in *ETUI Policy Brief*, The European Trade Union

management, machine readable data is an input, algorithms are automated data processors, and decision-making or execution is an output.[11] It should also be noted that algorithmic management is not necessarily run by AIs; since, algorithms do not have to be based on machine or deep learning and self-teaching, self-writing software.

Based on its purpose of use, it can be subcategorized as algorithmic direction, algorithmic evaluation and algorithmic disciplining.[12] In algorithmic direction, algorithms provide employees relevant information and suggestions regarding their work and guides them to decide the output according to employer's interests. Algorithmic evaluation is when an employer resorts to algorithms as to evaluate their employees' performances, by relying on surveillance of employee's behaviors, ratings and rankings. The collected data regarding behaviors, ratings and rankings is processed by algorithms and makes a conclusion regarding employee's performance such as productivity, speed and actions. Algorithmic disciplining is the use of softwares based on employee's collected data in order to determine performance appraisals, compensations and benefits, in order to reward or punish employees.[13]

Algorithmic management and the legal problems based on its use have two key issues regarding this paper: surveillance and discrimination.[14] First, surveillance is at the very heart of algorithmic management; since, the whole algorithmic management process starts with collecting machine-readable data from workers and customers, and the semi-automated or automated decisions are further implemented by surveillance methods. Second, discrimination is an almost inevitable outcome of recruitment processes that are run by an AI, and performance evaluation systems that are based on customer ratings are a gateway to bias.

Therefore, surveillance and discrimination that are caused by algorithmic management directly pose risks on the lawfulness of the surveillance methods that are implemented, employee's right to disconnect, and gender equality. These three aspects will be further examined in order to show how employee's right to privacy is affected by the following practices.

3. Practices.

After having covered the concepts of teleworking, employee's right to privacy and algorithmic management, it is necessary to demonstrate how certain surveillance methods are deployed in numerous sectors by big companies, using softwares. By doing so, it can be studied if these methods pose a risk of breaching employee's right to privacy. In order to achieve this, certain popular employee surveillance softwares are selected and their official

Institute, 5 September 2022; Tomprou M., Lee M. K., *Employment relationships in algorithmic management: A psychological contract perspective*, in *Computers in Human Behavior*, 126, August 2021, 2.

[11] Meijerink J., Bondarouk T., nt. (10), 3-4.

[12] *Ibidem*, 4; Tomprou M., Lee M. K., nt. (10), 2.

[13] Meijerink J., Bondarouk T., nt. (10), 3-4; Tomprou M., Lee M. K., nt. (10), 2; Mateescu A., Nguyen A., nt. (10), 3-4; Del Castillo Ponce A., Naranjo D., nt. (10), 2.

[14] Mateescu A., Nguyen A., nt. (10), 13-15.

websites have been analyzed to showcase the services they offer the employers. These softwares are Connecteam, Work Examiner, DeskTime and Ekran.

First, Connecteam offers the employers services such as; on-the-go tracking for multiple jobs & shifts; real-time visibility with GPS; absence & PTO approvals in a click; tracking work hours spent on jobs, projects and clients.[15] Employers can know exactly who clocked in and out, when, and where; while auto reminders alert employees to clock in and out, their daily limit, overtime, and double-time. Employers can also automatically see every single detail of their employees 'timesheets, ensure their employees clock in from pre-defined locations with virtual geofencing.[16]

Second, Work Examiner's monitoring tools show every type of computer activity performed by employees in real-time: web surfing, keystrokes, messaging, printing, or downloading. Additionally, switching between Stealth and Tray Icon modes allows the software to run with or without employee's knowledge of it. This monitoring software takes videos of the screen at 1 fps to reproduce all the employee activity for further analysis. It timely informs the employer of any employee activity that contradicts the established rules to stop further violations.[17] This software allows the employer to watch employee's screen in real-time and record any computer activity, while learning what apps and websites are used by employees.

Third, DeskTime monitors work time, it refers to keeping track of everyone's attendance, time spent at work, working habits and productivity. Its surveillance varies from auto screenshots to custom reports and document title tracking. It also has automatic time, app and URL tracking with auto screenshots.[18]

Finally, Ekran lets employers to monitor employee activity in real time and enable employer's security officers to watch an ongoing session without "disturbing" an employee. With this software, employers can audit employee activity and performance in real time or in retrospective, track and analyze the productivity of both in-house and remote employees. Employers receive alerts on suspicious events, such as launching an unwanted application or accessing a restricted website and they can also review flagged sessions to prevent inappropriate use of data inside the corporate network and eliminate security risks. Ekran also monitors and records online searches, network connections and social media usage of employees.[19] This includes uploaded or downloaded files, sent and received emails, typed keystrokes, visited websites, connected USB devices and accessed files and systems.

[15] Connecteam Operations, https://connecteam.com/operations/.
[16] Connecteam Employee Scheduling App, https://connecteam.com/employee-scheduling-app/.
[17] Work Examiner Use Cases, https://www.workexaminer.com/ .
[18] DeskTime Features, https://desktime.com/features .
[19] Ekran Employee Monitoring Software, https://www.ekransystem.com/en/solutions/monitoring-employee-activity .

4. Risks.

4.1. Risks on Lawfulness of Surveillance Methods.

4.1.1. General Remarks on Lawfulness of Surveillance Methods.

Employers constantly seek to track behaviors, personality traits and performance stats of their employees in the workplace, for several organizational and legal reasons.[20] While numerous reports from the EU countries exhibit how surveillance methods have been expanding and reaching new capacities with the use of new technologies in respect of the digitalization of labour,[21] these methods generally vary as; surveillance of employee's image and sound; telephone, internet, e-mail and general communication; and GPS location.[22] However, it is beyond doubt that employers have to abide by certain principles and rules in order for these methods to be lawful. The limits that should be paid due regard on this matter are: (i) general principles on the lawfulness of surveillance and (ii) special provisions of GDPR Art. 22 and Recital 71 on automated decision-making.

First, general principles on the lawfulness of surveillance are; prohibition of hidden surveillance, employee's acknowledgement or consent, and the proportionality of surveillance (appropriate, necessary, balanced/proportionate *stricto sensu*).[23] These three base principles can be depicted by the ECHR jurisprudence and ILO Recommendations.

Prohibition of hidden surveillance states that surveillance cannot be hidden from the employee and it has to be known in order to be lawful. Even state surveillance must be known by the citizen, with *numerus klausus* exceptions;[24] therefore, employer's surveillance has to be known by the employee, either as a direct consent or as a notification, based on the lawfulness basis of a certain jurisdiction. This knowledge has to contain the content, duration and limits of the surveillance.[25] Recent jurisprudence and scholarly work also advise and require use of employee representation mechanisms as to stipulate the surveillance methods in employment relations.[26]

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[20] Eurofound, *Employee Monitoring and Surveillance: The Challenges of Digitalisation*, Publications Office of the European Union, Luxembourg, 2020, 30-31; Eivazi K., *Computer Use Monitoring and Privacy at Work*, in *Computer Law & Security Review*, 27, 2011, 517.

[21] Eurofound, nt. (20), 7; Ponce A., *Labour in the Age of AI: Why Regulation is Needed to Protect Workers*, ETUI *Research Papers-Foresight Brief*, Brussels, 2020.

[22] Especially after GDPR's entrance into force, a study has shown that 51% of the enterprises inside of the EU have been analyzing data with digital tools, and 57% of these enterprises increase their capacity of data analysis each year. The data that is collected is processed by AI with Big Data, biometric technologies, GPS, wearable technology and RFID (radio frequency identification) tools. *See* Eurofound, nt. (20), 4-5.

[23] ILO, *Protection of Workers' Personal Data: An ILO Code of Practice*, International Labour Organization, Geneva, 1997, 1-8. *Taylor & Sabori v. United Kingdom*, 47114/99, 2002; *P.G. & J.H. v. United Kingdom*, 44787/98, 2001; *Prado Bugallo v. Spain*, 58496/00, 2003; *Dumitru Popescu v. Romania*, 71525/01, 2007; Milaj J., *Privacy, surveillance, and the proportionality principle: The need for a method of assessing privacy implications of technologies used for surveillance*, in *International Review of Law, Computers & Technology*, 30, 3, 2016, 119-120.

[24] ILO, nt. (23), 4. *Prado Bugallo v. Spain*, 58496/00, 2003; *Dumitru Popescu v. Romania*, 71525/01, 200.

[25] *Halford v. United Kingdom*, 20605/92, 1997; *Copland v. United Kingdom*, 62617/00, 2007; ILO, nt. (23), 2.

[26] Muenchinger N. E., Salés D., *Electronic Workplace Privacy in France*, in *Computer Law & Security Report*, 18, 6, 2002, 421-422; Eurofound, nt. (20), 23.

Proportionality of the surveillance means that the methods should be appropriate, necessary and balanced.[27] First, appropriate methods are the ones which are suitable or applicable to the aspect that is wanted to be tracked. For example, website login data cannot be tracked with the camera on employee's computer. Second, necessary methods are the ones which are compulsory to be deployed in order to track a certain element, and that they are the least infringing of all available methods. For example, if an employer wants to track the breaks of the employee's, a GPS tracking device would not be the least infringing method that can be deployed, same element can be basically tracked with a staff badge. Last, balanced methods are the ones that ensure a balance between the interests of the employer and the obligations or incumbency of the employee. The positive outcome on the employer's part and the negative outcome on the employee's part should be in equilibrium based on the principle of faith.

Second, as to the special provisions of the GDPR Art. 22 and Recital 71, almost every outcome of algorithmic management involves a semi-automated and automated decision-making. This includes surveillance methods that are utilized under algorithmic management and puts it in the scope of GDPR Art. 22 and Recital 71. These regulations stipulate that, in automated individual decision-making, including profiling; the data subject, in this case the employee, shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning them or similarly significantly affects them.[28] The data controller, in this case the employer, shall implement suitable measures to safeguard the data subject's rights and freedoms and legitimate interests, at least the right to obtain human intervention on the part of the controller, to express their point of view and to contest the decision or obtain an explanation of the decision reached after such assessment.[29]

In this regard, surveillance methods that are used in algorithmic management include any form of automated processing of personal data that evaluates the personal aspects of the employee, in particular to analyze or predict aspects concerning employee's performance at work, economic situation, health, personal preferences or interests, reliability or behavior, location or movements, where it produces legal effects concerning them.

4.1.2. How Practices Risk the Lawfulness of Surveillance Methods.

The use of surveillance methods with algorithmic management practices that have been demonstrated earlier, jeopardize every single principle. Moreover, these methods are not always in accordance with GDPR Art. 22 either; since, they do not always involve a human intervention. If the surveillance methods are hidden, not notified or do not rely on the

[27] Muenchinger N. E., Salés D., nt. (26), 421; Hunt C., Bell C., *Employer Monitoring of Employee Online Activities outside the Workplace: Not Taking Privacy Seriously*, in *Canadian Labour and Employment Law Journal*, 18, 2, 2015, 413-416.
[28] Vale S. B., Zanfir-Fortuna G., *Automated Decision-Making Under the GDPR: Practical Cases from Courts and Data Protection Authorities*, in *Future of Privacy Forum*, May 2022, 10.
[29] *Ibidem*, 10.

proportionality criteria, they breach employee's right to privacy. In practice, some solid examples can be further demonstrated to explain these risks.

If the employer has not informed the employee about the duration, limits and reasons of the surveillance, if the employer has hidden the surveillance, if the employer captures and records random and non-work-related screenshots of the desktop, if passwords are recorded as part of keystrokes, if employee's GPS location is constantly tracked even in off-times wherever they go, if employee's social media content that they have not opened to the public is tracked, if the camera surveillance covers unnecessary parts of employee's house; employee's right to privacy is breached due to the unlawful surveillance.

A special regard should be paid on tracking and recording of employee's internet, application, e-mail and telephone use. The lawfulness of these methods depends on whether the monitoring is conducted regarding the basic statistics of the usage or the content of the it. As a rule, the employer can track the statistics of the work-related usage of the technological equipment provided to the employee, without monitoring the content.[30] These statistics can vary, such as how many calls or e-mails have been received or sent, connection and log-in time stamps, the duration and size of downloads and uploads.

However, monitoring the content of the usage of the technological equipment provided to the employee differs whether the employee is allowed to use the equipment for non-work-related purposes as well. Regarding the work-related use, monitoring the content of usage is a proportionality issue, involving freedom of communication and third-party related personal data protection.[31] If such monitoring is proportionate, then the employer can use surveillance methods that substantively track employee's work-related use of the equipment provided by the employer, as a last resort. Regarding personal use, the contractual obligations should be taken at hand. If there is not a no limit on employee's personal use, employer cannot monitor the content of the usage, since it cannot be known when and which kind of use is personal or work-related. If there is a way to determine that, then the employer can only monitor the work-related use. If there is a time or geographical limit to the allowance of personal use, the employer can only monitor the statistics of the use to track whether the employee abides by the limits, and not the content.[32]

4.2. Risks on Employee's Right to Disconnect.

4.2.1. General Remarks on Employee's Right to Disconnect.

Along with the digitalization of labour, current employment relations started to become even more atypical and employee's subordination became even looser, while making the lines between employer's business organization and employee's personal life even blurrier. The

[30] Olivier H., *E-mail and Internet Monitoring in the Workplace: Information Privacy and Contracting-Out*, in *Industrial Law Journal*, 31, 4, 2002, 328; Miller S., Weckert J., *Privacy, the Workplace and the Internet*, in *Journal of Business Ethics*, 28, 2000, 260. *See* also *Copland v. United Kingdom*, 62617/00, 2007; *Halford v. United Kingdom*, 20605/92, 1997.

[31] Olivier H., nt. (30), 328.

[32] Cass. soc. Arrêt n° 4164 du 2 octobre 2001; *Bărbulescu v. Romania*, 61496/08, 5.9.2017; Miller S., Weckert J., nt. (30), 261.

work-life balance is now hard to maintain, broadly because of the always-on culture that depicts employees to be always ready to work and be reachable, even out of the working hours.[33] Techno-stress and exhaustion arisen the occupational health and safety hazards, namely the psycho-social risks. For example in 2015, 79% of the Deloitte employees stated that they control messages that are sent by their colleagues and seniors at night and during vacations.[34] Especially in teleworking, these not-so-new developments based on constant digital connection made it necessary to legally and explicitly recognize employee's right to disconnect from work, outside of working hours; simply because relevant regulations regarding employee's right to privacy, occupational health and safety and working hours were not enough to protect employee's non-work-related (personal) life in practice.[35] This newly recognized right started to be enacted by several countries; few of which are France, Italy, Spain, The Philippines, and Chile.

Employee's right to disconnect was discussed for the first time as a concept in a verdict rendered by the French *Cour de cassation* in 2004.[36] Afterwards, this right was conceptualized and enacted for the first time in comparative law on 8 August 2016 by France, on Myriam El Khomri's employment period of ministry. Pursuing this regulation, which was effectuated in January 2017, other legislations also started to acknowledge this right.[37]

Code du travail L. 2242-8 and 2242-17 that governs this right do not explicitly define what right to disconnect means.[38] However, it states that in workplaces with more than 50 employees, the employer and union or workplace representatives need to negotiate and stipulate the modes and times of digital communication during off times. This agreement should assure employee's right to rest, personal and familial life. In case of a disagreement, employer should draw out a timetable by consulting to the union or workplace representative. Regarding workplaces with less than 50 employees, this right should be separately governed inside the individual employment contracts.[39]

Italy enacted right to disconnect on 14 June 2017 with law no. 81/20174. Pursuant to Art. 19 of the law, the employer and the employee should do an agreement in written form that governs employee's rest and off time, right to disconnect, when and how employee will disconnect from the digital communication, in a technical and organizational manner.

[33] Ray J. E., *Grande accélération et droit a la déconnexion*, in *Droit Social*, 11, 2016, 912-913.
[34] Deloitte Conseil, *Qualité de vie au travail Et le bonheur?*, Observatoire du capital humain de Deloitte et Cadremploi, Neuilly-sur-Seine, 2015, 14-22.
[35] For a more detailed comparative study on right to disconnect and how it is related with employee's right to privacy, *see*: Casaux-Labrunée L., *Vie privée des salariés et vie de l'entreprise*, in *Droit Social*, 4, Avril 2012, 333; Milotay N., *Droit à la déconnexion*, Service de recherche du Parlement européen, 21 January 2021; Ray J. E., *Naissance et avis de décès du droit à la déconnexion, le droit à la vie privée du XXIe siècle*, in *Droit Social*, 11, 2002, 939. Auzero G., Beaugard D., Dockès E., *Droit du travail*, Paris, 2022, 1141.
[36] Cass. soc., Arrêt n° 45889 du 17 février 2004.
[37] This regulation created an impact on other EU countries and comparative labour law studies by getting recommended to be regulated as an independent right. *See* Saliba A. A., *Droit à la déconnexion*, En bref – Plénière de Parlement Européen, Janvier 2021; European Parliament Report with recommendations to the Commission on the right to disconnect (2019/2181(INL)), 4 December 2020; European Parliament Resolution with recommendations to the Commission on the right to disconnect (2019/2181(INL)), 21 January 2021.
[38] Michel S., *La déconnexion du salarié : entre droit de retrait et retrait d'un droit*, in *Issu de petites affiches*, 222, 2018, 1-2.
[39] For discussions regarding how this regulation restricts the scope of this right: *ibidem*, 2; *see* also Auzero G., Beaugard D., Dockès E., nt. (35), 1140.

However, this law does not guarantee the exercise of this right with a sanction of a mandatory rule. Moreover, this regulation governs only smart working (*lavaro agile*) models.[40]

In Italy, the number of smart/teleworking employees rose from 250.000 to 570.000 between October 2016 to October 2019.[41] Therefore, on 6 May 2021, law no. 61 Art. 1 (1-ter) was enacted to ensure employee's right to disconnect; stating that this right it directly linked with right to rest and occupational health and safety, and that no one can be subject to salary cuts or disciplinary sanctions because of their exercise of right to disconnect.[42]

Spain enacted employee's right to privacy inside the Data Protection Act on 6 December 2019. Pursuant to Art. 88 of the Act, public and private sector workers are entitled to right to disconnect on resting times, off days and vacations. However, the article also states that according to the nature of the solid employment relations, the exercise of this right can be flexed or stopped.[43] This right is to be stipulated in an agreement between the employer and the union or workplace representatives. According do this agreement, the employer should undertake necessary technical and organizational requirements so that the employees, as well as the ones in managerial positions, are able to exercise this right. The employer should also organize formations regarding use of technology, and prohibition of fatigue. This regulation also explicitly states that permanent or temporary remote workers as well as the ones working on employer's premises have the same rights.[44]

The Philippines enacted this right in January 2017 with the Presidential Decree No. 442.[45] This regulation states that employees cannot be subject to disciplinary sanctions or any sorts of restrictions on their rights because of neglecting workplace communication in their off times. It also governs that employer has the duty to form the schedule where employees will be exercising their right.[46]

Last, Chile also enacted right to disconnect solely for remote working. Pursuant to the relevant law of 26 March 2020, employers need to reach to an agreement with the employees the times that employees cannot be reached, that ensures a minimum of 12-hour uninterrupted time-off and notify the employment directorate.[47]

It should be noted that, whichever legislative jurisdiction is taken at hand, one can always reach to a right to disconnect based on the relevant rules governing employee's right to

[40] Avogaro M., *Right to Disconnect: French and Italian Proposals for a Global Issue*, in *Law Journal of Social and Labor Relations*, 4, 3, September/December 2018, 110-129.
[41] Corso M., Crespi F., Mauri M., *Smart Working and digitally-enabled forms of work organisation*, School of Management of the Politecnico di Milano, available at https://www.som.polimi.it/en/research/research-lines/smart-working-and-digitally-enabled-forms-of-work-organisation/.
[42] Legge 6 maggio 2021, n. 61, available at https://www.gazzettaufficiale.it/eli/id/2021/05/12/21G00071/sg. *See* also Reilly S., *How new EU rules can give Italy's right to disconnect more teeth, in IEL – International Employment Lawyer*, 20 May 2021, available at https://www.internationalemploymentlawyer.com/news/how-new-eu-rules-can-give-italys-right-disconnect-more-teeth .
[43] Legislating a Right to Disconnect, UNI Global Union Professionals and Managers, Nyon, 2020, 4.
[44] *Ibidem*, 4-5.
[45] http://www.congress.gov.ph/legisdocs/basic_17/HB04721.pdf .
[46] Legislating a Right to Disconnect, nt. (43), 7.
[47] IOWEC, *Chile Modified the Labour Code to Include Provisions on Telework (Law N. 21.220),* in *Industrial Relations and Labor Law – Newsletter*, May 2020, available at https://ioewec.newsletter.ioe-emp.org/industrial-relations-and-labour-law-may-2020/news/article/1590154111-chile-modified-the-labour-code-to-include-provisions-on-telework-law-n-21-220 .

privacy, occupational health and safety and working hours, even though a right to disconnect is not explicitly guaranteed under a special provision.

4.2.2. How Practices Risk Employee's Right to Disconnect.

It is undeniable that a big portion of the surveillance methods that were showcased make it onerous to exercise employee's right to disconnect. Constant surveillance, messaging, nudges, alerts and other sorts of communication outside of the working hours breach this right. It is practically almost impossible for the employee to detect a certain monitoring method and make it stop sending alerts, e-mails or SMS, such as automatically scheduled notifications. Many of the methods also allow employers to monitor and record allegedly illegal actions of the employee and alert the so-called breach.

Moreover, especially in teleworking, the always-on culture pushes employees to be always online on their working platforms such as Zoom, Skype and Microsoft Teams.[48] Knowing that all their actions on computers and telephones are surveilled and analyzed by algorithms and reflect on their performance evaluations, they start to feel a pressure of answering all the messages and calls coming from their colleagues or employers in order to evade being treated unequally with their counterparts.

This constant digital connection and surveillance also shows an increase in physical, psycho-social risks and occupational health and safety issues. Employees start working on a static routine in the same physical environment, using the same technological instruments without getting rest. This cause them to suffer from loneliness, exhaustion, fatigue and technostress.[49] Therefore, it becomes even harder for employees that telework to maintain work-life balance and their right to rest; which causes an overall increase in physical and psycho-social risks, a lot of stemming from mental health issues, that need to be addressed with relevant occupational health and safety regulations.

4.3. Risks on Gender Equality.

4.3.1. General Remarks on Gender Equality.

Employment relations and gender equality have always been correlated matters, since the beginning of the first labour movements. The unequal and gendered division of unpaid domestic labour, cis-heteronormative perceptions and rules in employment, and societal gender stereotypes regarding domestic care obligations arise issues regarding equality in the work life.

[48] European Parliament, *Report with recommendations to the Commission on the right to disconnect (2019/2181(INL))*, 4.12.2020; European Parliament, *Resolution with recommendations to the Commission on the right to disconnect (2019/2181(INL)),* 21.01.2021.

[49] European Parliament, *The Future of Work: Trends, Challenges and Potential Initiatives*, EPRS Ideas Paper: Thinking About Future EU Policy, 2021, 5; ILO, *Teleworking during the COVID-19 pandemic and beyond: A Practical Guide*, International Labour Organization, Geneva, 2020, 13.

Women and queer employees face violence and discrimination thin their professional lives, as well as their domestic lives. On a queer-feminist approach to what labour law should comprise of; gender equality is concerned with issues such as equal remuneration, special forms of leaves, glass ceiling, equal recruitment, equality in social security, representation in decision-making mechanisms, equal opportunities of promotion and in-house training, protection from any sorts of violence and especially sexual harassment and mobbing.[50] These issues are broadly considered as a part of employee's right to privacy matters as well, based on what sort of rights or obligations are being discussed. For instance: special form of leaves, equal recruitment and any sorts of discrimination during the employment relationship regarding employee's privacy is an issue regarding this right.

4.3.2. How Practices Risk Gender Equality.

Considered with the unequal division of unpaid domestic labour and gender stereotypes, they undertake most part of the domestic work and care for children and the elderly. This makes them even harder to invest their time in work, during the working hours, while being home.

Under the surveillance methods that have been demonstrated, especially women's productivity and performance are impaired, resulting in a decrease of performance-based premiums and bonuses, or worse, in possible disciplinary sanctions or termination of employment contracts.[51] Constant tracking and productivity reports regarding employees' use of programs do not necessarily reflect the reality that takes place in the working hours. For example in the US, in between February-April 2020, a study regarding women who had domestic caring responsibilities found that the time they were able to invest in working hours during the day was decreased four to five times more in comparison to their male counterparts.[52] This causes women to stretch out their schedules during the day and deal with work even in their time-off,[53] which does not read on the automatic reports that are sent to the employer. Therefore, women and queer employees are in a more disadvantaged position compared to their counterparts, rendering the right to disconnect even more

[50] For a more detailed comparative take on the queer-feminist issues of labour law, social policies and employment, *see* Frader L. L., *Gender and Labor in World History*, in Meadmerry T. A. (ed.), *A Companion to Global Gender History*, November 2020, 27-42; Frader L. L., *Le travail dans les études de genre*, in *Travail et genre dans le monde*, 2013, 33-43; Laufer J., *Egalité professionnelle, diversté et lutte contre les discriminations*, in *Travail et genre dans le monde*, 2013, 62-70; Saguy A. C., *Comment parler du harcèlement sexuel? Une comparaison franco-états-unienne*, in *Travail et genre dans le monde*, 2013, 388-398; Arabadjieva K., Zwysen W., *Gender inequality in performance-related pay: a gap in the EU equal pay agenda*, in *ETUI Research Paper-Policy Brief*, March 2022.

[51] European Economic and Social Committee, *Teleworking and gender equality – conditions so that teleworking does not exacerbate the unequal distribution of unpaid care and domestic work between women and men and for it to be an engine for promoting gender equality (SOC/662)*, 2020, para. 3, 4.

[52] Collins C., Landivar L. C., Ruppanner L., Scarborough W. J., *COVID-19 and the Gender Gap in Work Hours*, in *Gender, Work and Organization: Feminist Frontiers*, 28, 1, January 2021, 101-112.

[53] Peyronnet M., *COVID-19 et égalité*, in Dechristé C., Mavoka-Isana A., Royer E. (ed.), *COVID-10 et droit du travail*, Paris, 2020, 75-76; Donovan S. A., Labonte M., *The COVID-19 Pandemic: Labor Market Implications for Women*, in *Congressional Research Service Report*, 8 December 2020, 3-4.

onerous to exercise, by virtue of the same reasons, while the psycho-social risks become even more grave because of gender inequality.

Finally, the cis-heteronormative work life does not pay special needs and demands due regard.[54] Almost none of the empirical studies take problems regarding sexual orientation and gender identity at hand. This leaves employment and social policies blind-sighted and the domestic violence and discrimination regarding queers become invisible while developing relevant policies and rules.

5. Conclusions.

The aim of this paper is to resolve the risks regarding employee's right to privacy in teleworking stemming from surveillance methods of algorithmic management. In order to conclude the issue at hand, this paper will propose certain solutions regarding the risks that have been demonstrated above. These solution proposals are for legislative actions for states and employers on an enterprise level. They are general prospective rules and practices to avoid the risks regarding the lawfulness of the surveillance methods, employee's right to disconnect and gender equality.[55]

First, regarding the lawfulness of the surveillance methods, it should be noted that algorithmic management is a tool for automated or semi-automated decision-making. Therefore, both Art. 22 GDPR both ethical and legal obligations require a human intervention or control over all the decisions that are going to be taken. Moreover, the employer should always abide by the general principles of surveillance. Worker's representatives should be able to address issues related with protection of personal data and right to privacy. In order to do so, they should be able to provide with certain legal and technical and digital facilities. Transparency regarding algorithmic management methods that are deployed.[56]

Second, regarding employee's right to disconnect, all types of remote work should benefit from this right,[57] without making the exercise of this right impossible with numeric limits such as the 50-employee criterion in the workplace. Right to disconnect should be regulated with obligatory and sanctionable provisions while employee's representation and inclusion

[54] Cis-heteronormative work life configures legal, social and professional constructs based on binary, cis (non-trans) and heterosexual norms. These sort of rules and social policies exclude other gender identities and sexual orientations, therefore discriminates queers. *See* van der Toorn J., Pliskin R., Morgenroth T., *Not Quite Over the Rainbow: The Unrelenting and Insidious Nature of Heteronormative Ideology*, in *Current Opinion on Behavioural Sciences*, 34, 2020, 160-165.

[55] These solution proposals are based on several European Union and ILO reports, recommendations and resolutions. *See* Trindade C. M., nt. (1); European Economic and Social Committee, nt. (51); European Parliament, *Resolution with recommendations to the Commission on the right to disconnect (2019/2181(INL))*, 21.01.2021; ILO, nt. (49); ILO, *Working from home: From invisibility to decent work*, International Labour Organization, Geneva, 2021; ILO, *The COVID-19 response: Getting gender equality right for a better future for women at work*, ILO – Policy Brief, Geneva, May 2020; European Parliament, *The Future of Work: Trends, Challenges and Potential Initiatives*, in *EPRS Ideas Paper: Thinking About Future EU Policy*, 2021.

[56] European Social Partners Framework Agreement on Digitalisation, Art. 4.

[57] ILO, *Working from home: From invisibility to decent work*, International Labour Organization, Geneva, 2021, 200; ILO, nt. (49), 22.

in the decision-making mechanisms is assured, in order to maintain work-life balance and workplace democracy. These obligatory provisions should be a prominent part of the labour inspection to maintain the implementation and compliance.[58] Moreover, given the potential risks of social isolation, it is necessary to develop actions such as training sessions to address workers 'safety and health. Instead of always-on culture, a no-blame culture should be reset, to guard against employees who are unable to be always contactable. Overtime should not be the rule in working culture, it should be an exemption.

Third, regarding gender equality, whenever organizations collect data, especially in algorithmic management practices, it should be gender-disaggregated and diversified.[59] While maintaining gender equality in teleworking practices, cis-heteronormative practices should be avoided, in order to be more inclusive of queer employees. In this manner, intersectional and gender-sensitive social policies regarding teleworking should be implemented that include gender identity, sexual orientation, age and disabilities. Furthermore, performance evaluations and appraisals should not prioritize only those workers for promotions who are able to continue teleworking at full capacity,[60] since the principle of equal treatment works in two axes: (i) same treatment to those who are in the same conditions, (ii) proportionally different treatment to those who are in different conditions.

Finally, teleworking, surveillance methods under algorithmic management and employee's privacy should be reported periodically and frequently based on empiric studies, to evaluate and assess the risks and how to resolve them, and to further improve current regulations, in order to reach *de lege ferenda*. Such monitoring tools should be covered in future European legislation and/or collective bargaining at national, regional, sectoral and company level between the social partners in the states; although, the social dialogue especially in a teleworking and platform and microworking era seems to get weaker day by day.

[58] Trindade C. M., nt. (1), para. 5; ILO, nt. (49), 18.
[59] European Economic and Social Committee, nt. (51), para. 5.5-5.6; ILO, nt. (49), 19.
[60] European Economic and Social Committee, nt. (51), para. 4.7.

5

Artificial intelligence and personal data protection in the company: the role of workers' representatives

Noelia de Torres Bóveda*

1. Data protection and artificial intelligence. 1.1. Artificial intelligence and algorithms at the workplace. 1.1.1. Pre-contractual stage. 1.1.2. During the employment relationship. 1.1.3. Post-contractual stage. 1.2. Artificial intelligence and automated decision-making in the GDPR. Particularities in the field of employment. 2. The role that workers' representatives are called to play. 2.1. Rights to information, consultation and participation. 2.1.1. Transparency in automated decision-making: the right to be informed. 2.1.2. Workers' representatives' rights to information and consultation: a call for national legislation. 2.2. Collective bargaining as a fundamental institution in the digital era. 3. Work, AI and data protection: the questionable sufficiency of the current regulatory framework. 4. Concluding remarks.

1. Data protection and artificial intelligence.

We are currently witnessing a progressive increase[1] in the use of algorithmic systems in their different forms (artificial intelligence (AI), machine learning, among others) in the field of labour relations. The evolution and development of this technology has very positive effects for society, although, as the European Union (EU) itself has already pointed out, artificial intelligence poses significant risks for individuals.[2] These risks are

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[1] Unión General de Trabajadores, *Digitalización de la empresa española: desidia, retraso y sus consecuencias*, in *Servicio de estudios de la confederación*, 2nd edition, 2020, 32. However, in many European countries this type of technology is still residual. An example of this is Spain, where Unión General de Trabajadores or UGT (one of the most representative Spanish trade unions) warns of the lack of digitalisation of most Spanish companies and the need for them to adapt as quickly as possible, as companies that fail to do so "will be in serious danger of being ostracised from the competition". Especially in today's globalised economy.

[2] In particular, in the European proposal for a Regulation on Artificial Intelligence (Artificial Intelligence Act) it was determined that "aside from the many beneficial uses of artificial intelligence, that technology can also be misused and provide novel and powerful tools for manipulative, exploitative and social control practices. Such practices are particularly harmful and should be prohibited because they contradict Union values of respect for human dignity, freedom, equality, democracy and the rule of law and Union fundamental rights,

linked to fundamental rights protected by European and member State law, such as the right to equality and non-discrimination (commonly linked to 'algorithmic discrimination'), privacy, freedom of expression, health and safety and, as far as this chapter is concerned, personal data protection.

The right to the protection of personal data is recognised as a fundamental right by Article 8 of the European Convention on Human Rights and its regulation has been articulated through various rules, both binding (Convention 108 for the protection of individuals with regard to automatic processing of personal data, General Data Protection Regulation (GDPR), mainly) and non-binding (Recommendation (89)2 on the protection of personal data used for employment purposes, updated by Recommendation (2015)5, among others).

Despite all the regulations and the different mechanisms provided by the EU, data protection has been object of multiple disputes, both in case-law and literature. This controversy can be increased when we take into account other factors, for instance, when artificial intelligence is used at the workplace. If it was difficult to solve some of the conflicts that appeared before, how can we bare the new range of challenges that AI arises?

In this respect, and in order to assume this new challenge, it is necessary to give a relevant role to workers' representatives as guarantors of workers' rights in the 4.0 society context. In the present, the employer has to his or her disposal a wide range of instruments to control and manage the work performance of his or her employees. A clear example is the digital surveillance and monitorisation, but not only. Nowadays, companies can use more sophisticated systems that the workforce can barely notice, such as the named "wearables",[3] which are attached to the employee as any other complement of their clothing. The amount of information that this kind of mechanisms can achieve is immense; information that can be related just to work performance, but also to workers personal data.[4]

In this chapter we address some of the particularities of data protection in the workplace when the employer uses artificial intelligence systems to carry out automated decisions. In this context, a study is carried out on the role of workers' representatives as guarantors of workers' rights and as a limit to corporate powers in the use of this technologies, using the Spanish case as an example in some areas.

The absence of a set of labour-related provisions in the algorithmic context will make us question whether current regulation is really prepared to take on the new challenges that artificial intelligence poses to data protection and, in general, to all fundamental rights.

including the right to non-discrimination, *data protection and privacy* and the rights of the child" (fifteenth recital).

[3] European Commission, *Wearable technology*, in *Business Innovation Observatory*, case study 44, 2015, 11.
Regarding to this type of technology, the European commission warns that "as the proliferation of personal devices accelerates, data storage and data privacy will become key areas of concern. However, the current European regulatory framework may not be adequately geared to deal with the complex privacy issues that may result from these developments".

[4] *Ibidem*, 10.

1.1. Artificial intelligence and algorithms at the workplace.

Before going into the object of study, we must first take a brief look at the manifestations and implications of algorithms at work, which, as discussed below, does not only occur while the employment relationship is alive, but also when it is still to be built or when it has already been terminated. Hence, we can refer to their use in the following stages.

1.1.1. Pre-contractual stage.

The pre-employment stage is one of the phases in which most information can be collected by the company, as recruitment processes, especially in large companies, gather huge amounts of data on potential job candidates. One of the most popular technologies in this field is 'big data', as it can handle these large amounts of data and establish patterns between them.[5]

The use of data from this technology can result in the perpetuation of discriminatory situations in certain groups.[6] This may be due to the fact that the algorithm itself is originally biased by its designer,[7] that the criteria used as a reference for the search for the ideal candidate are based on historical data that maintain discriminatory patterns,[8] or that not all groups are sufficiently represented in the data sample used by the algorithm to give its answer.[9]

At this point, it is necessary to point out the concept of GIGO,[10] which, in short, means that the introduction of biased data will lead to biased results, answers or solutions, i.e. if the algorithm with which the AI operates is already poorly trained, the personnel selection it carries out will most likely be discriminatory.

1.1.2. During the employment relationship.

While the employment relationship is alive, it is possible to find multiple areas in which AI has taken on a fundamental role. A fundamental role that has its origin in the delegation by the employer of his or her own powers and prerogatives to the machine. When this management is carried out by algorithmic systems, we refer to what is known as *algorithmic*

[5] Leslie D., Burr C., Aitken M., Cowls J., Katel M., Briggs M., *Artificial intelligence, human rights, democracy, and the rule of law: a primer*, The Council of Europe, 2021, 8.
[6] Mercader Uguina J. R., *Algoritmos: personas y números en el Derecho Digital del Trabajo*", in *La Ley*, 2394, 2021, 3.
[7] De Stefano V., *Employment Working Paper No. 246. Negotiating the algorithm: automation, artificial intelligence and labour protection*", *International Labour Office.* Geneva, 2018, 9.
[8] Yang J. R., *Ensuring a future that advances equity in algorithmic employment decisions*, in *Urban Institute*, 2020, 5.
[9] European Parliament, *Resolution on artificial intelligence in a digital age*, (2020/2266(INI)), 3 May 2022, 24. [section 2 f) AI and the future of democracy, paragraph 93].
[10] The acronym stands for "garbage in, garbage out". On this concept, *see* Beltrán de Heredia Ruiz I., *La irrupción de los algoritmos en el Derecho del Trabajo*, 2022 https://ignasibeltran.com/2022/01/17/la-irrupcion-de-los-algoritmos-en-el-derecho-del-trabajo/.

management.[11] This type of management is perfectly appreciable in platform work, where it reaches its maximum expression, since among other things it was the germ of this way of managing work through the algorithm.[12]

Algorithmic management therefore encompasses three main faculties.

Firstly, the management of the work activity and the execution of the contract (*management power*). The employer, through the algorithm, is able to order and direct the tasks and functions of the worker throughout the working day, essentially through computer applications installed on mobile devices or computers. During the course of this management, the employer can access data relating to the worker, such as data relating to the work itself -for instance, their geographical location, their level of productivity, although the devices can also collect sensitive personal data, such as health data.[13]

Likewise, the employer uses the algorithm as a vehicle to evaluate and supervise the work performance of his or her employees (*surveillance power*). The problem of data protection already arises in the use of less advanced technologies, which makes us reflect on the intrusion that artificial intelligence systems can (and may) reach, with access to special categories of data (Art. 9 GDPR) such as biometric data.[14]

Finally, algorithms can be used to make decisions on sanctions (*disciplinary power*). This use of algorithmic systems can be seen in the warehousing sector where, for instance

> "Amazon relies on sophisticated algorithms to track productivity rates among its warehouse workers, logging the number of packages they pick, pack and stow each hour. If workers take a break from scanning packages for too long, Amazon's internal system will log it as "time off task" and generate a warning, which can lead to firings".[15]

Likewise, they can be used as a mechanism to facilitate the selection of workers for dismissal. This utilisation is analysed in the Spanish Supreme Court sentence of 25 September 2018, in which a collective dismissal is being judged. The company selected the

[11] *See* Wood A. J., *Algorithmic management. Consequences for work organisation and working conditions*, in *JRC Working papers series on Labour, education and technology,* Seville: European Commission, 7, 2021.
[12] Wood A. J., *ibidem*, 1.
[13] Article 29 Data Protection Working Party, *Opinion 2/2017 on data processing at work*, 2017, 18.
[14] European Data Protection Board, *Data protection issues arising in connection with the use of Artificial Intelligence*, 2022 https://edpb.europa.eu/news/national-news/2022/data-protection-issues-arising-connection-use-artificial-intelligence_en.
This piece of news from a Hungarian national case is an obvious example of the processing of sensitive personal data. It is claimed that "the data controller records all customer service phone calls. Each night, a software automatically analyses all new audio recordings. The software uses artificial intelligence to find keywords, and guesses the emotional state of the client at the time of the call […] The result of the analysis is a list of persons sorted by the likelihood of dissatisfaction, anger based on the audio recording of the customer service phone call". People who were analysed did not have the right to object as they did not received any information about the data processing the company was carrying out.
[15] Palmer A., *New York lawmakers pass bill limiting Amazon's use of worker productivity quotas in warehouses*, 2022 https://www.cnbc.com/2022/06/03/new-york-passes-bill-targeting-amazon-warehouse-productivity-quotas.html.

workers through the 'Skill Matrix system', which assessed them on the basis of their skills. In the event of a tie, it took into account whether they had family responsibilities.[16]

1.1.3. Post-contractual stage.

Once the employment relationship has ended, it is essential that the employer deletes the employee's personal data (Art. 17 GDPR), except for data that need to be stored for the processing of specific matters, such as social security benefits. In these exceptional cases, data may only be stored for the time necessary to fulfil the purpose (Art. 5(1) (e) GDPR).

As an example, we can point to the case decided by the Cyprus data protection authority,[17] where precisely the employee who terminates his employment requests the deletion of personal data that had been stored during the employment relationship. The Cyprus authority considers that the processing was appropriate and in accordance with the data protection legislation, as the storage of the data was necessary for the fulfilment of legal obligations.

1.2. Artificial intelligence and automated decision-making in the GDPR. Particularities in the field of employment.

It follows from the above that it cannot be disputed that "the fundamental right to the protection of personal data is an inseparable companion of the employment contract"[18]. Despite this and the important implications for workers' rights that it entails, the GDPR shows an absence of specific regulation in this context. Only one provision (Article 88 of the GDPR) explicitly mentions it.

Artificial intelligence, likewise, lacks specific regulation, with the difference that it is not even mentioned in any provision as the data protection regulation was conceived with the intention of having a broad scope, covering as many technologies as possible. To this is added a vocation to last over time, thanks to the adaptability of the technologically neutral configuration adopted.[19]

However, there is a provision of particular relevance for AI, namely Art. 22 GDPR, which establishes that "the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her" (Art. 22(1) GDPR). This

[16] Spanish Supreme Court ruling 861/2018 of 25 September (rec. n. 43/2018).
[17] Cyprus Office of the Commissioner for Personal Data Protection, *Result of the investigation – complaint of X against SEA CHEFS CRUISES LTD about an erasure request under the GDPR*, 2019 https://edpb.europa.eu/sites/default/files/article-60-final-decisions/publishable_cy_2019-10_right_to_erasure_decisionpublic.pdf.
[18] Preciado Domènech C. H., *El Derecho a la Protección de Datos en el Contrato de Trabajo. Adaptado al nuevo Reglamento 679/2016, de 27 de abril*, Thomson Reuters Aranzadi, Cizur, 2017, 149.
[19] Mitrou L., *Data protection, artificial intelligence and cognitive services: is the General Data Protection Regulation (GDPR) 'artificial intelligence-proof'?*, in *SSRN Electronic Journal*, 2018, 26-27.

provision, as the Article 29 Working Party has already had the opportunity to clarify, constitutes a prohibition for the controller and not a right of the data subject, which implies that it is a provision that does not need to be invoked by the data subject in order to be effective.[20]

The prohibition of Art. 22(1) GDPR is limited in the second paragraph, which provides of three exceptional cases in which automated decisions without human intervention are possible. Of the three cases, Art. 22(2) GDPR (a) and (c) are of particular interest for the field of employment, i.e. when it is necessary for the contract or when the data subject gives consent, respectively.

The first of the exceptions that allows automated processing to be carried out is based on the need to entering into or perform a contract; an exception that would be configured in principle as the 'easy way' for the employer to process the employee's data without the need to obtain his or her prior consent. Notwithstanding, this apparent easy way is undermined by the application of a restrictive interpretation of the provision based on the need to assess whether it is the least intrusive formula for achieving the objective pursued,[21] i.e. whether it is based on the principle of proportionality, such as, for example, that due to the large amounts of information available -e.g. in the platform work context, it is not possible or feasible to carry out another type of processing.

The complexity of justifying automated decision-making in the conclusion or performance of a contract leads us to turn our attention to consent as an alternative legal basis. However, again, we run into difficulties. Consent, which must be a "freely given, specific, informed and unambiguous" manifestation of the data subject's will (Art. 4(11) of the GDPR), is subject to particularities in the employment sphere, as a result of the imbalanced relationship between employer and employee (especially because of the latter's dependence on the former). This unequal position means that consent is permanently conditioned, with the employee being able to accept the processing against his or her will, for fear of suffering possible harm as a result of not accepting it. Let us imagine this situation in the pre-contract stages when the candidate longs to get the job or when, once employed, he or she fears being sanctioned or dismissed if he or she does not give his or her consent to the use of his or her data for automated decisions affecting him or her.

As a result, it is considered that, as a general rule, the worker cannot give genuinely free consent to the processing of his or her data,[22] especially when the data processing instrument is an AI, a technology with a notorious potential for intrusiveness. This 'tainted' consent is more severely restricted when it is linked to data of a special nature.[23]

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[20] Article 29 Data Protection Working Party, *Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679*, 2017, 19-20. "Interpreting Article 22 as a prohibition […] means that individuals are automatically protected from the potential effects this type of processing may have".

[21] *Ibidem*, 23.

[22] Article 29 Data Protection Working Party, *Guidelines on consent under Regulation 2016/679*, 2017, 7. In this respect, "for the majority of such data processing at work, the lawful basis cannot and should not be the consent of the employees (Art. 6(1)(a)) due to the nature of the relationship between employer and employee".

[23] *See* Article 29 Data Protection Working Party, *Opinion 2/2017 on data processing at work*, 2017, 18; specifically about workers' health data.

It would seem that at first glance the automated processing of employees' personal data for decision-making purposes will not be as accessible to the employer as it might appear. Nevertheless, artificial intelligence is not always directly linked to decision-making in the employment context. The employee who is monitored while working on the computer is not being subjected to any decision -although this could potentially exist as a consequence, but is obviously affected by this technology, since it collects data, which can be quite varied (places he or she has been, customers he or she has contacted, mood, number of breaks he or she has taken, etc.). Data that at first glance does not imply identifying the worker, but which, taken together, allow for the generation of a highly detailed profile of the worker.[24]

Finally, with regard to decisions based on automated processing, we must not forget that for the prohibition of this provision to apply, legal effects must be produced or affect the data subject in a similarly significant way.[25] In the case of processing carried out through AI it is clear, as it easily compromises workers' fundamental rights.

2. The role that workers' representatives are called to play.

The ease with which employers can access and process the employee's personal data places institutions such as workers' representatives in a crucial position as guarantors and preservers of workers' rights. This figure, legitimised by international and EU law, allows them to channel, vis-à-vis the employer, rights such as information and consultation, which are essential to ensure that information is obtained and processed legitimately. Likewise, their role as legitimate subjects of collective bargaining allows the development of these rights in a way that favours transparency and good practices in the company in terms of data protection.

2.1. Rights to information, consultation and participation.

The workers' representatives right of participation in the company and, in particular, the rights to information and consultation[26] in the technological and data protection context are crucial, as they are a full manifestation of the principle of transparency enshrined both in the GDPR and in the European proposal for an AI Regulation.

[24] This is clearly reflected in the field of social media. Social media such as Facebook or Instagram have an algorithm that allows them to identify the tastes of their users in order to provide them with specialised services and suggestions. In other words, a profile of the person is constructed that makes it possible to predict their future desires.

[25] Article 29 Data Protection Working Party, *Guidelines on Automated individual decision-making and Profiling*, 21. In the absence of a definition of "similarly significantly affects him or her", the Article 29 Working Party establishes that processing effects have relevance, with the potential to 1) affect his or her circumstances, behaviour or decisions, 2) have a lasting or permanent impact on the person concerned and 3) lead to exclusion or discrimination.
This notion includes, among others, decisions that deny or hinder people's access to employment.

[26] Rights that are recognised as fundamental by Art. 27 Charter of Fundamental Rights of the European Union (CFREU).

2.1.1. Transparency in automated decision-making: the right to be informed.

In order to address the possible involvement of employee representatives in this matter, we have to start from the regulation on information in data protection law.

The GDPR provides with regard to automated decision-making that the controller is obliged to inform the data subject about "the existence of automated decision-making, including profiling, referred to in Article 22(1) and (4) and, at least in those cases, meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject". Such a duty of information, which is generally incumbent on the employer,[27] is provided both when the data are collected from the data subject (Art. 13(2) (f) GDPR) and when they are not (Art. 14(2) (g) GDPR). The right of information that employees have under data protection law in this context is therefore strengthened, as they will no longer only be entitled to general information such as the data controller's data or the categories of personal data being processed, but will have a specific right to know about the existence of an automated decision and to be informed about the logic used to adopt it. However, the provision contains certain obscurities.

Firstly, it is stated that at least "meaningful information about the logic involved" must be provided, however, we do not have a development of what is meant by meaningful, nor what criteria or minimum content will effectively fulfil this duty to provide information. The Article 29 Working Party in its Guidelines on automated individual decision-making and profiling considers that this information will have to be sufficient for the data subject (worker) to understand the reason for the decision, which is achieved through the communication to the worker of the procedure followed by the algorithm to reach a certain result (decision). This information must therefore be such as is necessary for the employee to be in control of his or her own decisions concerning his or her data and to be able to effectively exercise his or her rights (to object in case the automated processing was based on consent - Art. 22(2) (c) -, to request human intervention, to express allegations or to contest the decision - Art. 22(3)).[28] In order to fulfil this purpose, the information should be communicated in clear and plain language (Art. 12(1) GDPR).[29]

The main problem we encounter in making this information effective is algorithmic opacity (black-box effect), because these systems can carry out complex processes that

[27] Almendros González M. A., *Nuevas tecnologías y derechos digitales laborales en la negociación colectiva*, in *Trabajo y Derecho: nueva revista de actualidad y relaciones laborales*, 83, 2021, 3. The main data controller is the employer, although there may be others, such as the employees' representatives themselves or the occupational risk prevention services, when they make use of personal data to carry out their functions.

[28] Núñez Seoane J., *El derecho de información y acceso al funcionamiento de los algoritmos que tratan datos personales*, in Huergo Lora A. (dir.), Díaz González G. M. (eds.), *La regulación de los algoritmos*, Thomson Reuters Aranzadi, Cizur, 2020, 299-315.

[29] Article 29 Data Protection Working Party, *Guidelines on transparency under Regulation 2016/679*, 2017, 8. This means that the information must be delivered in the simplest possible way. There is no point in providing the mathematical formulas or the variables that feed the algorithm if the data subject will not understand it and, as a result, will not be able to effectively defend his or her own interests and rights.

make it difficult to understand.[30] However, as the Article 29 Working Party states, the complexity of the algorithm is not an excuse for not providing this mandatory information.[31] Following "a normative view on algorithmic transparency implies that such systems may only be used if their underlying reasoning can be (adequately) explained to users",[32] which would imply that if the decision-maker is not able to know or understand the logic or functioning of the algorithm, the processing of personal data should not be carried out.

Information in respect of automated decision-making must be provided at the time the data are obtained from the employee, i.e. prior to the decision being taken (Art. 13(2) GDPR) and, if the data are not obtained directly from the employee, the rules of Art. 14(3) GDPR must be applied.[33]

The recipients of the information on the algorithm logic are the data subjects, the employees. This is because the GDPR is based on an individualistic approach based solely on the two-way data subject-responsible party relationship, which implies that in the event that the participation of any other subject not included in the provision is desired, the Member States would have to develop their own legislation. In this way, workers' representatives could be involved in this right to information, as an additional way of guaranteeing compliance with data protection obligations, when artificial intelligence (or in general, algorithm-based systems) intervene in the company. This break with the individualistic configuration effected by the GDPR has already been embraced by some voices,[34] which claim that "it would be highly beneficial if worker representatives to become involved in the exercise by individual workers of their rights under data protection", as sometimes is clearly "difficult for workers to make use of such rights on their own, not only because they are inevitably in a position of weakness when faced the computing power enjoyed by employers, but also because many workers simply do not understand the processes to their data is subjected".

[30] European Commission, *White paper on Artificial Intelligence - A European approach to excellence and trust*, (COM(2020) 65 final), 19 February 2020, 14. In this particular, it states that "enforcement authorities and affected persons might lack the means to verify how a given decision made with the involvement of AI was taken and, therefore, whether the relevant rules were respected".

[31] Article 29 Data Protection Working Party, *Guidelines on Automated individual decision-making and Profiling*, 25.

[32] Mitrou L., nt. (19), 57. In reference to Eiband M., Schneider H., Buschek D., *Normative vs Pragmatic: Two Perspectives on the Design of Explanations in Intelligent Systems*, in *ExSS'18,* 2018.

[33] This is 1) once the data have been obtained, within a maximum period of one month, 2) if they are going to be used to communicate with the data subject, this must be informed as soon as the first communication is made and 3) in the event that the data were to be communicated to another recipient, at the time they are communicated for the first time.

[34] Thibault Aranda J., *Information technology and workers' privacy: the role of worker representatives*", in *Comparative Labor Law & Policy Journal*, 23, 2002, 539.

2.1.2. Workers' representatives' rights to information and consultation: a call for national legislation.

The 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 necessary. This is not a whimsical statement, as the proposal for the AI Regulation itself recognises that artificial intelligence systems in the field of work must be qualified as high-risk systems,[35] which means that special safeguards must be provided for.

At present, however, the combination of the individual guarantee - provided by the GDPR - in conjunction with the collective one - through workers' representatives - is only possible through national legislation or collective bargaining (recital 155 and Art. 88 GDPR) as there is currently no express provision for the involvement of these subjects in the context of AI or data protection at the European level.

Spain is one of the cases where the participation of workers' representatives has been developed internally in this respect, and in a pioneering way, through the establishment of a right of information on algorithms. Thus, Art. 64(4) (d) of the Estatuto de los Trabajadores (Workers' Statute) introduced for the first time in 2021[36] the right of representatives 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".

This acknowledgement has been an important step towards algorithmic transparency in the company, although it is a provision that does not cover all the needs that these systems generate in practice. An example of this is the existence of certain grey areas, such as the failure to specify whether there is a right to receive information on the algorithms to be implemented, on those already existing in the company, or on both. We find that this right to information is conditional on affecting a specific number of subjects (working conditions, employment and profiling), not being possible to demand information when the decision affects others, and the periodicity with which information must be provided to the representatives is not stipulated, stating only that it must be provided "at appropriate intervals".

Possibly one of the biggest criticisms that can be made of this Article is the fact that it has not been accompanied by the recognition of the right of workers' representatives to be consulted by the company on algorithms[37] when their use affects workers, *inter alia*, because of the use of their personal data and their possible profiling.

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[35] *See* recital 36 and Annex III, section 4.

[36] Legislative reform introduced by Law 12/2021 of 28 September amending the revised text of the Workers' Statute Law, to guarantee the labour rights of people engaged in digital platform delivery. Access https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-15767.

[37] *See* Pérez Amorós F., *¿Quién vigila al algoritmo?: los derechos de información de los repartidores en la empresa sobre los algoritmos de las plataformas de reparto*, in *e-Revista Internacional de la Protección Social*, 6, 1, 2021. The author examines the drafting process of the provision in question. It can be seen that some previous drafts were more protective than the one that was finally enacted, since, among other things, the right to consultation was recognised.

Transparency[38] in the algorithms that feed artificial intelligence is necessary to assess their logic, functioning and possible effects on people's rights, both prior to the implementation of this technology (*ex ante*) and afterwards (*ex post*), when modifications are made. The participation of workers' representatives through information and, if foreseen, consultation rights is essential to assess that the interests of both parties are balanced and do not represent an immeasurable acquisition of power by the employer.

2.2. Collective bargaining as a fundamental institution in the digital era.

The absence of binding provisions (at supranational level) on the protection of personal data when artificial intelligence is used in the work environment, as well as the lack of collective guarantees on data protection, makes collective bargaining the most appropriate tool to fill this legislative gap. Especially through collective agreements, whether at company or sector level.

The advantages of this instrument for work regulation in the algorithm era are widely recognised,[39] as it combines the characteristics of adaptability, flexibility and convergence of interests. Adaptability, as it allows for adjustment to the specific characteristics of the company or sector and their respective needs. It is also flexible because, unlike legal regulation, it is able to adapt quickly to changes and, finally, it is consensual because the parties concerned are involved in the actual negotiation of the regulatory source, which makes it possible to reach more satisfactory and balanced agreements in terms of the parties' interests.

Workers' representatives have an essential role to play in this context, as they will have to fight for additional safeguards in the implementation of new technologies at work and in the processing of workers' personal data through them. In this sense, it will be essential to agree on a global content, i.e. quantitative and qualitative, that pays attention to issues such as job destruction and creation (quantitative), but also to substantive aspects (qualitative) linked to the impact of these developments, such as risks to privacy, health and safety or the overreach of corporate powers.[40] With this vision and with the emphasis on an approach based on the collection of personal data as a potential vehicle for the infringement of workers' fundamental rights, the following contents are proposed to be

[38] Mantelero A., *Data processing and the risks of Artificial Intelligence*, in *La Ley, Wolters Kluwer*, 2019, 3. In the words of the author "transparency may consist in a disclosure of the AI applications used, a description of their logic or access to the structure of the AI algorithms and -where applicable- to the datasets used to train the algorithms".

[39] *See* 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. R., nt. (6), 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. (dir.), *Discriminación algorítmica en el ámbito laboral*, Aranzadi Thomson Reuters, Cizur, 2022, 635-668; Wood A. J., nt. (11), 14; UNI Global Union, *Top 10 principles for workers' data privacy and protection*, 2017:
http://www.thefutureworldofwork.org/media/35421/uni_workers_data_protection.pdf .

[40] Garrigues Giménez A., nt. (39).

addressed by collective bargaining. Content that puts the role of workers' representatives at the centre.

a. Establishment or development of workers' representatives information and consultation rights in the field of algorithms. These are rights with a long tradition in the field of employment, of a fundamental nature (Art. 27 Charter of Fundamental Rights of the European Union), which are not, however, specifically recognised in the field of algorithms and new technologies, unless provided for in the legislation of each State. Collective bargaining makes possible to fill this gap and to recognise or develop, as appropriate, these rights.
b. Provide for the possibility for employees to be assisted by their representatives when making decisions regarding their personal data[41]. This is of particular relevance when such processing is based on consent since, as has been analysed, it is a conditional consent.
c. Involvement of workers' representatives in the procedures for implementing and modifying algorithmic systems, especially when they are a source of IA.
d. Involvement of representatives in the risk assessment of Art. 35 GDPR, with the right to receive a report with the results, in clear and plain language.
e. Implementation of training actions on new technologies, both for workers and representatives, so that they can understand and exercise their rights in a qualified manner.
f. Establishment of internal protocols or rules on personal data protection. For example, it has been noted that collective bargaining should regulate "the amount of data that is collected on the job performance and personal characteristics of employees, as well as the manner in which such data is collected".[42]
g. Special attention to groups that are particularly vulnerable to this type of technology,[43] such as teleworkers or platform workers (if they are employees).
h. Establishment of an internal complaints channel at the service of workers.

Making provisions for worker participation will encourage the application of the 'human-in-command'[44] approach, which aims to put people at the centre, keeping machines in control and preventing them from overreaching[45] (in decision-making or monitoring of work activity).

[41] This possibility was already foreseen in the Recommendation (2015) 5 on the processing of personal data in the context of employment, principle 11.8.
[42] Garrigues Giménez A., nt. (39).
[43] Jolly C., *Collective action and bargaining in the digital era*, in Neufeind M., O'Reilly J., Ranft F. (eds.), *Work in the digital age: challenges of the Fourth Industrial Revolution*, Rowman & Littlefield, London, 2018.
[44] European Economic and Social Committee, *Opinion INT/806 on Artificial intelligence - The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society'*, 2017, 2.
[45] Coelho Moreira T., *Algorithms, discrimination and collective bargaining*, in Miranda Boto J. M., Brameshuber E. (eds.), *Collective Bargaining and the Gig Economy. A Traditional Tool for New Business Models*, Bloomsbury Publishing, London, 2022, 164. In this regard, "in the collective agreements, principles that minimise the new risks associated with the autonomous behaviour of AI, establishing requirements to ensure the protection of privacy and personal data, equality and non-discrimination, ethics, transparency and the explicability of systems based on algorithms".

Little by little, we can begin to observe manifestations of collective bargaining regulating these aspects. In Spain, for example, provisions on algorithms and artificial intelligence are still very scarce,[46] although there are already some examples, such as the XXIV Collective Bargaining Agreement for the banking sector,[47] which in its Art. 80(5) recognises a 'right to artificial intelligence'. This precept declares the need to carry out a careful implementation of AI within the company and recognises the right of workers not to be subject to decisions based solely on automated variables -except in exceptional cases provided by law-, as well as the right to non-discrimination based on algorithms. Of particular interest is the express recognition of a right to information for workers' representatives on algorithms, "on the use of data analytics or artificial intelligence systems when human resources and labour relations decision-making processes are based exclusively on digital models without human intervention. Such information shall, at a minimum, cover the data feeding the algorithms, the operating logic and the evaluation of the results".

Agreed regulation enables swift action in the face of possible changes, in contrast to legal regulation which tends to act after the need or phenomenon has arisen. It is therefore not surprising that Art. 88 GDPR allows for regulation by agreement, since, as already noted, this provision "defines collective agreements as important sources for ensuring fair and lawful data processing in the context of employment".[48]

3. Work, AI and data protection: the questionable sufficiency of the current regulatory framework.

Following this paper, a number of shortcomings in the existing regulation have become evident. In particular, the GDPR has some limitations when the vehicle for data processing is artificial intelligence. Proof of this is its capacity to process massive amounts of data, which poses a problem when it comes to establishing a lawful legal basis for its processing, such as consent, since the subjects affected by the processing can be practically indeterminable.

Moreover, Artificial intelligence raises questions about the very principles governing the regulation of personal data protection. For example, it becomes difficult to maintain the purpose on which the data processing was based, as the purpose of the processing may change due to the functioning of such sophisticated technologies (artificial intelligence, machine learning).[49] This situation would mean that if the processing is based on consent,

[46] Almendros González M. A., nt. (27), 2. The "incorporation of these new contents into collective bargaining has been very poor and insufficient".
[47] Ref. BOE 30 March 2021. In the same sense as this agreement, *see* Art. 35(5) of the Collective agreement for credit financial institutions 2021 (ref. BOE 15 October 2021).
[48] De Stefano V., Taes S., *Algorithmic management and collective bargaining*, in *Foresight Brief - ETUI*, *The European Trade Union Institute*, 2021, 9.
[49] Mitrou L., nt. (19), 39. In reference to Mantelero A., *The future of consumer data protection in the EU. Re-thinking the 'notice and consent' paradigm in the new era of predictive analytics*, in *Computer Law and Security Review*, 30, 2014, 643-660.

the controller - in this case the employer - would have to seek consent from each employee/applicant whose data would be processed on an ongoing and probably inoperable basis in practice.

Finally, another example of the limited scope of the GDPR is that even when data is protected under anonymisation, it is still at risk. The European Parliament is clear on this point, stating that:

> While all privacy preservation techniques enhance data protection and privacy, their effectiveness has been repeatedly questioned. They may become even less effective in the future with the development of AI and further data analytics. None of the anonymisation techniques guarantees full and complete protection of anonymity, especially in the big data context, because 'human traces are unique'. Experts recommend using a combination of techniques to render personal data truly anonymous. However, de-anonymisation (re-identification) is possible even then as many experiments have demonstrated. Due to possible de-anonymisation, any data could potentially become personal data, which would render the scope of application of the GDPR too broad and all-encompassing.[50]

Personal data protection regulation and its effectiveness is, therefore, challenged by artificial intelligence systems and their scope.

In addition to the limitations of existing regulation with respect to the potential general implications of AI, we have another important weakness, which is that we lack specific provisions needed in the area of labour. As the International Labour Organisation has already pointed out, "as data protection laws are generally not designed for, although applicable to, the employment context, the creation of more specific and adapted rules or principles may be envisaged or desirable".[51] At present, there is only one provision (Art. 88 GDPR) which, in fact, does not regulate *strictu sensu*, as it delegates to the States and to their legal regulations or collective agreements, in case they decide to regulate in this way.

This means, in addition to a lack of minimum protection, that each state will have different levels of protection in the working environment.

The new proposed AI Regulation (AI Act) makes it clear that AI systems implemented in the workplace are of high risk, however, like the GDPR, it does not pay specific attention to specific sectors, but establishes a general regulation for all of them as a whole, in this case, depending on the level of risk. Apart from this feature, this regulation has been criticised as "far from being sufficient to protect workers adequately"[52] since, among other things, the assessment procedure for high-risk systems that is articulated is based solely on the system provider,[53] i.e., "not subject to any form of social dialogue at the EU level".[54]

[50] European Parliament, *European Union data challenge*, 202. Briefing requested by the Special Committee on Artificial Intelligence in a Digital Age (AIDA).
[51] Hendrickx F., *Protection of workers' personal data: general principles*, in *ILO Working Papers*, 62, 2022, 40.
[52] De Stefano V., Taes S., nt. (48), 11.
[53] Ponce del Castillo A., *The AI Regulation: entering an AI regulatory winter?*, in *ETUI Policy Brief*, 2021, 5. "High-risk uses are allowed as long as the provider, based on self-assessment, is able to tick the boxes on what is a largely procedural checklist".

This issue has in turn raised the question that in the absence of any provision for the intervention of the social partners, national legislators with more protective regulations could be damaged by this new regulation.[55]

Other shortcomings have also been detected, such as the lack of specialised training for the person entrusted with the control and operation of artificial intelligence.[56]

Some authors argue for the need to create a specific law to regulate the artificial intelligence impact at work, in the form of a European Directive. It is suggested that such a Directive should incorporate in its content 1) AI risks and employers' responsibilities, 2) rules in the matter of privacy and data protection, 3) explainability, 4) human-in-command by trade unions and 5) algorithmic worker surveillance provisions.[57] It seems that the idea of a specific regulation in this sense would be pertinent, indeed necessary, as workers are in a particularly vulnerable position with respect to the employer and his or her prerogatives of control and direction, now also at the mercy of another boss, the algorithm.[58]

However, in the event that future European legislation on this issue is envisaged, it should take the form of a regulation rather than a directive, as the European Parliament's recent resolution on artificial intelligence in a digital age[59] "calls on the Commission to only propose legislative acts in the form of regulations for new digital laws in areas such as AI, as the digital single market needs to undergo a process of genuine harmonisation".

4. Concluding remarks.

The use of artificial intelligence and algorithms in the workplace is already a reality.

The employer, through the collection and processing of massive amounts of employee data, is able to direct and control even the smallest detail of the employment relationship, from its birth to its termination. In this context, the ability of workers to enforce their decisions about their data in the employment relationship is limited, as they maintain a bond of dependency that even exists prior to employment. This is why the involvement of workers' representatives is essential.

Employees' representatives stand as an institution that breaks the individualistic approach of data protection law, allowing employees to be supported in their decision-making, to comply with data protection obligations and to obtain or develop employment rights through collective bargaining. Moreover, the involvement of employee representatives is not only in the interest of employees, but also in the interest of the employer itself, as they are, for example, proof that it is complying with its obligations by processing data lawfully (Art. 5(2) GDPR, on accountability).

[54] De Stefano V., Taes S., nt. (48).
[55] De Stefano V., Taes S., nt. (48). As the authors pointed out, this potential Regulation "risks functioning as a 'ceiling', rather than a 'floor' for labour protection".
[56] Garrigues Giménez A., nt. (39), 635-668.
[57] Ponce del Castillo A., nt. (53), 7-8.
[58] *See* Adams-Prassl J., *What if your boss was an algorithm?. Economic incentives, legal challenges, and the rise of artificial intelligence at work*, in *Comparative Labor Law & Policy Journal*, 41, 1, 2019.
[59] European Parliament, *Resolution on artificial intelligence in a digital age*, (2020/2266(INI)), 3 May 2022, 29.

We know that reconciling the right to data protection with artificial intelligence is a major challenge, as we are dealing with two opposing areas. While the GDPR seeks data minimisation, AI needs data maximisation in order to function, while the GDPR needs transparency, AI is characterised by opacity.

However, this does not detract from the need to regulate - quite the contrary.

Workers' representatives, collective rights and, in general, the labour sphere are the great forgotten ones in the regulation of data protection and AI. The absence of provisions on artificial intelligence and its impact on the labour sphere must be addressed. A single provision in the GDPR that redirects this responsibility to the States is not enough; a common framework of guarantees is required.

As the European Commission has already acknowledged, "future challenges lie ahead in clarifying how to apply the proven principles to specific technologies such as artificial intelligence, blockchain, Internet of Things or facial recognition which require a monitoring on a continuous basis".[60] But it is no longer the future, it is the present.

[60] European Commission, *Communication from the Commission to the European Parliament and the Council. Data protection as a pillar of citizens' empowerment and the EU's approach to the digital transition - two years of application of the General Data Protection Regulation*, (COM/2020/264 final), 24 June 2020, 10.

6

Platform workers' earning capacity. A set of key variables.

Luigi Di Cataldo* - Marta Basile+

1. Introducing the issue. 2. Literature review and existing gaps. 3. A set of key variables. 3.1. Remuneration system. 3.2. Potential benefits. 3.3. Job opportunities assignment system. 3.4. Labour fragmentation. 3.5. Participation costs. 4. Some conclusive considerations. 5. Next research line.

1. Introducing the issue.

The arrival of digital platforms and social relations intermediation through digital infrastructures constitute a structural change in society, economy, and labour markets.[1] However, the ongoing process outcomes are still uncertain and contradictory; from one side, new opportunities are emerging for the socio-economic empowerment of people, on the other one, new spaces are opening for the «marginal workforce» exploitation present in the system,[2] that is those categories of individuals which are located on the margins of the labour market: immigrants, young people, those over the 50s, people with low levels of education, etc.

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[1] Eurofound, *The digital age: Implications of automation, digitalization and platforms for work and employment. Challenges and prospects in the EU series,* Publications Office of the European Union, Luxembourg, 2021.

[2] Firinu A., Maestripieri L., *No-siders: uno studio sul lavoro marginale in Italia*, in Croce C., Prevete R., Zucca A. (eds.), *Porte girevoli. Contributi di ricerca e buone pratiche sul lavoro marginale e le nuove vulnerabilità sociali*, Fondazione Giangiacomo Feltrinelli, Milano, 2019. *See* also Scholz T., *Digital labor: The Internet as playground and factory*, Routledge, London, 2012.

The scientific literature of the sociological area has highlighted the unequal distribution of material opportunities coming from the platform economy among social groups, explaining that the positioning of people in digital labour markets continues to occur with individual socio-economic dispositions as indeed happens in the physical world and the traditional economy.[3] Those who possess large endowments of economic capital or human capital will be able to operate through platforms such as Airbnb, Booking, Superprof, OnlyFans, YouTube, etc., and to produce income outside of a hierarchical relationship of over-ordering and under-ordering.[4] Otherwise, those who are affected by «forms of capital» poverty[5] will only be able to move on behalf of labour-intensive platforms, such as those of food delivery, putting their time and energy at the disposal of others. The people included in the latter group continue to represent the weak part of a hierarchical relationship characterized by a marked structural asymmetry, yet the economic and regulatory treatment reserved for them is significantly lower than for workers employed in the traditional economy.

Compared to the latter set of work contexts and subjects, the inadequacy of the legal framework is evident both on the hermeneutic side,[6] just as on the controlled one.[7] For these reasons, concerning the countries of the north of the world, the international literature has defined the platformation of employment relations as a «process of neo-commodification» [8] which confines people to a state of legal under-protection and economic poverty.

The INAPP-plus investigation, held in the period March-July 2021, notes the quick work on digital platforms rising in the Italian context and a significant consolidation of the interest that people have for these forms of work.[9] Furthermore, the effect of the SARS-CoV-2 pandemic and the containment measures arranged to stem the spread of the virus have

[3] Gil Garcia J., *Inequalities, limits and possibilities for the transformation of capital in the sharing economy,* in *Redes Com-Revista de Estudios para el Desarrollo Social de la Comunicación*, 15, 2017, 32-67; Schor J. B., *The Platform Economy. Consequences for labour, inequality and the environment*, in Neufeind M., O'Reilly J., Ranft F. (eds.), *Work in the digital age: challenges of the fourth industrial revolution Identifying the challenges for work in the digital age*, Rowman & Littlefield Publishing Group, Lanham, 2018.

[4] On this point, *see* Gil Garcia J., nt. (3), 42 ff.

[5] Bourdieu P., *Sul concetto di campo in sociologia*, in Cerulo M. (ed.), *Classici di Sociologia*, Armando editore, Roma, 2010.

[6] It is proof of that from the *vexata quaestio* widespread on a global scale. For an exhaustive review, even if now dated, *see* Pacella G., *Il lavoro tramite piattaforma digitale nella giurisprudenza dei paesi di civil law*, in *Labour & Law Issues*, 5, 1, 2019, 15-42.

[7] Regarding the impact of the digital intermediation of employment relationships on the legal system, *see, ex multis,* Treu T., *Rimedi, tutele e fattispecie riflessioni a partire dai lavori della gig economy*, in *Lavoro e Diritto*, 3, 4, 2017, 367-405; Papa V., *Post-industriale o pre-moderno? Economia digitale e lavoratori on-demand: nuovi paradigmi organizzativi e vecchie esigenze di tutela*, in *Diritto delle Relazioni Industriali*, 3, 2018; Weiss M., *La platform economy e le principali sfide per il diritto del lavoro*, in *Diritto delle Relazioni Industriali*, 3, 2018.

[8] Marčeta P., *Platform capitalism – towards the neo-commodification of labour?*, in Haidar J., Keune M. (eds.), *Work and Labour Relations in Global Platform Capitalism*, Edward Elgar, Cheltenham, 2021; De Stefano V., *Lavoro "su piattaforma" e lavoro non-standard in prospettiva internazionale e comparata*, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 2, 2017.

[9] The survey notes a significant increase in those who have qualified this income from work as "essential" or "important", going from 49% in 2018 to 80% in 2021. People's interest in these forms of work always becomes more widespread, consistent, and stable. There are more and more people who dedicate themselves to these activities, the economic needs that people intend to satisfy through these activities become more and more consistent and, finally, the periods in which people dedicate themselves tend to lengthen, exclusively or secondary, to the platform work.

drastically redistributed the job offer between the traditional economy and the digital economy and accentuated the monopsony conformation of the labour market of labour-intensive digital platforms.[10] Therefore, it seems urgent to deepen knowledge of the *real* economic profile[11] of these forms of work and identify the factors that underlie the economic devaluation of work and the widespread economic dependence among platform workers.

In recent decades, the expansion of the area of self-employment and the socio-economic fragility within it have led to a shift in the focus of scientific research on the phenomenon of in-work poverty beyond the traditional boundaries of standard work, also involving the context (legal, economic and social) of the platform work intensive mainly composed of economically dependent self-employed workers and false self-employed workers, generally fragile, under-paid and paid in relation to the tasks performed.[12] Despite the concept of working poor and the in-work poverty rate[13] index is effectively inclusive of contextual factors exceeding the working and individual dimensions, the contractual framework and the economic treatment of workers can strengthen or, vice versa, dilute the socio-economic vulnerability of the individual and of the nucleus in which he is inserted.[14] The main causes of individual working poverty are the low level of remunerations and the reduced employment intensity, both in terms of hours worked and in terms of months of employment.

This contribution aims to provide some conceptual elements to assess the impact of the platform model on the economic profile of the quality of work,[15] the purpose is to identify those variables that play a key role in determining the earning capacity of platform workers, *ergo* a possible situation of poverty despite work. The reconstruction carried out here highlights the complex, mixed, and multidimensional nature of the economic profile of employment relationships through digital infrastructures. Moreover, some reasons for the widespread economic dependence among platform workers are also indirectly highlighted.

[10] A monopsonistic conformation of the labour market occurs in a situation in which the job offer is concentrated towards a small number of companies and significantly increases the contractual asymmetry between the latter and the workers, generating repercussions on the working conditions of individuals, which are more evident in low-skilled production sectors and in negative macroeconomic situations in conjunction with which people's need for work tends to deepen. *See* § 3.1..

[11] Regarding quantities such as income, production and price, the adjective real is used as opposed to nominal measures in monetary terms, which provide a partial and, therefore, inaccurate representation of economic quantities. We use the adjective "real" to oppose it to the conception of the economic profile of working conditions limited to the amount of remuneration and instead assume a holistic perspective, also considering dimensions that are not purely economic but still incisive for workers' earning capacity.

[12] With respect to the topic check: Papa V., *The New Working (Poor) Class. Self-Employment and In-Work Poverty in the EU: a Supranational Regulatory Strategy*, in *Italian Labour Law e-Journal*, 14, 2, 2021; Papa V., *Working (&) Poor. Dualizzazione del mercato e lavoro autonomo povero nell'UE*, in *Rivista di Diritto della Sicurezza Sociale*, 1, 2021, 49 ff.

[13] Peña-Casas R., Ghailani D., Spasova S. and Vanhercke B., *In-work poverty in Europe. A study of national policies*, European Social Policy Network (ESPN), European Commission, Brussels, 2019.

[14] Carinci M. T., *I lavoratori delle piattaforme quali working poors*, in *Labour*, 6, 2021, 627-636.

[15] With respect to the topic discussed, *see* the contribution of Arcidiacono D., Pais I., Piccitto G., *La qualità del lavoro nella platform economy: da diritto a servizio*, in *Politiche Sociali*, 1, 2021. In this publication, the authors use the index developed by the international community to assess the quality of work in the context of an interpretative research design based on qualitative survey methodologies. The index in question makes up the OECD Job Quality Framework. Also check Cazes S., Hijzen A. and Saint-Martin A., *Measuring and Assessing Job Quality: The OECD Job Quality Framework*, in *OECD Social, Employment and Migration Working Papers*, OECD Publishing, Paris, 174, 2015.

This article opens with a literature review on the economic dimension of platform work aimed at identifying the gaps we intend to address. Some essential methodological notes are set out to understand the extraction process of our variables and the continuity of this exercise with the existing literature. Therefore, we are presenting the identified variables and some guidelines that could be potentially useful for future research on the topic.

2. Literature review and existing gaps.

The global scientific community has produced copious literature on platform work. Each disciplinary field has put in place its theoretical background, the conceptual categories of reference, as well as its analytical approaches and related research techniques. Great attention was paid to the economic profile of working conditions.

This paragraph collects an unsystematic review of the specialist literature on the subject and takes into consideration the scientific publications that mainly refer to two disciplinary fields that have sought, more than others, dialogue and mutual contamination: labour law and labour sociology. This review provides an overview of the debate on the topic and describes the continuity of the exercise conducted here concerning the existing literature.

The first aspect highlighted by the literature concerns the extreme heterogeneity that distinguishes the platform work phenomenon, also about the economic profile of working conditions and between different production areas,[16] both within the same area.[17] Some contributions found a substantial variety in the mechanisms for determining workers' rates which in some contexts are unilaterally stable by the platform[18], while in other cases the workers maintain a certain margin of discretion.[19] Others have studied the relationship between paid and unpaid work in the deregulated markets of the platform economy and have explained that these two opposing dimensions are along a line of continuity.[20] Various scholars have found a different diffusion of the supplemental earner and the dependent earner between typologies of platform work,[21] others have highlighted the role of supplemental earners in the entrepreneurial strategies of platforms that can act as free

[16] Arcidiacono D., Pais I., Piccitto G., nt. (15).
[17] Di Cataldo L., *Il mercato del food delivery nella città di Catania. Un caso di studio interdisciplinare: dalla composizione della categoria al rapporto di lavoro*, in *Professionalità studi*, 1, 2021, 86 ff.
[18] This happens in ride hailing app. and food delivery. *See*: Rosenblat A., *Uberland: How Algorithms are Rewriting the Rules of Work*, University of California Press, Berkeley, 2018; Ivanova M., Bronowicka J., Kocher E., Degner A., *The App as a Boss? Control and Autonomy in Application-Based Management*, in *Arbeit | Grenze | Fluss - Work in Progress interdisziplinärer Arbeitsforschung*, Frankfurt (Oder): Viadrina, 2, 2018; Di Cataldo L., nt. (17).
[19] Kuhn M. K., Maleki A., *Micro-entrepreneurs, Dependent Contractors, and Instaserfs: Understanding Online Labour Platform Workforces*, in *Academy of Management Perspectives*, 31, 3, 2017.
[20] Pulignano V. *Work in deregulated labour markets: a research agenda for precariousness*, in *ETUI Research Paper-Working Paper*, 3, 2019.
[21] Huws U., Spencer N., Syrdal D. S., Holts K., *Work in the European gig economy: Research results from the UK, Sweden, Germany, Austria, the Netherlands, Switzerland and Italy*, FEPS in cooperation with UNI Europa and the University of Hertfordshire, 2017, available at https://uhra.herts.ac.uk/bitstream/handle/2299/19922/Huws_U._Spencer_N.H._Syrdal_D.S._Holt_K._2017_.pdf ; Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. S., *Digital labour platforms and the future of work. Towards Decent Work in the Online World*, International Labour Office, Geneva, 2018; Drahokoupil J., Piasna A., *Work in the Platform Economy: Beyond Lower Transaction Costs*, in *Intereconomics*, 52, 2017, 335-340.

riders.[22] Some studies, even if by now dated, have found modest levels of platform workers' remuneration.[23] Still, others have found and explained a progressive lowering of the compensations after a first phase in which the platforms, rich in venture capital, have offered excellent economic working conditions to gain market share and to win the monopoly race as if it were a lightning war[24]. Moreover, the contributions that have evidenced the volatility and uncertainty of the pricing schemes[25] and that have been associated it with the opacity of algorithmic-reputational processes[26] are important. Moreover, the proliferation of piecework pays systems[27] has been a subject of great attention. Some have especially associated this process with the computing capacity of new technologies.[28] Some have analysed work poverty in platform economy from a legal perspective focused on the single employment relationship[29], instead others have shifted the focus to the macro level[30]. Recently, in light of the reform carried out by Just Eat on its business model in Italy, has emerged the problem of hourly labour fragmentation.[31] Moreover, the need to introduce a minimum wage has been widely supported[32] and has also highlighted the obstacles that the application to the platform work may encounter.[33]

To conclude it is interesting to take into consideration the theoretical proposal of Gil Garcia J.[34] to explain the unequal distribution of material opportunities deriving from the platform economy among social groups. According to this author, the platform economy is made up of variously convenient areas for the people. The possibility to access these areas depends on the individual socio-economic characteristics and, therefore, on the forms of capital available to each one. Taking up Bourdieu's forms of capital model, Gil Garcia explains that the conversion of a certain form of capital into income involves transformation costs. Those who carry out a capital-intensive platform activity will have to incur considerably lower transformation costs in comparison with those who carry out a platform

[22] Schor J., *After the Gig: How the Sharing Economy Got Hijacked and How to Win It Back*, University of California Press, San Francisco, 2020.
[23] Fabo B., Karanovic J., Dukova K., *In search of an adequate European policy response to the platform economy*, in *Transfer: European Review of Labour and Research*, 23, 2, 2017, 163-175, https://doi.org/10.1177/1024258916688861; Berg J., Furrer M., Harmon E., Rani U., Six Silberman M., *Digital labour platforms and the future of work: Towards decent work in the online world*, International Labour Office, Geneva, 2018.
[24] van Doorn N., Chen Y. J., *Odds stacked against workers: datafied gamification on Chinese and American food delivery platforms*, in *Socio-Economic Review*, 19, 4, 2021, 1354 ff.
[25] *Ibidem*, 1324 and 1351-1352. *See* also Dow Schüll N., *Addiction by Design: Machine Gambling in Las Vegas*, Princeton University Press, Princeton, 2012.
[26] Rosenblat A., Stark L., *Algorithmic Labour and Information Asymmetries: A Case Study of Uber's Drivers*, in *International Journal of Communication*, 10, 2016, 3766.
[27] Pesole A., Urzí M.C., Brancati E., Fernández Macías F., Biagi F., González Vázquez I., *Platform Workers in Europe Evidence from the COLLEEM Survey*, EU Commission – JRC Science for Policy Report, Bruxelles, 2018.
[28] Alkhatib A., Bernstein M. S., Levi M., *Examining Crowd Work and Gig Work Through The Historical Lens of Piecework*, in *Proceedings of the 2017 CHI conference on human factors in computing systems,* 2017, 4599-4616.
[29] Carinci M. T., nt. (14).
[30] Bano F., *Quando lo sfruttamento è smart*, in *Lavoro e Diritto*, 2, 2021, 303-319.
[31] Carinci M. T., nt. (14).
[32] OECD, *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, 2019; Lane M., *Regulating platform work in the digital age*, in *Going Digital Toolkit Policy Note*, 1, 2020, available at https://goingdigital.oecd.org/toolkitnotes/regulating-platform-work-in-the-digital-age.pdf.
[33] OECD, nt. (32); Piglialarmi G., *Il nodo (giuridico) del sistema di determinazione del compenso nell'accordo Assodelivery-UGL Rider*, in *Professionalità studi*, 1, 2021, 166-174.
[34] Gil Garcia J., nt. (3).

activity with a high intensity of human capital. In the same way, the latter will have to support lower costs of available capital transformation into income compared with those carrying out a labour-intensive activity. This situation will entail a worker's self-denial in terms of time and energy.[35] In addition, as mentioned in the introductory part of this paper, people employed in labour-intensive platforms pay a lower economic and regulatory treatment than those who work in the traditional sectors of the production system. Gil Garcia accurately describes this dynamic and the varying convenience of the production segments into which this new economy is divided using four variables: (i) *accessibility* indicates the ability to access the different areas of the platform economy, classified by the author as capital-intensive, human-capital-intensive and labour-intensive; (ii) *potential benefits* indicate those forms of capital that can be acquired by people through a particular work carried out on the platform and used to improve their performance in the market; (iii) *profitability* indicates the profitability of these segments, therefore the possibility of producing economic resources; (iv) *participation costs* indicate the time, economic costs, energy and risks required to generate a certain income by operating in the different segments.

From the survey of the literature exposed here, in our opinion emerges a significant void. Despite the amount of analysis on the economic dimension of work on digital platforms, it seems that the variables that play a key role in determining the platform workers' earning capacity have not yet been identified; much less have these variables been included within a theoretical framework useful for comparative studies, as well as the inter- and transdisciplinary analysis, regarding the economic profile of working conditions in the platform economy.

This article aims to provide a preliminary contribution to address this gap and to stimulate research on the subject starting from the variables that will be identified in these pages.

3. A set of key variables.

The five variables presented in this study were identified through an unsystematic review of the literature of the sociological and legal area concerning the real economic profile of the working conditions in platform work.

Looking at this existing literature, we asked ourselves these questions: what do we know about the economic profile of working conditions? What factors influence the earning capacity of workers? Can we further systematize the evidence that has emerged from the debate in recent years? Can we identify a complex of variables that play a key role in platform workers' earning capacity?

Although the economic profile of the working conditions of platform workers is extremely heterogeneous, the study of the literature shows the existence of a set of mutually connected variables that are crucial for the earning capacity of any sub-category of platform workers. These variables, therefore, combine any form of work carried out on digital

[35] *Ibidem*. On the process of converting forms of capital, *see* also Bourdieu (2015 [1986]). Forme di Capitale. In Santoro (a cura di). Armando editore, Roma, 111 ff.

platforms regardless of the nature – capital-intensive, human-capital-intensive or labour-intensive - of the activity carried out.

The key variables for the earning capacity of platform workers identified in this study are five: (i) Remuneration system; (ii) Potential benefits; (iii) Job opportunities assignment system; (iv) Labour fragmentation; (v) Participation costs.

These variables can be defined in three different ways in relation to the connotation of the relationship between the platform and the worker. The process can be subjected to the unilateral control of the platform or the worker according to their respective economic interests, or it can occur by consensus.

Any unilateral control by the "central actor"[36] who governs the digital infrastructure establishes the rules of the game and the criterion for organizing the workforce [37] manifests the asymmetry of power between the platform and the worker concerning the economic profile of the working conditions and allows the former to maximize the value captured on the overall value created with the exchanges that took place within the platform's digital ecosystem. Conversely, any unilateral control of the worker on the economic profile of his activity indicates the existence of an effective margin of organizational autonomy, at least about the profile considered. As an alternative to these two opposing hypotheses, the economic profile of the activity carried out by the platform worker could be defined in a consensual way between the parties to reconcile their specific needs. However, the variables considered can be determined, in part, unilaterally and, in another part, by consensus. It will be seen that the variables considered also undergo conditioning that develops at the macro level, such as the conformation that the labour market can assume and the macro-economic situation.

Regardless of the hetero-determined character of the central actor, self-determined by the worker or a hybrid that the process through which these variables are defined can take on, the earning capacity of the platform workers can be explained, conceptualized, and strengthened starting from the variables identified here and their mutual connections.

The individual variables will be illustrated in the following sub-paragraphs with a level of abstraction such as to preserve the consistency of the discussion concerning the many concrete cases of platform work in circulation.

3.1. Remuneration system.

The first of the key variables identified in this study about the economic profile of working conditions is the *remuneration system*. It is a mixed variable, which includes within it: (a) the

[36] From now on the substantival term "central actor" will be used without further clarification. On this point, *check* Laczko P., Hullova D., Needham A., Rossiter A-M., Battisti M., *The role of a central actor in increasing platform stickiness and stakeholder profitability: Bridging the gap between value creation and value capture in the sharing economy*, in *Industrial Marketing Management*, 76, 2019, 214–230.

[37] *Consult*: Ivanova M., Bronowicka J., Kocher E., Degner A., nt. (18); Griesbach K., Reich A., Elliott-Negri L., Mikman R., *Algorithmic Control in Platform Food Delivery Work*, in *Socius: Sociological Research for a Dynamic World*, 5, 2019, 1–15.

criterion adopted for measuring the work and its consideration; (b) the amount of the remuneration; (c) the frequency with which the financial transfers by the platform take place.

The remuneration system is a crucial variable for the earning capacity of any platform worker and of any worker in general. The workers give particular importance to the three aspects that make up our variable, considering them when they choose the platform in which to operate.[38]

The work and its consideration can be measured using three macro-criterion: the time spent in the workplace, the performance of the work activity or the availability of the entrepreneur; the achievement of certain objectives that can be established with different forms and methods, for example with achievement thresholds or concerning a specific objective achievement, such as the realization of a project, the stipulation of a contract, the completion of a task, etc.; the number of tasks performed or the time spent in the material execution of the same.

The production paradigms[39] alternating in the course of the capitalist dynamic – mercantilism or pre-Fordism,[40] Fordism, Toyotism, Platformism - corresponds to a certain diffusion of the multiple criteria that can be adopted to measure work and its consideration, which changes in relation to the changes induced by technological innovation in terms of the spatial and temporal dimension of the work activity, as well as on the complexity and the breakdown of work performance, but it also changes in relation to the political weight assumed by the working class, the rights acquired and the ability these rights have to resist socio-technical transformations, which modify the interaction between technical elements (e.g. hardware, software, work equipment, work environments) and social elements (e.g. people, groups, practices, culture, etc.).[41]

The historical determination of labour law, fully developed during the twentieth century, manifests itself in having learned to conceive time as the main criterion for measuring work performance. However, the massive presence of digital technologies in the world of work and the "platform model" affirmation[42] push the progressive overcoming of the traditional space-time references of working activity and the corresponding marginalization of the classic time parameter.[43] The diffusion of the various forms of remote work that took place

38 Di Cataldo L., nt. (17).

39 Arcidiacono D., Borghi P., Ciarini A., *Platform work: from digital promises to labour challenges*, in *PACO - Partecipazione e Conflitto*, 12, 3, 2019, 611-628.

40 It stands historically between the decline of the feudal system and the advent of the first industrial revolution. It is a form of organisation of simple production, which finds its basic nucleus in the artisan or domestic workshop.

41 Regarding the concepts of sociomateriality and socio-technical system, the contribution of Leonardi, P. M., *Materiality, Sociomateriality, and Socio-Technical Systems: What Do These Terms Mean? How Are They Related? Do We Need Them?*, in Leonardi P.M., Nardi B. A., Kallinikos J. (eds.), *Materiality and Organizing: Social Interaction in a Technological World*, Oxford University Press, Oxford, 2012, 25-48. For the remuneration issue, *see* Alkhatib A., Bernstein M. S., Levi M., *Examining Crowd Work and Gig Work Through The Historical Lens of Piecework*, in *Proceedings of the 2017 CHI conference on human factors in computing systems,* 2017, 4599-4616.

42 Arcidiacono D., *Gli ambigui sentieri del platform work: tra marginalizzazione e nuovi paradigmi produttivi*, in Croce C., Prevete R., Zucca A. (eds.), *Porte Girevoli. Lavoro marginale e nuove vulnerabilità*, Fondazione Feltrinelli, Milano, 2019.

43 Fenoglio A., *Il tempo di lavoro nella New Automation Age: Un quadro in trasformazione*, in *Rivista Italiana di Diritto del Lavoro*, 1, 2018, 625-650; Martelloni F., *Metamorfosi del lavoro e polisemia del tempo: riconoscerlo, proteggerlo, remunerarlo*, in *Legal archive "Filippo Serafini": CLI*, 2, 2019, 249-266.

in the context of the third and fourth industrial revolutions – such as teleworking, the case in point of the quick mode of execution of work performance, platform work, etc. - involves the diffusion of organizational and remuneration practices based on an alternative criterion to the temporal one, such as the achievement of specific objectives, c.d. management by objectives, or the services performed.[44] Objective-oriented organizational and remuneration practices are gaining ground, not without difficulty, in the context of telework, while the management and remuneration practices of workers based on performance are already widespread in the platform economy and other forms of autonomous and poorly qualified remote work (e.g. private mail services).

A second aspect connected with the "remuneration system" variable concerns the amount of remuneration. The macroeconomic situation, the conformation of the labour market and the availability of workforce within it, but also the presence of dynamics that place workers in direct competition, are all factors influencing in various ways the amount of compensation offered by economic operators. For example, the labour market degeneration in a monopsony sense and the use of mechanisms for the sharing of earning opportunities that put workers in competition, which are a completely typical element of the algorithmic management of platforms, can carry a so-called pressure such as a race to the bottom on the remuneration paid to workers.

The monopsonistic conformation of the labour market has been drastically accentuated by the containment measures ordered by the scientific-health authorities to stem the spread of the Covid-19 virus since there has been a rapid and consistent redistribution of the job offer between the traditional economy and the digital economy, which has concentrated the less skilled and more fragile workers of the labour supply on the labour-intensive areas of the platform economy.[45] When these circumstances occur, the unilateral control of the platform on workers' rates keeps the remuneration at a lower level than what could occur in a competitive labour market, especially in the low-skilled areas and in the negative macroeconomic situations which the people's need for work tends to spread and deepen.[46]

The mechanism set up by the central actor for the division of earning opportunities among platform workers also contributes to influencing the amount of compensation offered to workers. However, this aspect will be discussed below, in para 3.3. To avoid making the discussion redundant.

Another element that makes up the variable remuneration system is the frequency with which the remuneration is paid. The platforms can make transfers upon completion of the single service, otherwise the transfers can take place on a weekly, bi-weekly, or monthly basis. The frequency of remuneration generally occurs differently in relation to the criterion adopted by the platform to measure the remuneration of the work activity. Usually, in the context of piecework pay systems, the compensations are paid as soon as the work

[44] Please *check* Oliva L., Maino F., Barazzetta E., *Smart worker e smart working places: lavorare oltre l'ufficio*, Centro di Ricerca e Documentazione Luigi Einaudi di Torino, 2019.

[45] The impact of the pandemic on the platform economy, on businesses and workers, has been widely documented in Chicchi F., Frapporti M., Marrone M., Pirone M., *Covid-19 impact on platform economy: a preliminary outlook*, in *PLUS Platform Labour in Urban Spaces*, July 2020.

[46] Dube A., Jacobs J., Naidu S., Suri S., *Monopsony in Online Labor Markets,* in *American Economic Review: Insights*, 2, 1, 2020, 33-46.

performed by the worker is completed or on a weekly or bi-weekly basis. In remuneration systems that adopt a temporal measurement criterion, the transfer usually takes place monthly. However, a platform may remunerate workers for the services performed and the transfer of the consideration takes place monthly.[47]

3.2. Potential benefits.

The *potential benefits* constitute the second variable we have identified. With this concept, Gil Garcia J.[48] indicates those «forms of capital» that people can acquire by doing some work on digital platforms and that can be used to improve their position in the market, successfully deal with intra-sectoral occupational transitions, increase their contractual power, and increase their economic performance. Potential benefits, therefore, are those resources that give power to social agents within specific fields in which they are active. This concept includes all those resources that make it possible to acquire an advantage within a certain relational context. The competencies, the follower, symbolic capital, and digital reputation are some examples of potential benefits in the specific *field* of the platform economy.[49]

The potential benefits concept, therefore, includes very different forms of capital. There are forms of capital that we can understand as "free" and others that, on the other hand, we can qualify as "constrained" as their production, recognition, and conservation are subject to the control of actors other than those who have matured them. The competencies, the follower, reputation in its traditional forms and symbolic capital represent free forms of capital since their production and conservation fall within the control sphere of the agent who matured them, and they can be easily used in different social relations within the same field. Otherwise, digital reputation represents a form of bound capital as the processes of construction, recognition and conservation fall under the unilateral control of the central actor and are governed by the "private discipline" established by the latter.[50] At present, there is no comprehensive legal discipline of the reputational profiling practices adopted by the platforms, nor is there an effective right to the portability and accruable of the digital reputation of workers since it encounters a series of potentially insurmountable material obstacles in the implementation phase.[51] Since they are forms of capital linked to the platform of origin, it seems correct to us to speak of "fixed" and "not usable" capital since it cannot be "transferred", nor can it be "accumulated" by carrying out the same work activity for different platforms.

Digital reputation represents the main example of potential benefits in the context of the platform economy. The reputational profiling techniques adopted by the platforms towards the people who work within them and the forms that the digital reputation can take are

[47] Di Cataldo L., nt. (17), 89.
[48] Gil Garcia J., nt. (3).; Bourdieu P., nt. (35).
[49] Bourdieu P., nt. (5).
[50] Cf. Mutti A., *Reputazione*, in *Rassegna Italiana di Sociologia*, 4, 2007, 601-622; Cutolo D., Kenney M., Zysman J., *Platform-Dependent Entrepreneurs as Private Regulators in the Platform Economy*, in *BRIE Working Paper*, 5, 2019.
[51] Di Cataldo L., *Transferability and accumulation of digital reputation in platform work: a preliminary study*, in Benevides C., Veiga (eds.), *Contratos atipicos de emprego en la economia digital. Prospectiva luso-italo-brasiliana*, Iberojur, 2022.

extraordinarily varied, people analytics practices appear generally functional to the management of the volumes of work within the platform and the impossibility to transfer and/or accumulate this *reputational capital* [52] produces largely similar effects regardless of the specific type of platform or work activity.

Reputational profiling systems are extremely widespread in the platform economy as they are used to address the considerable problems of coordination between agents operating in digital ecosystems[53]: in some circumstances, the digital reputation appears functional to the consolidation trust links between the agents involved in the plurilateral intermediation of the platform, acting as a compensatory tool for the information asymmetries within the digital environment, which may be due to the large number of agents involved, their frequent change, the occasional and temporary nature of the interactions that take place between them; in other circumstances, the digital reputation appears functional to the hierarchical and unilateral coordination of the workforce, configuring itself as a tool available to the central actor to satisfy their control needs despite the material obstacles that they may encounter and regardless of the contractual framework of workers: the loss of firm's classic space-time references; the dispersion of workers on a global scale or, alternatively, within a large but more contained space such as the urban territory; the large number of workers to be managed and their frequent change; the reduction of visible interference on work activities in order to justify the use of autonomous-occasional contractual schemes and subtly conform the behaviour of workers to their expectations.[54]

If the reputational profiling techniques respond to the first of the functions described, the digital reputation of the workers will be visible to all the agents involved in the plurilateral intermediation of the platform to orientate the allocation of expectations efficiently, in the second hypothesis instead, the digital reputation will only be visible to the central actor.

In both these macro-sets of circumstances, digital reputation has a decisive effect on workers' earning capacity: primarily because the reputational capital has a decisive effect on the volumes of work which in the first circumstance will be assigned by the users of the platform, while in the second the volumes of work will be assigned by the central actor; secondly, since in both macro-sets of circumstances, the continuity of income from work during intra-sectoral occupational transitions depends on the discipline of the digital reputation recognition processes by platforms. In fact, when a worker decides to change platform the non-interoperability digital reputation implies a net interruption of the work volumes and of the income received. Equally when a worker decides to work on two platforms simultaneously the non-interoperability digital reputation implies the construction of two different reputation.

The usability limits of the reputational capital workers may encounter hinder the mobility of the labour factor within the market and contradict the conception of digital platforms as perfect markets. The construction of a new digital reputation, replacing the previous one or

[52] Topo A., *"Automatic management", reputazione del lavoratore e tutela della riservatezza*, in *Lavoro e Diritto*, 3, 2018, 453-476.
[53] Marmo S., *L'uso della reputazione nelle applicazioni Internet. Un antico artefatto per un nuovo contesto sociale*, in *Sistemi intelligenti*, 1, 2007, 91-112.
[54] Ivanova M., Bronowicka J., Kocher E., Degner A., nt. (18); Bano F., nt. (30).

parallel to it, requires a considerable investment in time and energy, which can make the worker give up on making decisions and behaving that could improve their working conditions. These implications could make workers give up on moving to another platform in search of better working conditions within the market or starting a multi-client regime to overcome a previous situation of economic dependence. Therefore, the transferring or accumulating of one's reputational capital results in a transaction cost that hinders the mobility of the labour factor toward the most profitable jobs, towards the best working conditions present within the market.[55]

3.3. Job opportunities assignment system.

The third variable identified through our research is the "job opportunities assignment system".

The literature has now fully highlighted the configuration of the platforms as competitive arenas for "zero-sum", as ecosystems built to induce the people who work within them to contend with a finished good consisting of work shifts and/or tasks to be performed.[56]

As explained in the previous paragraph, reputational profiling techniques are a characteristic feature of «algorithmic organizations».[57] Regardless of the platform work, the techniques adopted for the construction of the reputational profile of the worker and the forms that the digital reputation can take, the reputational capital of the worker expresses the "person value in the digital market"[58] and represents the main criterion for the distribution of the work volumes within the infrastructure. In pure intermediation platforms, it guides the users of the platform in identifying the worker best suited to their needs; in platforms that sell a service in addition to mere intermediation through the employment of a workforce, digital reputation guides the processes of algorithmic management for the automated management of workers, starting with access to shifts and the assignment of work assignments to be to execute.

The mechanism for assigning job opportunities can take on a hybrid function which is both rewarding and punitive, or this function can be neutral. It will be hybrid if the system is set up for booking work shifts and/or for assigning the tasks to be performed benefits those who have adjusted their behaviour with the expectations of the plat-firm and, at the

[55] The discussion on transaction costs is resumed at the end of para 3.4.

56 Without prejudice to the unavoidable peculiarities inherent in the myriad of organizational practices and sub-projects.

[57] Some contributions related to algorithmic management, the concept of reputational capital and the difficulties that the introduction of a legal framework for digital reputation may encounter: Origgi G., Pais I., *Digital Reputation in the Mutual Admiration Society*, in *Studi di Sociologia*, 2, 2018, 175-194; Griesbach K., Reich A., Elliott-Negri L., Mikman R., nt. (41); Pais I., Stark D., *Algorithmic Management in the Platform Economy*, in *Sociologica*, 14, 3, 2020, 47-72; Zappalà L., *Informatizzazione dei processi decisionali e diritto del lavoro: algoritmi, poteri datoriali e responsabilità del prestatore nell'era dell'intelligenza artificiale*, in S. Aleo (eds.), *Evoluzione scientifica e profili di responsabilità*, Pacini editore, Pisa, 2021, 363 ff.*; See* also Giardullo P., Miele F., *L'organizzazione algoritmica: tecnologia, performance e automazione*, in Marini D., Setiffi F. (eds.), *Una grammatica della digitalizzazione. Interpretare la metamorfosi di società, economia e organizzazioni*, Edizioni Angelo Guerini e Associati, Milano, 2020.

[58] European Parliament Resolution of 2017 June 15th on A European agenda for the collaborative economy.

same time, penalizes those who have it done to a lesser extent. The functions assumed by this mechanism will instead be neutral if the management of work shifts and/or the assignment of job opportunities occurs regardless of the compliance of the behaviour of the individual worker over time with the expectations of the platform company.

The mechanism hybrid nature predisposed to the division of job opportunities among platform workers can produce significant negative repercussions on workers' remuneration and significantly affect their earning capacity, both about those categories of workers, generally highly skilled, having the power to self-determine their rates and who receive the tasks to be performed directly by other parties involved in the intermediation of the platform, both about those categories of workers, generally low-skilled, whose remuneration is hetero-determined by the central actor and whose tasks of work are directly assigned by the latter. For the organization of the first group of workers, systems are frequently used that require them to compete for a contract and induce workers to adopt competitive strategies focused on reducing the cost of their work for the benefit of the final consumer.[59] For the second group of workers organization, on the other hand, the work assignments division takes place through a reputational profiling system that rewards those who meet company expectations and simultaneously penalizes those who do not, this mechanism can induce workers to the acceptance of the assignments for which excessively small sums are paid to avoid downgrading and preserve the stability of the volumes of work transmitted by the digital infrastructure.[60]

The hybrid function of the systems used for the earning opportunities distribution among the workers of the platform seems to be more widespread among the companies that have contractual schemes falling within the perimeter of self-employment and remuneration systems that are fully or largely focused on assignments performed. In such business models, the reward/punitive function of the mechanism in question compensates for the reduced conformational scope of the contract, which may be due to the margins of discretion formally recognized to the worker, for example, the freedom to self-determine the times and workloads, as well as the reduced conformational scope of the criterion adopted for the measurement of work which is frequently limited to the material execution of the main service. Therefore, the hybrid function of these mechanisms allows companies to keep the amounts of compensation paid to workers at minimum levels.

3.4. Labour fragmentation.

[59] This is the challenge mechanism, rather widespread in the forms of high-skilled platform work. Some examples are platforms 99Design e 4C Legal. The problem has been discussed by several authors: Ekbia H.R., Nardi B.A., *Heteromation, and other stories of computing and capitalism*, MIT Press, Cambridge, 2017; Arcidiacono D., Pais I., Piccitto G., nt. (15), 81.

[60] A concrete example can be found in the work performance assignment mechanism used by the food delivery platforms.

The labour fragmentation constitutes the fourth variable we have identified and represents a characteristic aspect of work in contemporary capitalism and specifically of platform work.

The labour can be fragmented in relation to the legal-contractual profile and/or to the salary profile or in relation to the hourly dimension of the employment relationship.

A legal-contractual fragmentation occurs in circumstances in which the central actor arranges for the stipulation of a new contract for each of the tasks assigned to the worker.[61]

The fragmentation of the remuneration profile consists, on the other hand, of a breakdown of the employment relationship concerning the mutual link between the components of the employment relationship represented by the exchange between the work performance and the economic consideration. In this case, the employment relationship is parcelled out and cleared of the pauses in which the labour activity does not generate surplus value for the capital, in this way there is a reduction of the legal concept of labour performance which overlaps the service purchased by the customer, resulting in a corresponding reduction in the economic consideration recognized by the platform to the worker. While maintaining the reference to food delivery, the platforms generally break down the activity carried out by the rider and qualify as actual work, such as the material execution of the work performance, only the time between the assignment of the service by the platform and the delivery of the product to the customer, therefore further temporal situations and any activities that are not directly included in the aforementioned interval do not meet the economic consideration by the platform.

Even in the context of employment relationships "long term",[62] there is a fragmentation of the work activity into microtasks and a fragmentation of the salary into micro-compensations which involves, on the one hand, the emergence of unpaid work[63] intervals, on the other hand, the unsuitable remuneration received by the workers, which manifests itself in the non-proportionality for the quantity and quality of the work performed, such as for the hours of availability conferred by the worker to the platform, to the participation costs incurred by the worker (check § 3.5.) and in relation to the tasks performed by the latter outside the main job performance.[64]

To conclude, labour can also be fragmented in reference to the hourly dimension of the employment relationship with the provision of a predefined and insurmountable limit of weekly/monthly working hours. The phenomenon of hourly fragmentation of labour and the implications arising from it for the workers earning capacity have emerged strongly in the context of the reform of its employment model carried out by Just Eat with the signing of a company collective agreement, which provides for and integrates the application of the

[61] What happened in Just Eat, checkpoint 2. contract model of 2019 and 2020.
[62] The performance is continuous because only through the continuous execution of the service it is possible to satisfy the interest of the creditor. The continuity, therefore, in the duration of contracts, lies in the cause of the contract that realizes the interest of the creditor. On this point, *check* Bavaro V., *Sul concetto giuridico di «tempo di lavoro» (a proposito di ciclo-fattorini)*, in *Labor*, 6, 2020, 675*; See* also Oppo G., *I contratti di durata*, in *Rivista del Diritto Commerciale e del diritto generale delle obbligazioni*, 5-6, 1943, available at https://www.rivistadeldirittocommerciale.com/fascicoli/1943-numero-5-6/39951-i-contratti-di-durata .
[63] Pulignano V., nt. (20).
[64] Di Cataldo L., nt. (17).

National Collective Labour Agreement for Logistics, Transport, Goods and Shipping, defining an innovative model for the regulation of subordinate work according to the profiles characteristic of the activity carried out by the riders, but also in the optics of a fair balance between the protection needs of workers and the needs of economic efficiency and productivity of companies. The agreement has introduced an hourly remuneration of € 8.50 based on the time spent on the availability of the platform,[65] which are bonuses, indemnities and a kilometre reimbursement, the operation conducted was criticized by authoritative labour law doctrine. However, the hourly dimension of the new contracts proposed to workers has been contested, which provides for a pre-established, rigid, and restricted number of hours of weekly work, which can be 10, 20 or 30 hours.[66]

For complete examination purposes, it seems useful to highlight the implications that this hourly fragmentation can produce on the economic profile of working conditions. The weekly working hours constitute an insurmountable limit for the earning capacity of the workers which is thus hinged within rigid, restricted, and predetermined limits. It will not be easy for Just Eat riders - especially for those who have been asked to request a contract of 10 or 20 hours per week - to reach a monthly sufficient salary to satisfy their life needs, a part of these workers will not be able to do it without working for other platforms in the sector as well and submitting to the treatment defined by the national collective agreement signed on 2020 September 15 between Assodelivery and UGL Riders which is applied in the majority of companies. Therefore, they will continue to be classified, also, as self-employed workers (according to Art. 2222 of the Italian Civil Code) and paid for the services performed.[67] The hourly labour fragmentation introduced by Just Eat risks neutralizing, or drastically reducing, the beneficial effects on the economic profile of the working conditions that could have resulted from the reform of the contractual classification of workers and the criterion for measuring the remuneration to be recognized to these latter.

3.5. Participation costs.

Participation costs are the last variable we take into consideration. It includes the time, economic costs, and energy that the worker must use to generate a certain income by carrying out a particular labour activity on digital platforms. We can also include in this concept the health and safety hazards that are specific in relation to the activity carried out.[68]

[65] Company supplementary agreement between Takeaway.com Express Italy (Just Eat) e Filt CGIL, FIT-CISL, UIL Trasporti - Art. 14, Hourly Remuneration.
[66] Carinci M.T., nt. (14).
[67] Art. 11 - Minimum per delivery: «The parties agree that the Rider is guaranteed a minimum compensation for one or more deliveries, determined on the basis of the estimated time for carrying it out. This compensation is equivalent to € 10.00 (ten/00) gross per hour. If the time estimated by the Platform for the deliveries is less than one hour, the amount due will be re-parameterized proportionally to the estimated minutes for the deliveries completed (…) ».
[68] For example, road accidents represent a very typical danger for those who perform their services while moving in urban traffic, such as Uber drivers or food delivery riders.

The participation cost are different within the platform economy, it changes based on several factors: the intensity of economic, human and labour capital the person must use to operate within the platform; the production characteristics area and work performance; the entrepreneurial practices adopted by the platforms and, above all, the particular configuration of the four variables described above; the adequacy of the legal framework with respect to the protection needs of the person working in the context of the digital economy.

In the context of the digital transformation of work, the transfer of the economic risk of the company to the workers is becoming more and more widespread. The possible performance of the work activity anytime and anywhere,[69] in an institutional context that is still unprepared to govern the reconfiguration of the socio-economic relationship between the factors of production induced by the most recent developments in technological innovation,[70] becomes the pretext for resorting to business practices (legal, salary and organizational) oriented towards a deconstruction of the employment status[71]. Some of these practices have already become structural in the context of digital labour platforms and could further spread to other remote work areas, such as in the context of agile working (so-called Italian smart working). As already mentioned in para 3.1., companies that make use of digital platforms often resort to employment contracts in fraud of the law - the phenomenon of so-called bogus self-employment –[72] and they usually pay workers for the tasks performed, transferring to them the uncertainties and risks deriving from market trends.

A second entrepreneurial practice, referred to as the balance of power restructuring between capital and labour in platform capitalism consists in placing the economic burdens deriving from the constant capital of the business activity on the workers.[73] In the forms of work that take place outside the company headquarters, a part of the constant capital is naturally dislocated on the worker: energy costs, stationery materials, work equipment and the costs associated with the latter. At present, no suitable measures have been put in place to compensate for the cost redistribution deriving from business activity and prevent a dangerous erosive effect on the real earnings perceived by platform workers who are already quite small.[74] For example, smart workers frequently support expenses previously in the charge of companies, in the same way Uber drivers or food delivery riders support significant expenses for the purchase and maintenance of work equipment, think of fuel costs, insurance and maintenance of means of transport.

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[69] Eurofound and the International Labour Office, *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union and the International Labour Office, Luxembourg-Geneva, 2017, available at http://eurofound.link/ef1658 .

[70] In Marx K., *Das Kapital. Kritik der politischen Ökonomie, Erster Band. Buch I: Der Produktionsprocess des Kapitals,* Otto Meissner, Hamburg, 1867, the Author explains the role of technological innovation in the configuration and reconfiguration of production relations. *Check* also Bolchini P., *L'innovazione in Marx e Shumpeter*, in *Quaderni di storia dell'economia politica*, 2, 1/2, 1984, 41-64.

[71] Srnicek N., *Platform Capitalism*, Polity Press, United Kingdom, 2016, p. 14 ff.

[72] Aloisi A., De Stefano V., *European Legal framework for digital labour platforms*, Publications Office of the European Union, Luxembourg, 2018.

[73] Constant capital indicates the entrepreneur's expenditure on raw materials and the cost of depreciation on fixed capital. In essence, it represents the sum of all the non-labour costs incurred by the capitalists to produce the goods.

[74] Todolì-Signes A., *The "gig economy": employee, self-employed or the need for a special employment regulation?*, in *Transfer*, 23, 2, 2017, 193-205.

Through these business practices, economic operators significantly reduce the cost of labour, they can keep prices for final consumers within minimum levels and they are also able to effort wide-ranging exogenous shocks.[75]

As anticipated, participation costs are influenced by the other four variables identified in this study. As mentioned in part, the amount of remuneration and the criterion adopted by the platform to measure the consideration to be paid for carrying out a specific job can increase the time and effort required to generate a certain income. Furthermore, the criterion for measuring the remuneration of the work activity can involve a perennial condition of economic uncertainty and increase the exposure of the worker to the specific health and safety hazards for a given activity, as are the dangers for safety road in the case of riders. Workers paid by the piece have irregular economic income and tend to speed up the execution of individual services to maximize the income received over a certain period, implementing opportunistic behaviours even to the detriment of their well-being and safety, such as self-exploitation conducts and the violation of the rules of the highway code.[76]

Also the *potential benefits* and the usability of the same, therefore, the transferability and accumulation of the capital forms acquired through the platform work, can affect the participation costs since the volumes of work that will be assigned to the worker by the users depend on them, the transferability and accumulation of the forms of capital acquired through the platform work can affect the participation costs since the volumes of work that will be assigned to the worker by the users of the platform (i.e. Booking, Superprof) or by the platform itself (i.e. food delivery).

Likewise, the mechanism in charge of the earning opportunities allocation among the workers connected to the platform can influence the costs of participation. This can occur because, as already explained above in para. 3.2., the hybrid, reward and punitive logic of this mechanism can favour the maintenance of the remuneration paid to workers at a minimum levels and consequently increase, the time required to generate a certain income, but it can also increase any risks to the health and safety of the worker related to the material execution of the work performance; moreover, the system for the earning opportunities allocation may require the completion of activities that involve a waste of time, energy and economic costs, even if they are outside the main work performance and which do not meet an economic consideration by the client (it may coincide with the central actor or be one of the users involved in the plurilateral intermediation of the platform). We know for example that riders are sometimes required to move within the work area covered by the delivery service to facilitate operation of the performance assignment mechanism, which also takes into consideration the satellite location of the worker (so-called geo-location), and with the undeclared aim of improving the efficiency and quality of the overall service sold by the platform.

[75] Chicchi F., Frapporti M., Marrone M., Pirone M., nt. (45).

[76] On this topic *see*: Papakostopoulos V., Nathanel D., *The Complex Interrelationship of Work-Related Factors Underlying Risky Driving Behavior of Food Delivery Riders in Athens, Greece*, in *Safety and health at work*, 12, 2, 2021, 147-153; Kudasz F., Liddle M., Makowski K., Schmitz-Felten E., *Delivery and dispatch riders' safety and health: a European review of good practice guidelines*, European Agency for Safety and Health at Work, Luxembourg, 2011; Christie N., Ward H., *The health and safety risks for people who drive for work in the gig economy*, in *Journal of Transport & Health*, 3, 2019, 115-127.

Even the work fragmentation can affect the participation costs incurred by the worker since it makes discontinuous income increasing the organizational efforts and the bureaucratic requirements placed on the workers. For these reasons, in our opinion, when we discuss the effects of the platform model on transaction costs, we need to talk about a *restoration* process rather than a simple *decrease*[77] since the digital infrastructure reduces those transaction costs that hinder the activity of the central actor but, on the other hand, creates new transaction costs for the workers that can be an indirect and undesirable effect of the reduction of the former, as in the case of complex bureaucratic formalities that have been transferred from the company to the workers[78] or, alternatively, a direct and desired effect of the functioning of the digital infrastructure, as in the case of the immobility of digital reputation of the platform worker (check *supra* 3.2.).

4. Some conclusions.

The digital transformation represents a new test for the quality of work[79] and could result in a further increase in poverty despite labour, economic dependence and, therefore, inequalities in our society.

This article proves the economic profile of the platform workers' working conditions is a complex issue, marked by multiple variables, and dimensions, as well as by the reciprocal connections existing between them.

The five variables identified through this study as decisive for the earning capacity of these workers express some of the many challenges imposed by the digital intermediation of employment relationships on the legal system, and on the regulatory side.

The *remuneration system* variable indicates the extent, frequency and criterion adopted for measuring the economic transfers arranged by the central actor for the benefit of the workers. Regarding the remuneration system, central issues arise for labour law, relating to the remuneration institution and the quantum of the remuneration of which, above all, compliance with the standards defined by collective bargaining, as well as the proportionality to the quantity and quality of the work performed. Certainly, these are known problems, which refer to the debate concerning the possibility of introducing a legal minimum wage and the effects that this measure could produce.

The *potential benefits* indicate those forms of capital that the platform worker can acquire during his business and that can be used to strengthen his position in the market. An emerging problem regarding the potential benefits concerns the usability by workers of these forms of capital - discussed here with particular referred to the reputational profiling techniques widespread within the platform economy and the reputational capital of the worker - and the effects produced on the real economic profile of working conditions;, these forms of capital influence the volumes of work assigned to the worker, the ability to

[77] Cf. Del Prato F., Stagnaro C., *Take it easy, rider! Perché la flessibilità dei lavoretti è un valore e non un limite*, in *IBL Briefing Paper,* 167, 2018.
[78] Ichino P., *Diritto del lavoro e innovazione tecnologica*, in *Rivista Italiana di Diritto del Lavoro*, 4, 2017, 525-563.
[79] Arcidiacono D., Pais I., Piccitto G., nt. (15).

successfully deal with employment transitions and can also incentivize/dissuade work in a multi-client regime, consequently affecting the spread of economic dependence between the platform workers.

As regards the mechanism set up for the earning opportunities distribution among workers, they were discussed two distinct operating hypotheses and their implications. These mechanisms can take on a hybrid connotation, that is at the same time rewarding and punitive, or, otherwise, they can take on a neutral one.

When the mechanism is based on a competitive criterion for the distribution of a finished good, and so the resources allocation to workers who have been judged as "best" entails a subtraction of the same from those who have a "worst" assessment, it will be defined hybrid. Such a system can create a stable and effective confirmative pressure on the behaviour of workers that will depend on the person's need for work, aligning them with company expectations, and exerting downward pressure on workers' remuneration. Workers who have the power to self-determine their rates and who receive the tasks to be performed directly by their customers will be induced to the exasperated contraction of the same to acquire a competitive advantage over their competitors, while workers with opposite characteristics will be forced to an indiscriminate acceptance of the positions proposed by the central actor, even if completely inconvenient in economic terms, for fear of incurring a reduction in future earning opportunities.

The fourth variable, labour fragmentation, emerges from the excessive extension of the margins granted by the legal system to the private autonomy of companies.[80] These margins allow a multidimensional breakdown of the employment relationship, which may concern the legal-contractual and/or remuneration profile or the internal temporality of the employment relationship. Each of these declinations of the fragmentation of work affects, albeit in various ways, the economic profile of working conditions. For example, the appearance of unpaid work windows may occur within the employment relationship, or the earning capacity of the workers may arise within a predetermined, restricted, and rigid number of hours per week.

The participation costs associated with carrying out a particular work activity represent the last variable taken into consideration and are closely connected with the configuration of the other four variables. Regarding those participation costs that are subject to a clear economic quantification, these are costs deriving from the increasingly widespread practice in the various forms of remote work that we are learning to know, of transferring the economic risk of the company borne by workers through recourse to piecework pay systems and with the displacement of the economic burdens of constant capital. Such entrepreneurial practices can be understood as a direct expression of the reconfiguration of the power relationship between the factors of production resulting from the most recent applications of technological innovation to employment relationships, an already structural phenomenon in platform work that could also expand to telework with the risk of a significant reduction in the real earning capacity of workers.

[80] Baccaro L., Howell C., *Trajectories of neoliberal transformations*, Cambridge University Press, Cambridge, 2017.

5. Next lines of research.

The complexity of the proposed framework excludes that the real economic profile of working conditions can be effectively improved through a single intervention concentrated on the purely economic component, such as the introduction of a *minimum wage*, instead diversified, multidimensional interventions are needed and complementary.

The inclusive digitization promotion requires an inevitable institutional adaptation[81] and, therefore, a careful reflection on the "need for permanence and renewal of the legal institutions of capitalism in the contemporary evolutionary scenario",[82] which - at least with reference to the topic discussed here - could be tackled starting from the set of variables proposed by us. Acting effectively on the economic profile of the working conditions of platform workers means: (i) reducing the risk of falling into working poverty, through the introduction of a legal minimum wage, downsizing the private autonomy of contractors in terms of paperwork and remuneration, as well as through measures that prevent the transfer of business risk to workers and/or that compensate for the material effects of these products;[83] (ii) mitigating the spread of economic dependence by facilitating work in a multi-client regime, starting with the introduction of a legal framework of the dynamics of construction, recognition and conservation of the reputational capital of workers that ensures its usability;[84] (iii) introducing suitable institutions to support workers during intra-sectoral occupational transitions.[85]

By adequately facing these intervention objectives the "trap effect" could be reduced"[86] inherent in these new-born forms of work and transform them, instead, acting as a springboard for a progressive social and work integration of people, especially concerning vulnerable categories placed on the margins of the labour market.[87]

Although the scientific and political debate has been going on for more than five years now, the macro-issues concerning work on digital platforms are still on the table today. The labour markets of the platform economy continue to procrastinate in a state of profound deregulation and a considerable part of the internal processes of digital infrastructures continue to take place opaque and be entrusted to the "private regulation" of economic operators. We also see this situation in relation to location-based and labour-intensive platform work which undoubtedly represents the most well-known, regulated, and unionized portion of the phenomenon. Therefore, there is still an urgent need for profitable synergies

[81] Neufeind M., Ranft F., O'Railly J., nt. (3), 543.
[82] Lyon-Caen G., *Permanenza e rinnovamento del diritto del lavoro in una economia globalizzata*, in *Lavoro e Diritto*, 2, 2004, 257-265.
[83] Todolì-Signes A., nt. (74); Bano F., *Il lavoro povero nell'economia digitale*, in *Lavoro e Diritto*, 1, 2019, 129-148.
[84] Aloisi A., De Stefano V., nt. (72); Di Cataldo L., nt. (51);
[85] Casano L., *Contributo all'analisi giuridica dei mercati transizionali del lavoro*, Adapt University Press, Bologna, 2020.
[86] We talk about the "trap effect" because these forms of work, on the one hand, allow people to overcome a condition of extreme economic and social fragility but, on the other, do not allow them to accrue income and skills that are indispensable for relocating to the labour market.
[87] Gil Garcia J., nt. (3); Lam L., Triandafylidou A., *An unlikely stepping stone? Exploring how platform work shapes newcomer migrant integration*, in *Transitions: Journal of Transient Migration*, 5, 1, 2021, 11-29.

between the academic world and legal professionals engaged in various capacities in the attempt to govern the ongoing metamorphosis, through legislative processes, the industrial relations system, and the administration of justice.

From this perspective, scientific research should aim at proposing reconstructions of economic and work processes mediated by digital infrastructures that highlight the distance present between social facts, for example the concrete types of work that have emerged in the context of digital transformation, and the multilevel system, that is the complex of legal institutions of capitalism responsible for the reconciliation between opposing needs such as the protection of the person who works and the economic interest of companies.[88] Regarding the wide examination in these pages, it is necessary to understand how a possible condition of legal under-protection can translate into a condition of economic dependence, uncertainty and poverty[89] so marked as to jeopardize the enjoyment of full citizenship[90] to resolve and prevent any «cumulative disadvantage situations».[91]

With the hope of providing a further stimulus to the formation of the synergies, we propose some research guidelines starting from the variables identified in this study. Certainly, future research should experiment with methodologies and techniques that make it possible to evaluate the impact of the production paradigm embodied by digital platforms on the quality of labour front and the economic profile of working conditions, taking into consideration both the multidimensional and complex character of this profile, both the irreducible polymorphism of the platform model and the forms of work present within it.

In this sense, it could be useful to elaborate a theoretical framework, which inserts the set of variables presented on this occasion. A theoretical framework could allow the analysis of the economic profile of the working conditions in a comparative key – making comparisons both between platforms of the same sector, both between platforms that are located in different areas of the platform economy (capital-intensive, human-capital-intensive, labour-intensive) – as well as in an inter- and trans-disciplinary key,[92] cultivating the relationships of complementarity, integration and interaction between different disciplinary fields that share research themes and objectives. Such a framework should certainly pay more attention to the mutual connections between the variables considered, as well as to the implications that the connotation of the relationship between the platform and the worker could have on the determination of the variables presented by us and, consequently, on the economic profile. working conditions.

The second line of research, mainly policy-oriented, could aim at identifying the emerging problems in relation to the five variables proposed by us and the corresponding regulatory

88 Perulli A., *Lavoro e tecnica ai tempi di Uber*, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 2, 2017;
89 Bano F., nt. (83).
90 Marchi G., *"Working, yet poor": la povertà tra bassi salari e instabilità lavorativa*, in *Sociologia del lavoro*, 161, 2021, 54-72.
91 Arcidiacono D., Pais I., Piccitto G., nt. (15).
92 Piaget J., *L'épistémologie des relations interdisciplinaires*, in CERI-Centre pour la Recherche et l'Innovation dans l'Enseignement (eds.), *L'interdisciplinarité: problèmes d'enseignement et de recherche dans les universités. Séminaire sur l'Interdisciplinarité dans l'Université organisé par le CERI avec la collaboration du Ministère Français de l'Education national à l'Université de Nice (France) du 7 au 12 septembre 1970*, OCDE, Paris, 1972; Nicolescu B., *Transdisciplinarity - Past, Present and Future*, CETRANS – Centro de Educacao Transdisciplinar, 2006.

deficiencies, to favour the design of diversified and coherent regulatory interventions, suitable for strengthening the people to generate income by operating on digital platforms.

These seem to be the methodological and cognitive challenges for the social sciences engaged in the attempt to compose a reconstruction of the processes underlying the economic devaluation of labour in the context of contemporary capitalism and to elaborate appropriate legal solutions.

7

The Chinese approach to platform work – current state of affairs and possible further developments in the labor law of the PRC.

Piotr Grzebyk*

1. Introduction. 2. Sharing economy and platform work in China. 3. Platform workers and the 'dichotomy' of Chinese labor law. 4. Are platform workers employees? 5. Guiding Opinions of 2021 and possible further developments. 6. Conclusions.

1. Introduction.

Platform work has recently received considerable attention in scholarship. In this context, the paper addresses the following questions, much-debated in Chinese academia: 1) How is the legal nature of platform work defined and interpreted in China? 2) How are employees differentiated from self-employed workers and how is the existence of a labor relationship determined in the context of platform work? 3) What are the possible avenues for the Chinese 'innovative legislation' (创新立法; ***chuàngxīn lìfǎ***),[1] expected to emerge in near future, to safeguard the legitimate rights and interests of platform workers?

The paper is organized in the following manner. After this introduction (Part 1), Part 2 offers a look at platform work within the broader context of sharing economy in the PRC. Parts 3 and 4 address the two-tier division of workforce in China, based on the Labor Contract Law of 1994, and the issues arising from the fact that the status of platform workers is difficult to fit into this dichotomous legal division: they are either recognized as employees with full social rights, or viewed as self-employed and therefore left outside the bounds of such protection. An overview of ongoing debates among Chinese labor law experts on the subject is provided. In Part 5, the latest developments in China are discussed in terms of

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[1] The paper includes references to core terms in Chinese (characters). For non-Chinese speakers, there are also the terms written out in *pinyin,* which is a system that spells Chinese words with the Latin alphabet based on their pronunciation. Titles of paper originally written in Chinese have their English translations in brackets without *pinyin.*

safeguarding the rights and interest of platform workers, and further possible evolution of legislation is addressed. At the end, a brief Part 6 outlines conclusions.

2. Sharing economy and platform work in China.

Sharing economy (共享经济; *gòngxiǎng jīngjì*) has been developing extremely fast and has had an increasing impact on economic and social life not only in the USA and in Europe, but also in China.[2] It influences many sectors, with tourism and transport[3] being most strongly affected. In addition to other challenges, the expansion of shared economy raised new legal questions to labor law[4] behind the Great Wall.

In Chinese, work performed via online platforms (i.e. platform work) is generally referred to as *píngtái yònggōng láodòng*; 平台用工劳动.[5] *Píngtái* means *platform*, *yònggōng* means *to recruit and use* (workers), and *láodòng* means *work*. *Píngtái yònggōng láodòng* is one of the elements of shared economy in China,[6] just as it is in other parts of the world. Its development has shifted workers from traditional forms of carrying out work in services and production to new forms based on new technologies: the Internet and artificial intelligence (AI).

Regulating the work performed via online platforms is a part of the PRC's wider plans regarding the 'healthy development of China's digital economy' (数字经济健康发展; *shùzì jīngjì jiànkāng fāzhǎn*).[7] The *14th five-year' digital economy development Plan of 2021*[8] (*Plan of 2021*) makes explicit reference to 'platform workers' (平台从业人员; *píngtái cóngyè rényuán*) and 'workers' (劳动者; *láodòng zhě*, 员工; *yuángōng*) – but it does so only in a few parts of the text. Taking into consideration the number of issues addressed in the *Plan of 2021* – which is a programmatic document of unquestionable importance – and the detailed nature of its elements, it is noteworthy that the concept of 'work' and 'worker' is hardly a top priority. Platform work is only one concern – among many others – that the PRC's authorities have decided to tackle in the context of digital economy.

Plan of 2021 calls for: firstly, further clarification of main responsibilities and obligations of platform enterprises, which is understood to go hand in hand with the protection of the

[2] *See* for instance: Ma Y., Zhang H., *Development of the Sharing Economy in China: Challenges and Lessons*, in Liu K. Ch., Racherla U.S. (eds.), *Innovation, Economic Development, and Intellectual Property in India and China*, Springer, Singapore, 2019, 467 ff. *See* for more 中国共享经济发展报告 (*China Sharing Economy Development Report 2021*) available at http://www.sic.gov.cn/archiver/SIC/UpFile/Files/Default/20220222100305459566.pdf.

[3] Yujie Chen J., Linchuan Qiu J., *Digital utility: Datafication, regulation, labor, and DiDi's platformization of urban transport in China*, in *Chinese Journal of Communication*, 12, 3, 2019, 274 ff.

[4] *See* for instance: Zhou I., *Digital Labour Platforms and Labour Protection in China*, ILO Working Paper 11, 2020; Wang T., Lee Cooke F., *Internet Platform Employment in China: Legal Challenges and Implications for Gig Workers through the Lens of Court Decisions*, in *Industrial Relations,* 3, 2021; Lin O., *Regulating On-demand Work in China: Just Getting Started?*, in *Industrial Law Journal*, 51, 2, 2022.

[5] Other often used terms also include 'online employment' (网约用工; *wǎng yuē yònggōng*) or 'crowdsourcing online employment' (众包型网约工; *zhòng bāo xíng wǎng yuē gōng*).

[6] Jiang H., Zhang X., *An experimental model of regulating the sharing economy in China: The case of online car hailing*, in *Computer Law & Security Review*, 35, 2, 2019, 145 ff.

[7] https://www.ndrc.gov.cn/fzggw/wld/hlf/lddt/202201/t20220116_1312074.html?code=&state=123.

[8] "十四五" 数字经济发展规划; "*shísìwǔ" shùzì jīngjì fāzhǎn guīhuà* (*14th five-year' digital economy development Plan of 2021),* http://www.gov.cn/zhengce/content/2022-01/12/content_5667817.htm.

legitimate rights and interests (合法权益; *héfǎ quányì*) of platform workers (mentioned in this context together with consumers);[9] secondly, development of 'new employment platforms' (新型就业平台; *xīnxíng jiùyè píngtái*);[10] thirdly, improvement the digital skills of workers and their data management capabilities;[11] fourthly, improvement of the unemployment insurance system (失业保险; *shīyè bǎoxiǎn*) and the social assistance system (社会救助制度; *shèhuì jiùzhù zhìdù*) as well as improvement of the accident insurance system (工伤保险制度; *gōngshāng bǎoxiǎn* zhìdù) in flexible employment (灵活就业; *línghuó jiùyè*); fifthly, improvement of the social security system (社会保险制度; *shèhuì bǎoxiǎn zhìdù*) and of the system of protection of labor rights (劳动者权益保障制度; *láodòng zhě quányì bǎozhàng zhìdù*) of those in flexible employment.[12]

Platform workers (平台从业人员; *píngtái cóngyè rényuán*) have received more attention in the recently published *Report on the development of the sharing economy in China of 2022* (*Report of 2022*).[13] The report categorizes platform workers as a sub-category of 'new employment groups' (新就业群体; *xīn jiùyè qúntǐ*) or 'new forms of employment' (新就业形态，新就业形态劳动; *xīn jiùyè xíngtài, xīn jiùyè xíngtài láodòng*) in the collaborative economy. The *Report of 2022* reads:

"working conditions of workers in new forms of employment have aroused widespread concern. On the one hand, the platform relies on new technologies such as big data, artificial intelligence and algorithms to form a more refined and tight control mechanism for workers. On the other hand, the labor security system and social security system, established during the industrial economic era, are facing a series of new problems and challenges. When the inadaptability of the existing system is increasingly prominent and the new one has not yet been formed, some actions of platform enterprises walk in the 'grey zone' (灰色地带; huīsè dìdài), which leads to the insufficient protection of workers' rights and interests in many cases. How to fully protect the rights and interests of those workers employed via platforms, while achieving high quality of this form of employment has become more pressing question".[14]

Xie Zengyi – whose ideas will be often presented in the paper – has aptly pointed out the ideas that should guide future legislation on platform work in China:

"platform legislation should balance the interests of workers and platform enterprises. On the one hand, we should encourage the development and innovation of platform workers, maintain their moderate flexibility, reasonably stipulate obligations and responsibilities of platform enterprises, and at the same time make platform workers continue to maintain certain flexibility, which is an important reason why many platform workers choose to work on platform. […]. On the other hand, the basic rights and interests of workers should be protected. Therefore, regulations should not hinder innovation and, most importantly, regulators should be

[9] *Ibidem*, point 8.3.
[10] *Ibidem*, point 6.3.
[11] *Ibidem*, point 5.1.
[12] *Ibidem*, point 9.3.
[13] 中国共享经济发展报告; *Zhōngguó gòngxiǎng jīngjì fāzhǎn bàogào* (*Report on the development of the sharing economy in China of 2022*), http://www.sic.gov.cn/News/568/11277.htm.
[14] *Ibidem,* 11.

aware that labor markets are highly heterogeneous and that identifying all platform workers as employees will not benefit all workers. Extending social protection should be adapted to new characteristics of platform employment".[15]

PRC authorities appear intent to act swiftly towards establishing a labor security system for new forms of employment (新就业形态劳动保障制度体系加快建立; ***xīn jiùyè xíngtài láodòng bǎozhàng zhìdù tǐxì jiākuài jiànlì***).[16] The future system should not only fully consider the current institutional arrangements, but also fully adapt to the characteristics platform work. Most interestingly, it should also change the existing 'dichotomy' (二分法; ***èrfēn fǎ***) model of labor relations.[17] This line of reasoning is based on the observation that the current labor law model that relies on a division into 'labor relations' and 'no labor relations' (有劳动关系 *vs.* 无劳动关系; ***yǒu láodòng guānxì vs. wú láodòng guānxì***) fails to fully incorporate the idea of 'third class of workers' (第三类劳动者; ***dì sān lèi láodòng zhě***).[18] Before proceeding, it is perhaps best to discuss this concept of labor 'dichotomy' and 'third class of workers.'

3. Platform workers and the 'dichotomy' of Chinese labor law.

In China, like in most other countries, the labor relationship is a central carrier of social rights. The entirety of labor law protections can be enjoyed if a labor relationship exists; conversely, if the existence of a labor relationship cannot be inferred from the facts of the case, the person carrying out the work is excluded from the scope of labor law, and the situation is viewed as falling into the realm of civil law. A labor relationship also enables the worker to stay under the 'umbrella of social security' (保护伞; ***bǎohùsǎn***). It is therefore hardly surprising that the key legal controversy regarding work via online platforms in China centers around the identification of the relationship between a platform and its workers, or – in other words – the classification *vs.* misclassification of platform workers.[19]

The personal scope of individual labor law in China is specified by Article 2 of the Labor Contract Law of the People's Republic of China of 1994:[20]

"This Law shall apply to enterprises and individual economic organizations (hereinafter referred to as employing units) within the territory of the PRC and workers who form labor relations with them. State

[15] 谢增毅， 我国互联网平台工人劳动权益保护的立法进路， 中外法学, 34, 1, 2022, 117 (Zengyi X., *The Legislative Approach to the Protection of Labor Rights and Interests of Internet Platform Workers in China*, in *Peking University Law Journal*, 2022).
[16] *Report on the development of the sharing economy in China,* nt. (13), 28.
[17] *Ibidem.*
[18] *Ibidem.*
[19] Lin O., nt. (4), 10.
[20] 中华人民共和国劳动合同; ***Zhōnghuá rénmín gònghéguó láodòng hétóng fǎ***, http://www.gov.cn/banshi/2005-05/25/content_905.htm, English translation available at: http://www.lawinfochina.com/Display.aspx?LookType=3&Lib=law&Cgid=9587&Id=705&SearchKeyword=&SearchCKeyword=&paycode.

organs, institutions, public organizations and laborers with whom labor contracts have been established shall be governed by this Law".

Labor Contract Law of 1994 applies then solely to 'worker' (劳动者; ***láodòng zhě***), who stays in a 'labor relationship' (劳动关系; ***láodòng guānxì***) with a 'employing unit' (用人单位; ***yòngrén dānwèi***). The personal scope of the PRC Labor Contract Law is further elaborated by two 'qualifiers' (主体资格; ***zhǔtǐ zīgé***) and three 'criteria' (要素; ***yàosù)***[21]. As for the qualifiers: 1) a labor relationship can be established only with a employing unit, and natural persons or unregistered entities cannot be classified as such,[22] and 2) a labor relationship comes into being only through the signing of a 'labor contract' (劳动合同; ***láodòng hétóng***). As for the three criteria that must be met in order to recognize the existence of a labor relationship: 1) the parties must have qualifications, 2) the worker must be subject to management and regulations in the workplace and must perform work for remuneration, and 3) the work performed by the worker must constitute an integral part of the establishment's activities.[23]

Since there is no specific definition of 'labor relations' (劳动关系) or 'worker' (劳动者) in Chinese labor law, in practice it has fallen to courts and other bodies to apply other, supplementary sources of law,[24] including Article 1 of the *Notice on Matters Concerning the Establishment of Labor Relations* (关于确立劳动关系有关事项的通知; ***guānyú quèlì láodòng guānxì yǒuguān shìxiàng de tōngzhī***) issued by the former Ministry of Labor and Social Security in 2005.[25] According to the *Notice*, a labor relationship is established if the following circumstances exist: 1) the employing unit and the workers meet the subjective qualifications (主体资格; ***zhǔtǐ zīgé***) prescribed by laws and regulations, 2) labor rules and regulations formulated according to law by the employing unit applies to workers, who are subject to the labor management of the employing unit and engage in remunerative labor arranged by the employing unit, and 3) labor provided by a worker constitutes an integral part of the business of the employing unit.

Without going into the details of Article 2 of the Labor Contract Law of 1994, it is important to note here that defining the personal scope of individual labor law was in the past, and still may be today, a complex issue.[26] The reasons are manifold. Firstly, Article 2 of the Labor Contract Law is not particularly precise, and it fails to establish clear criteria for distinguishing a labor relationship from other relationships. The same applies to other,

[21] 周畅，中国数字劳工平台和工人权益保障：国际劳工组织工作报告 11（日内瓦 2020，国际劳工局），25.
[22] Zhou I., nt. (4), 28; Cooney S., Biddulph S., Zhu Y., *Law and Fair Work in China. Routledge Contemporary China Series*, Routledge, London, 2013, 53.
[23] Zhou I., nt. (4), 28. *See* more 佟岩，网约用工中劳动关系的认定 (Tong Yan, *Identification of Labor Relations in Online Contract Employment*). Available online: http://www.zjbar.com/info/26d91f66f7424b078e0bb0f2121468b0.
[24] As for sources of labor law in China *see* Dong Yan, *In Search for "Chinese Labour Law"* in Neal A.C. (ed.), *Cross-Currents in Modern Chinese Labour Law*, Wolters Kluwer Law & Business, Alphen aan den Rijn, 2014, 40 ff.
[25] http://www.mohrss.gov.cn/ldgxs/LDGXzhengcefagui/LDGXzyzc/201107/t20110728_86296.htm. The aim of the notice is to "[…] standardize the employment practices of the employing units, protect the legitimate rights and interests of the laborers and promote social stability, the relevant matters concerning the establishment of labor relations between the employing units and laborers […]".
[26] Cooney S., Biddulph S., Zhu Y., nt. (22), 53; Cooney S., *The 'Labour Relationship' in Chinese Jurisprudence: Mistranslating Definitional Barriers to Labour Protection*, in *University of Melbourne Legal Studies Research* Paper, 824, 2019.

supplementary sources of law. Secondly, no clear criteria have been developed by courts or state actors either. A general assumption persists in Chinese law that stipulates the existence of a rigid dichotomous division of forms of work. The PRC labor law consequently relies on a dichotomy division into a 'labor contract' (劳动合同; *láodòng hétóng*) on one hand, which falls within the subjective scope of labor law, and an 'employment contract' (雇佣合同; *gùyōng hétóng*) for other forms of work, not covered by PRC labor law,[27] on the other hand. Courts follow this formalistic approach,[28] so in a large number of disputes platform workers are determined to be outside the scope of labor law.[29] Thirdly, due to the distribution of burden of proof (举证原则; *jǔzhèng yuánzé*) in civil litigation, it is difficult to successfully argue in favor of labeling the platform workers' position toward the platform company as a labor relationship.

4. Are platform workers employees?

In the ongoing debate within Chinese labor law scholarship as to the relationship between a 'sharing company' (共享企业; *gòngxiǎng qǐyè*) and its workers ('crowdsourced online workers) (众包型网约工; *zhòng bāo xíng wǎng yuē gōng*), there are essentially three groups of views: 1) negative, 2) positive, and 3) 'it depends on the facts of the case'.[30] Based on interpretation of existing laws in general, i.e. also beyond the scope of labor law, several scholars claim that it is indeed difficult to precisely characterize the relationship between a platform company and its workers.[31]

There are significant differences between 'crowdsourced online workers' (众包型网约工) and 'traditional workers' (传统劳动者; *chuántǒng láodòng zhě*), making it difficult to argue in favor of the existence of a labor relationship (group one; negative). Firstly, 'crowdsourced online workers' have a large degree of autonomy in terms of organizing their work, the time and place thereof, etc. They may even decide if they want to work at all – which is not the case with traditional workers, who simply receive orders and instructions. Secondly, in many cases, in addition to labor, platform workers also provide vehicles and other production equipment or tools, while traditional workers provide only labor. Thirdly, the wages of platform workers are generally paid on an ongoing basis in real time and piecemeal, while wages of traditional workers are paid on a monthly or weekly basis and calculated in reference to an hourly rate. Fourthly, the quality of the work that platform workers perform is assessed and, to a degree, supervised, by customers, while traditional workers are generally managed

[27] Cooney S., Biddulph S., Zhu Y., nt. (22), 55.
[28] *Ibidem*, 54.
[29] Lin O., nt. (4), 12 ff.
[30] This section is partially based on very informative and comprehensive report prepared by Wang Qian for All-China Federation of Trade Unions; 王倩, 共享经济用工中的劳动关系认定理论研究综述 (Qian W., *A review of theoretical research on labor relationship identification in sharing economy employment*). Report available online: https://www.acftu.org/wjzl/ghqk/jxwz/zgldgxxyxb/202011/t20201110_729137.html?7OkeOa4k=qAc1cAqrqAlrqAlrq3jUoOQ4iwJovUR4TZrgiMzMn17qqomgUublqAqqqA).
[31] In more details 王全兴、王茜在, 我国"网约工"的劳动关系认定及权益保护, 法学, 4, 2018, 64 ff. (Quanxing W., Qizai W., *Labor relationship identification and protection of rights and interests of "online contract workers" in China,* Law).

and supervised by the employer. Fifthly, it is easy for platform workers both to get a job on the platform and to leave that job, while traditional workers typically go through stricter selection and hiring procedures, and the procedures that precede termination of the labor relationship are also more complex. These features suggest the absence of the 'subordination' (从属性; *cóng shǔxìng*) or 'control' (控制; *kòngzhì*) factor, which makes the classification of the platform labor relationship difficult.[32]

Scholars who claim platform workers are independent contractors, for instance Wang Tianyu, argue that in platform work subordination is – as a rule – missing. His position is that platform workers should stay outside the subordinated labor institutions also in the future.[33] Crowdsourced online workers (众包型网约工; *zhòng bāo xíng wǎng yuē gōng*) can independently decide whether to work, can choose when and where to carry out the job, and have to meet no requirements for workload, online time, service area, etc. The vehicles and other equipment necessary to complete deliveries is self-provided and the platform only charges commissions. These parameters do not meet the characteristics of labor relationship. Moreover, there is no moment wherein the parties agree to establish a labor relationship.[34] Wang Tianyu further argues that the issue of bargaining power only demonstrates that a platform is a powerful player, nothing more, and that the concept of 'price is not negotiable' (价格不可议; *jiàgé bùkě yì*) should be regarded just as a standard contract clause. Its purpose is to achieve a large number of convenient transactions, and it should be regulated by competition law, not labor law. In Wang Tianyu's opinion, these elements are not sufficient to be considered the platform's labor management.[35]

Those who claim platform workers are under a 'labor relationship umbrella' (group two; positive) sill point out that the final decision much depends on the circumstances of the case at hand (group three; 'it depends on the facts of the case'). For instance, according to Xiao Zhu[36] the strong autonomy of part-time drivers under the self-owned vehicle franchise model who have short working hours and do not use online car-hailing operations as their main source of income do not have a labor relationship with the platform. However, full-time drivers under the self-owned vehicle franchise model strictly controlled by the platform company (in terms of the number of orders received, the transaction rate of assigned orders, service time and service quality, etc.) will most likely be considered workers, i.e. would be deemed to have a labor relationship with the platform[37]. The same applies to the four-party

[32] 谢增毅, 互联网平台用工劳动关系认定中外法学, 中外法学, 6, 2018, 1546-1569 (Zengyi X., *Identification of labor relations on internet platforms,* in *Peking University Law Journal*); 常凯,郑小静.雇佣关系还是合作关系? – 互联网经济中用工关系性质辨析, 中国人民大学学报, 2, 2019, 78-88. (Kai C., Xiaojing Z., *Employment relationship or cooperative relationship? – discrimination and analysis of the nature of employment relationship in the internet economy*, in *Journal of Renmin University of China*).

[33] 王天玉， 网络劳务是对劳动法的挑战吗， 中国法律评论, 6, 2018, 124 (Tianyu W., *Is Internet Labor Service a Challenge to Labor Law,* in *China Law Review*).

[34] 徐增鹏，关于闪送平台劳动关系认定的思考，中国法律评论，6, 2018, 130-132 (Zengpeng X., *Thoughts on the Identification of Labor Relations on Shansong delivery platform*, in *China Law Review*).

[35] Tianyu W., nt. (33), 121-122. Xu Zengpeng also expressed similar view: Zengpeng X., nt. (34), 130-132.

[36] 肖竹, 网约车劳动关系的认定:基于不同用工模式的调研, 财经法学, 2, 2018, 95-110 （Zhu X., *Identification of labor relations in online car-hailing: A survey based on different employment models,* Law and Economy).

[37] Alike 佟岩， 网约用工中劳动关系的认定 (Tong Yan, *Identification of Labor Relations in Online Contract Employment*) http://www.zjbar.com/info/26d91f66f7424b078e0bb0f2121468b0.

agreement model (四方协议; *sìfāng xiéyì*) in which the platform provides vehicles. Ownership of the vehicle belongs to the car rental company, the management right of the driver belongs to the labor service company, and either the platform or the driver leases the car from a rental company to complete the service chain. In such a scenario, relations between platform companies and drivers are similar to 'labor dispatch'[38] (劳务派遣; *láowù pàiqiǎn*). The platform retains strict control over services, workload, and working hours, with an option to impose penalties.[39] As for workers whose freedom to conduct work has been limited by new technologies to the extent similar to traditional dependence, Xie Zengyi labels them as 'workers who have been *platformized* due to technological development' (被平台化的工人; *bèi píngtái huà de gōngrén*)[40]. This goes together with his observation that the traditional meaning of dependence and subordination turns out to be inoperable in context of new forms of work. Even though the subordination theory（从属性理论; *cóng shǔxìng lǐlùn*）in general is mainly based on the industrialized era factory labor relationship, it has proven to be flexible and adaptable, and in result, it is not completely outdated. On the contrary, it appears still able to accommodate the labor relationships arising out of platform work. In the internet age, it is necessary to update this theory.[41] From a practical perspective, in the sharing economy 'the capital' often uses other legal relationships, such as contracting and intermediation, to conceal the true nature of labor relations, in order to reduce labor costs and maximize profits ('hidden exploitation' 隐蔽剥削; *yǐnbì bōxuè*).[42] All in all, platform workers are at a disadvantage in everything from information access to rule-making. Their work has three characteristics: loose management – but strict internal control; formal independence – but substantive labor subordination; and nominal equality of rights – but an overwhelming power imbalance in reality.[43] This suggests that platform workers should be classified as employees.[44]

The above is an outline of the three possible positions with regard to the legal status of platform work in Chinese labor law. On this basis, it appears that the vagueness of the fundamental concept of an 'worker' together with the dichotomy division of workers in the Chinese law leaves the final word on the subject matter to the judiciary. A 'judicial approach' (司法路径; *sīfǎ lùjìng*) to dealing with platform workers allows for flexibility based on individual facts of the case and specific feature of platform jobs. Disadvantages of this approach are obvious. The PRC's courts seldom confirm the existence of a labor relationship between workers and platforms. There is a concern among the Chinese judiciary that recognizing labor relationships in platform work cases may result in a 'chain reaction' (连锁反应; *liánsuǒ fǎnyìng*), leading to a sudden inclusion of a huge section of workforce within the

[38] *See* art. 57 of the Labour Contract Law of 1994.
[39] Zhu X., nt. (36), 95-110.
[40] Zengyi X., nt. (15), 118.
[41] Zengyi X., nt. (32), 1558-1561.
[42] 袁文全， 徐新鹏， 共享经济视阈下隐蔽雇佣关系的法律规制， 政法论坛, 1, 2018, 119-130 (Wenquan Y., Xinpeng X., *Legal Regulation of Concealed Employment Relationship from the Perspective of Sharing Economy*, in *Forum on Politics and Law*).
[43] Huang H., *Riders on the Storm: Amplified Platform Precarity and the Impact of COVID-19 on Online Food-delivery Drivers in China*, in *Journal of Contemporary China*, 31, 2022, 351 ff.
[44] Kai C., Xiaojing Z., nt. (32), 78-88.

scope of labor law.[45] Yet leaving the problem of workers working via internet platforms with the courts, which are likely to hear only the cases in which disputes have arisen, leaves a large number of workers uncertain about their legal position. Protection of platform workers, if granted at all, should not consist in *ex post* protection offered only to those who take the matters to court.[46] The existing 'judicial approach' to platform work suggests that the regulators in the PRC are not yet ready to comprehensively deal with the misclassification problems of platform workers and that the judiciary is left to handle the issue on its own, at least for the time being.[47]

5. Guiding Opinions of 2021 and possible further developments.

In 2021, two important *Guiding Opinions* （指导意见; ***zhǐdǎo yìjiàn***） on platform work were issued. The first is the *Guiding Opinion on safeguarding labor security rights and interests of workers in new forms of employment* (关于维护新就业形态劳动者劳动保障权益的指导意见; ***guānyú wéihù xīn jiùyè xíngtài láodòng zhě láodòng bǎozhàng quányì de zhǐdǎo yìjiàn***).[48] The second is the *Guiding Opinion on implementing the responsibilities of online catering platforms and effectively safeguarding the rights and interests of food supply personnel* (关于落实网络餐饮平台责任切实维护外卖送餐员权益的指导意见; ***guānyú luòshí wǎngluò cānyǐn píngtái zérèn qièshí wéihù wàimài sòng cān yuán quányì de zhǐdǎo yìjiàn***).[49] These *Opinions* are not binding in court proceedings,[50] which makes it extremely difficult for an individual to rely on the measures listed therein. In referring to the obligations of enterprises, *Opinions* use legally vague expressions such as to 'promote' (推动; ***tuīdòng***), 'supervise' (督促; ***dūcù***), and 'guide' （引导; ***yǐndǎo***). This creates the impression that the *Opinions* are careful not to impose any 'hard' obligations on the platform companies, nor to confer any rights or remedies on workers.[51] *Guiding Opinion on safeguarding labor security rights and interests of workers in new forms of employment* is limited to barely 19 provisions. Several of them will be cited here, to illustrate its vagueness and the difficulty it is likely to create in terms of implementation.

Point 2 of the *Opinion* reads as follows:

"*The enterprise shall conclude labor contracts with workers in accordance with the law if it meets the circumstances of establishing labor relationships. Where the enterprise does not fully meet the circumstances under which the labor relations are established but engages in labor management of the workers (hereinafter referred to* as *'not fully meeting the circumstances requiring the establishment of labor relations'* (不完全符

[45] Zengyi X., nt. (15), 111.
[46] *Ibidem*.
[47] Alike Lin O., nt. (4), 14.
[48] http://www.gov.cn/zhengce/zhengceku/2021-07/23/content_5626761.htm.
[49] http://www.gov.cn/xinwen/2021-07/26/content_5627462.htm.
[50] For more details *see*: Popov G., *China and International Labor Standards: New Guidelines Extend Labor Protections to Platform Workers*, in *New York University Journal of International Law and Politics*, 54, 2021, 132-133, available online at https://www.nyujilp.org/china-and-international-labor-standards-new-guidelines-extend-labor-protections-to-platform-workers/.
[51] Zengyi X., nt. (15), 114.

合确立劳动关系情形; *bù wánquán fúhé quèlì láodòng guānxì qíngxíng*), *it shall guide the enterprise to conclude a written agreement with workers and reasonably determine the rights and obligations of the enterprise and workers. Individuals who rely on the platform to independently carry out business activities, engage in freelance jobs, etc. adjust the rights and obligations of both parties in accordance with civil laws".*

Point 6 reads as follows:

"Improve the rest system, encourage industries to clarify the labor quota standards (劳动定员定额标准; *láodòng dìngyuán dìng'é biāozhǔn*),[52] *and scientifically determine the workload and work intensity of workers. We urge enterprises to implement reasonable rest measures in accordance with regulations and pay reasonable remuneration at a rate higher than that applicable during normal working hours on statutory holidays".*

Point 9 reads as follows:

"*Strengthen occupational injury protection, focus on platform enterprises in the industries of travel, takeout, instant delivery and intra-city freight, and organize and carry out pilot programs of occupational injury protection for flexible workers on the platform. Platform enterprises shall participate in these programs according to regulations. The government should take the approach of combining the guidance of information technology and by using societal forces* (社会力量; *shèhuì lìliàng*) *to establish and improve the standard and operation mechanism of occupational injury protection management services. Platform enterprises are encouraged to purchase commercial insurance, such as personal accident insurance for the workers, and employer liability insurance, to improve the level of protection for flexible workers on the platform".*

In general, the fact that the *Opinions* were issued tends to confirm the authorities' genuine interest in determining platform workers' legal position and in identifying new directions and goals for future development.[53] Therefore, further laws and regulations are excepted to be passed. The matters likely to be addressed soon include: 1) the burden of proof in determining the existence of a labor relationship in platform work, 2) further conceptualization of the third category of workers, 3) the extension of certain labor rights to platform workers.[54]

At least two ways of preventing platform workers from being misclassified are under consideration in China right now. One is a statutory presumption (推定规则; *tuīdìng guīzé*) that platform workers whose working hours exceed the minimum threshold are considered in principle to be employees, unless they are independent contractors or explicitly self-employed.[55] The second is a rule of shifting the burden of proof (举证责任转移; *jǔzhèng zérèn zhuǎnyí*) in cases where the existence of a labor relationship is to be determined by the courts. The platform workers should only need to provide the court with evidence of 'a few basic facts' (较少基本事实; *jiào shǎo jīběn shìshí*), and then it would be on the platform to demonstrate

[52] In the Opinion, 'labor quota standard' means 'fixed number of workers needed for a job'.
[53] Zengyi X., nt. (15), 114.
[54] *Ibidem*, 114.
[55] *Ibidem*, 120.

that the relationship is not a labor relationship. Both instruments may theoretically help protect platform workers. However, the latter seems to be more appropriate in the Chinese context.[56]

Some Chinese scholars support the idea of introducing a new category of 'third type of subjects'/ 'employee-like workers', (第三类主体; *dì sān lèi zhǔtǐ*, 类雇员; *lèi gùyuán*), namely workers positioned between the 'traditional worker' and 'independent contractor'.[57] This new category of workers attributed with a list of rights should be broad enough to cover new forms of work, including platform work. The main points discussed regarding the 'third type of subjects' system in the PRC are as follows: 1) Chinese labor law needs to work out a comprehensive definition of the 'third type of subjects', 2) the dichotomy between employment and self-employment in China is not yet fully theoretically elaborated, so the introduction of a third type of workers may lead to further confusion, 3) the legislator needs to decide which labor and social security rights the workers in this third category should be granted, 4) if workers in this third category are to have fewer rights, companies will have a stronger incentive to convert their workforce into the workers of this third category; if numerous rights are to be granted to the third category, the newly established group may not be easily distinguished from traditional workers, 5) comparative research (for instance in the UK and in Spain) demonstrates that vague definitions tend to lead to more misclassifications and covert cases of labor relationships.[58]

In view of these issues, Xie Zengyi discusses how the introduction of the 'third category of subjects' may not be beneficial to platform workers, because of room for possible misclassification in a three-tier system of labor law: employees may be downgraded and independent contractors upgraded to the third category.[59] Xie Zengyi argues that the introduction of a third category of workers could lead to regulatory arbitrage as well as difficulties both theoretical and practical. He concludes that at this stage, if the PRC brings in the concept of a 'third type of subject' (第三类主体; *dì sān lèi zhǔtǐ*), such as 'worker' (工人; *gōngrén*) or 'quasi-employee' (类雇员; *lèi gùyuán*), in addition to existing concepts of 'employee' (劳动者; *láodòng zhě*) and 'self-employed persons' (自雇者; *zì gù zhě*), the entirety of Chinese labor law will face conceptual changes. His concern is that labor law theory and practice in China are immature at the moment, and in result, these revolutionary changes may create significant challenges.[60]

In this context, Xie Zengyi suggests following not the 'third subject' (第三类主提; *dì sān lèi zhǔ tí*) method but the 'third way' (第三类经路; *dì sān lèi jīng lù*). The 'third way' is

[56] *Ibidem*, 120.
[57] 肖竹，第三类劳动者的理论反思与替代路径，环球法律评论, 6, 2018, 79-100 (Zhu X., *Theoretical reflection and alternative path of the third type of workers*, in *Global Law Review*); 班小辉，论分享经济下我国劳动法保护对象的扩张:以互联网专车为视角，四川大学学报, 2, 2017, 159-161 (Xiaohui B., *On the expansion of protection objects of Chinese Labor Law under the sharing economy: from the perspective of Internet chauffeured car*, in *Journal of Sichuan University*); 粟瑜, 王全兴, 我国灵活就业中自治性劳动的法律保护, 东南学术, 3, 2016, 107-112 (Yu S., Quanxing W., *Legal protection of autonomous labor in flexible employment,* Southeast Academia); *see* also 王天玉，互联网平台用工的'类雇员'解释路径及其规范体系，环球法律评论, 3, 2020, 85 ff. (Tianyu W., *The interpretation of 'quasi-employee' on internet platform employment and its regulatory system*, in *Global Law Review*).
[58] Zhu X., nt. (36), 79-100.
[59] Zengyi X., nt. (15), 115.
[60] *Ibidem*, 116.

conceptualized as a method of defining the status of platform workers and their specific rights and interests. Instead of introducing new legal concepts, it would be better if the legislator granted platform workers certain specific labor rights. In this sense, the 'third way' consists in extending specific existing labor rights (not the full scope of these rights available to employees) to platform workers.

In all likelihood, these two approaches will be applied by the Chinese legislator, either alternately or complementarily. *Opinions* demonstrate that China is on its way towards introducing a concept of workers *'not fully meeting the circumstances requiring the establishment of labor relations'* (不完全符合确立劳动关系情形; ***bù wánquán fúhé quèlì láodòng guānxì qíngxíng***), which will be probably defined and improved in the legislation soon.[61] Moreover, *Guiding Opinion on safeguarding labor security rights and interests of workers in new forms of employment* suggests which labor rights will be extended to platform workers. These will likely be safeguards regarding antidiscrimination,[62] health and safety,[63] labor dispatch,[64] working time,[65] minimum wage,[66] occupational injury protection,[67] and the right to join trade unions.[68] One more potential right is related to platform algorithms (算法; ***suànfǎ***); it will be further elaborated below.

Algorithms have the potential to jeopardize platform workers' rights and interests: 1) algorithmic rules on allocation of work tasks, work control, as well as reward and punishment are often unilaterally set by the platform, 2) platform workers lack the right to speak in this respect, which often leads to introducing unfair algorithmic rules. Algorithms in platform work have been described as 'not transparent and not reasonable' (不透明、不合理; ***bù tòumíng, bù hélǐ***).[69] Moreover, to avoid supervision, basic data about operations and employment are often hidden from the public by platform companies. However, algorithms can generate discrimination and bias, and it is difficult for workers to effectively argue their position in cases of objections regarding the operation of algorithms. For instance, the high proportion of workers on whom fines and penalties are imposed by algorithms suggests that platform rules are too strict and insufficiently transparent.[70] Therefore, it has been voiced that algorithms should be carefully regulated.[71]

Point 10 of the *Guiding Opinion of 2021* supports this idea. It reads as follows:

"Urge enterprises to formulate and revise the system rules and platform algorithms directly related to the rights and interests of workers, such as platform entry and exit, order distribution, piece rate unit price, percentage, remuneration composition and payment, working hours, rewards and punishments. Fully listen to the opinions

[61] *Ibidem*, 114.
[62] *Guiding Opinion on safeguarding labor security rights and interests of workers in new forms of employment*, point 4.
[63] *Ibidem,* point 7.
[64] *Ibidem,* point 3.
[65] *Ibidem,* point 6.
[66] *Ibidem,* point 5.
[67] *Ibidem,* point 9.
[68] *Ibidem,* point 17.
[69] Zengyi X., nt. (15), 108.
[70] *Ibidem*, 108-109. *See* more: Sun P., *Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China*, in *Chinese Journal of Communication*, 12, 3, 2019, 308-323.
[71] Zengyi X., nt. (15), 119.

and suggestions of trade unions or workers' representatives, publicize the results, and inform workers. Where the trade union or the labor representative puts forward a request for consultation, the enterprise shall respond positively and provide the necessary information and materials. Guide enterprises to establish and improve the mechanism for workers' complaints to ensure that workers' complaints are answered in a timely manner and dealt with objectively and fairly".

Report on the development of the sharing economy in China (2022) emphasizes that by issuing *Opinions*, the authorities have expressed a requirement for platform companies to reasonably formulate order distribution, piece rate unit price, percentage, reward composition and payment, working hours, rewards and punishments and other system rules and platform algorithms. The report also proposes the replacement of the 'strictest algorithm' (最严算法; *zuì yán suànfǎ*) with the 'algorithm takes the middle' (算法取中; *suànfǎ qǔ zhōng*).[72] On this basis, Xie Zengyi lists the following rights that should be granted to the platform workers regarding algorithms:

- The right to know (对平台规则和算法的知情权; *duì píngtái guīzé hé suànfǎ de zhīqíng quán*). Workers should have the right to know in advance the rules of the platform concerning entry and exit, assignment of work, working hours, remuneration of work, work standards and rewards and punishments, and the corresponding algorithmic results, which should be made known to workers in an accessible manner.
- The right to participate in formulation of algorithm rules (工人有权参与算法规则的制订; *gōngrén yǒu quán cānyù suànfǎ guīzé de zhìdìng*). Workers should participate in the formulation of these rules in an appropriate way, which is also an important reflection of the exercise of collective rights by platform workers.
- Personal information rights (个人信息权益; *gèrén xìnxī quányì*). In order to implement the algorithm, the platform needs to collect a large amount of workers' personal information. This personal information should be protected.
- The right to internal appeals and remedies (内部申诉和获得救济的权利; *nèibù shēnsù hé huòdé jiùjì de quánlì*). Workers should have the right to challenge the platforms' and the algorithms' decisions. Platform should establish an internal grievance mechanism and a dispute resolution mechanism in order to properly handle conflicts with workers and to avoid unfair and unreasonable treatment or punishment.

The conceptualization of rights regarding algorithms is a work in progress in the PRC. On 1 March 2022, the *Regulations on the Administration of Algorithm Recommendations for Internet Information Services* (互联网信息服务算法推荐管理规定; *hùliánwǎng xìnxī fúwù suànfǎ tuījiàn guǎnlǐ guīdìng*)[73] entered into force. Article 2 of the *Regulation* defines 'algorithm recommendation technology' (算法推荐技术; *suànfǎ tuījiàn jìshù*) as *information to users by means of such algorithm*

[72] *Report on the development of the sharing economy in China (2022)*, nt. (13), 12. *See* also more on much-debated report *Delivery Workers, Trapped in the System* (外卖骑手，困在系统里), in *ChuangBlog*, 12 November 2020, https://chuangcn.org/2020/11/delivery-renwu-translation/.
[73] http://www.gov.cn/zhengce/zhengceku/2022-01/04/content_5666429.htm.

technologies as generation of synthetic classes, personalized push classes, sorting and selecting classes, retrieval and filtering classes, scheduling and decision-making classes, etc. The overall aim of the *Regulation* is to establish a legal framework for the functioning of the Internet, in line with the *Plan of 2021*.[74] The new legislation concerning the use of algorithms is intended to ensure the healthy development of the digital economy (with its core components – 'data, algorithms and computing power' (数据、算法、算力; ***shùjù, suànfǎ, suàn lì***). This is because the PRC leadership expects very fast developments in areas related to AI (which includes swift progress in the area of recommendation algorithms). This has the potential to bring both significant benefits and significant risks. Therefore, China aims to create a 'trustworthy AI' (可信人工智能; ***kě xìn réngōng zhìnéng***) ecosystem that enhances AI's explainability, accountability, and controllability.[75] The new legislation, on the one hand, is aimed at shaping the behavior of technological enterprises to become more transparent in the realm of recommendation algorithms. On the other hand, it intends to mitigate the risks associated with the use of recommendation algorithms, including unfair competitive practices, Internet fraud, Internet addiction, and excessive consumption.

One provision of the *Regulation* refers directly to platform workers. Article 20 reads as follows:

"*Where an algorithm recommendation service provider provides work scheduling services to workers, it shall protect laborers' legitimate rights and interests in obtaining labor remuneration, rest and vacation, and establish and improve algorithms related to order distribution, remuneration composition and payment, working hours, rewards and punishments on the platform* ".[76]

Compared to the *Opinions*, the *Regulation* is a more powerful instrument in terms of direct applicability: it may serve, for instance, as the legal basis for administrative penalties. For example, Articles 31-33 stipulate algorithmic service provider's liability for non-compliance with its provisions.

6. Conclusions.

This paper notes that the current legislation and judicial practice in China come short of providing effective protection for platform workers' legitimate rights and interest. Appropriate safeguards for the legitimate interests of platform workers may be built into 'innovative legislation' (创新立法; ***chuàngxīn lìfǎ***).[77] Such innovative legislation for platform

[74] The PRC has already made its first steps in this regard by issuing the Cybersecurity Law (网络安全法), the Data Security Law (数据安全法), and the Personal Information Protection Law (个人信息保护法). All these laws are aimed at establishing a systematic regulatory framework for Artificial Intelligence.
[75] 可信人工智能白皮书, 2021 (China Academy of Information and Communications Technology (CAICT), *White Paper on Trustworthy Artificial Intelligence*, JD Explore Academy https://cset.georgetown.edu/wp-content/uploads/t0390_trustworthy_AI_EN.pdf).
[76] 第二十条 算法推荐服务提供者向劳动者提供工作调度服务的，应当保护劳动者取得劳动报酬、休息休假等合法权益，建立完善平台订单分配、报酬构成及支付、工作时间、奖惩等相关算法。
[77] Zengyi X., nt. (15), 122.

work includes the following potential developments: 1) the introduction of a 'third category' (第三类主体; *dì sān lèi zhǔtǐ*) of workers, 2) taking the legislative strategy of the 'third way' (第三经路; *dì sān jīng lù*), 3) shifting the burden of proof (举证责任转移; *jǔzhèng zérèn zhuǎnyí*) in cases of determination of the existence of a labor relationship, 4) possibly expanding the scope of labor law regulations to platform workers who are not employees, 5) introducting regulations on algorithms in platform work.

The paper aims to leave the reader with the general impression that platform work in China has generated similar, if not identical, legal problems as those discussed in the West and by now partially resolved in European countries and the USA.[78] China is currently working on developing its own model 'with Chinese characteristics' (中国特色; *Zhōngguó tèsè*), adapted – as always – to the Chinese circumstances in terms of time, culture, politics, and ideology.[79]

[78] *See* for instance the whole special issue in Comparative Labor Law & Policy Journal, 41, 2, 2020; *Platform Work in Europe*, Carinci M.T., Dorssemont F. (eds.), Intersentia, Cambridge-Antwerp-Chicago, 2021; Kocher E., *Digital Work Platforms at the Interface of Labour Law*, Bloomsbury Publishing, New York, 2022; or Gyulavári T., Menegatti E. (eds.), *Decent Work in the Digital Age. European and Comparative Perspectives*, Bloomsbury Publishing, New York, 2022.

[79] A good introduction to the subject of 'Chinese characteristics' is offered by Boer R., *Socialism with Chinese Characteristics. A Guide for Foreigners*, Springer, Berlin, 2019.

8

Does playing with time elasticity alter its quality? Concerns about technologically-induced existential alienation of workers.

Eva Lacková*

1. Preliminary remarks. 2. Metamorphosis of time and work intensity. Consequences for the meaningfulness as legal category. 3. Digital contamination of non-working time. 4. Work scheduling and the threat of regulatory hack. 5. Final conclusions.

1. Preliminary remarks.

In a pivotal scene of classic masterpiece Modern Times, Charlie Chaplin's character, a worker in a factory, is assigned to a conveyor belt of an innovative machine that enables to save time and increase productivity. After a while of an unsustainable pace of work, Chaplin falls on the conveyor belt and lets himself be swallowed by a machine, where he becomes another cog in wheels of the factory. Arguably, the same situation has been described – in a rather technical and refined manner – by an Italian labour law scholar Gaetano Vardaro in his groundbreaking 1986 essay "*Tecnica, tecnologia e ideologia della tecnica nel diritto del lavoro*".[1] According to Vardaro, the new technologies have the ability to metaphorically swallow the employee, both in his role of the bearer of the rights, as well as in its purely existential, human meaning.

Chaplin's character, as well as worker in Vardaro's essay, share a destiny of a subordinated employee of 20th century. First labour law interventions, directed to limit working hours in order to protect employees' health and safety, had a paradoxical effect on labour intensity – the less the working day lasted, the higher performance was required from worker during that limited time.[2]

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[1] Vardaro G., *Tecnica, tecnologia e ideologia della tecnica nel diritto del lavoro,* in *Politica del Diritto*, 1, 1986.

[2] *Ibidem*, 102.

In the factory presented by Chaplin the work flows in the technologically inducted rhythm. If the employee fails to follow the timeframe set by machine to conduct work, he surrenders to his own desperation, throws himself to a chute and disappears in the machine. The power of this metaphor does not stand exclusively in illustrating the dependency of human work on the technology – even if the external control of worker by (or through) technological devices is anything but irrelevant – but in the internal, personal sense of alienation towards it. As Vardaro puts it "worker's way of thinking must bend to the logic of the machine".[3] In his opinion, the notion of subordination should incorporate this attitude of being dominated by the technology which controls how should one work and when. He calls for "an intertwined consideration of technical and existential subordination, thus taking into account simultaneously not only the duration (and the intensity) of the work performed, but also its repercussions on the existence of worker".[4] New dimension of subordination would therefore consist also in existential alienation and thus "in awareness of the temporality of one's existence".[5] Such assumptions must be followed with inevitable question: should the concept of worker's existence and his life-time be considered as relevant under the labour law, and if so, how?

Now, apart from the wages, working time and its organisation are the working conditions with the most impact on the quality of employee's life.[6] The beginning of labour law regulation is inexplicably linked to normative acts pursuing reduction of working hours, especially for fragile groups of workers, i.e. children and women. Moreover, Treaty of Versailles, when proclaiming the establishment of International Labour Organization ("ILO") in order to achieve universal peace among the nations, considered of utmost importance for such quest the adoption of working time standards as eight hours day and weekly rest.[7] The aforementioned rights were placed only on the fourth and fifth position on the overall list of ILO's founding principles, after being understandably surpassed only by the labour is not (merely)[8] a commodity rule, freedom of association and right to a fair salary.

Traditionally legal scholarship considers the twofold function of time in labour relations: on the one hand, time acts as a standard by which the value of the work can be financially evaluated, and on the other hand it sets the boundaries of employer's intervention in

[3] *Ibidem*, 123. Also, Marx, describing the reverse roles of humans and machines: "The worker's activity, reduced to a mere abstraction of activity, is determined and regulated on all sides by the movement of the machinery, and not the opposite", Marx K., *Grundrisse der Kritik der politischen Ökonomie [Grundrisse: Foundations of the critique of political economy*], Penguin Books, London, 1973, 692-693.
[4] Vardaro G., nt. (1), 123.
[5] *Ibidem*, 93.
[6] ILO, *General Survey Concerning Working-Time Instruments: Ensuring Decent Working Time for the Future,* International Labour Office, Report III, part B, 107th session, Geneva, 2018, par. 4, 271, available online: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_618485.pdf.
[7] Treaty of Versailles, Part XIII, Section I – Organization of labour.
[8] As opposed to shorter "labour is not a commodity" principle enshrined in the Declaration of Philadelphia from 1944, article 427 of the Treaty of Versailles includes the word merely that aims to express that labour is also an activity with a productive character with economic value. *See* Hendrickx F., *Foundations and Functions of Contemporary Labour Law*, in *European Labour Law Journal*, 3, 2, 2012, 110-114. https://doi.org/10.1177/201395251200300202.

employee's life.[9] Subordination is, therefore, marked by temporal limits, and everything situated outside is considered free time – time of inactivity, rest period, time-off, non-work time.[10]

Under Article 1, paragraph 2 lett. a) and b) of the Legislative Decree No. 66/2003, free time (rest period) is defined negatively as any period of time outside of working time, which then is considered a period when employee is at work, available to the employer or exercising its activities or functions. Two notions operate as perfect opposites, one excluding the other. However, while the behaviour during the working time gets heavy regulation from labour law, free time falls outside its scope and thus "is insulated from the contracting party's life time, thereby legally ratifying the economic fiction that work is detachable from the worker".[11] Naturally, the lack of regulation does not release worker's free time from existential alienation, even further emphasised by the concept of time-off between different work performances.[12]

In addition to being inadequate from existential alienation standpoint, the working time/free time dichotomy does not stand well under the pressure of fissured labour market. In contingent contractual working arrangements such as intermittent or on-demand work, or even with regards to the time of unemployment between the jobs on flexible positions, the third category of time – "waiting time"[13] – plays an important role. Clearly, today time as a labour law category transcends the boundaries of classical working hours. In fact, work activity is less and less measurable on the basis of abstract units of time, since it includes aspects that until recently belonged to the sphere of ethos, cultural consumption, aesthetic tastes, emotions and more generally of life beyond the work;[14] all this with inevitable repercussions on the autonomous management of the time of one's life.

Traditional analysis of time in relation to human labour sees it through the lens of quantitative approach, applied both on the time managed by employer and the one on employee's disposition. The problem with a mere quantitative assessment of labour law founding categories is that it does not fully reveal their essence. According to Alain Supiot, regulations of working time from the sole standpoint of companies or the organisation of paid work turns out to be inadequate, since it "brings into play the very story line of human

[9] European Commission, Directorate-General for Employment, Social Affairs and Inclusion, *Transformation of labour and future of labour law in Europe: Final Report*, Publications Office, Luxembourg, 1999, 45-46. *See* also Vardaro G., nt. (1), 95.
[10] In Italian scholarly literature the expression "non-work time" is commonly used. *See* Ghera E., Garilli A., Garofalo D. (eds.), *Diritto del lavoro,* Third edition, G. Giappichelli Editore, Turin, 2017, 169.
[11] European Commission, Directorate-General for Employment, Social Affairs and Inclusion, nt. (9), 48.
[12] Vardaro G., nt. (1), 102.
[13] *Tertium genus* in this discourse conveys the idea of "a temporality that is not only full of anguish, but which is also to be used practically if one wants to reduce its temporal extension, increasing professionalism, skills and employability to be spent in that particular relationship or in another". Martelloni F., *Metamorfosi del lavoro e polisemia del tempo: riconoscerlo, proteggerlo, remunerarlo*, in *Archivio giuridico*, Vol. 2, 2019, 259. https://doi.org/10.1400/270299.
[14] *Ibidem*, 261.

life".[15] That is why international labour scholarship has been calling for more complex evaluation of working standards.[16]

2. Metamorphosis of time and work intensity. Consequences for the meaningfulness as legal category

Nature of time has changed since Chaplin's era. Inside the factory standardised working hours used to be as immobile and solid as all the technological equipment placed on the ground. Time was the means that needed to be managed prudently in order to maximise the return value.[17] Today its effectiveness as the means of obtaining value tends to reach infinity because labour can be virtually separated from the factory and even from the worker.[18] Let's imagine working time in Chaplin's factory as a heavy block of concrete – immobile yet breakable into smaller, more manageable pieces. It could have very well preserved its original quality even if divided into fractions and it still did not crumble under pressure. Conversely, in the digital era working time has turned into an amorphous rubber that can easily stretch beyond its normal size and take any unusual forms. Moreover, it could be tear down by the employer into many irregular pieces of various density. The quality of time spent on work thus cannot be evaluated without taking in consideration both its intensity and its elasticity.

It seems rather obvious that working time losing its typical homogeneity affects profoundly the way it should be evaluated. Considering the ever more evident segmentation of working time, where every individual period bears very different characteristics in terms of utility and/or work quality:[19] one could observe the disparity between labour-intensive moments of a working day as compared to aforementioned waiting periods designated to pure human surveillance over the technology or even to waiting for a task assignment. Attempts to measure job quality (and with it the quality of working time) were first articulated on EU level in 2001, with a pioneering initiative called Laeken indicators. Although inadequate in many aspects,[20] they managed to open a discourse on the issue. Many of the subsequent actions taken by international or supranational bodies included also the concept

[15] European Commission, Directorate-General for Employment, Social Affairs and Inclusion, nt. (9), 76.
[16] De Stefano V., *Negotiating the algorithm: Automation, artificial intelligence, and labor protection*, in *Comparative Labor Law & Policy Journal*, Vol. 41, 15-4, 2019.
[17] Authors refer to the breaking of the Aristotelian scheme based on the unity of time, place and action. *See* Cuttone M., *Oltre il paradigma dell'unità di luogo tempo e azione: la revanche dell'autonomia individuale nella nuova fattispecie di lavoro agile*, in Verzaro M. (ed.), *Lavoro agile nella disciplina legale collettiva ed individuale*, Jovene Editore, Naples, 2018, 66 ff.
[18] Bauman distinguished between hardware era and software era, meaning (with reference only to work) the former the solid, Fordist-type of employment, and the latter the liquid modernity of disembodied capital and ephemeral employment relationships. Bauman Z., *Modernità liquida,* Editori Laterza, Bari, 2011, 127-137.
[19] De Luca Tamajo R., *Il tempo di lavoro (il rapporto individuale di lavoro),* in *Il tempo di lavoro: atti delle giornate di studio di diritto del lavoro*, Genoa, 4th-5th of April 1986, Giuffrè, Milan, 1987, XI, 33 -34. The author describes the time in specific working sectors as composed of different "layers of utility".
[20] The weakest spot of Laeken indicators was represented by the choice of indicators incapable to describe the quality of the working environment, for example hours worked and the nature of work tasks were not included among them. *See* OECD, *OECD Guidelines on Measuring the Quality of the Working Environment*, Chapter 2, OECD Publishing, Paris, 2017. http://dx.doi.org/10.1787/9789264278240-en.

of work intensity as a barometer of work environment, warning about excessive workload and fast pace having negative impact on a job quality and leading to risks for psychological health and for workplace safety in general.[21]

Work intensity (*rectius* time density) represents the "internal structure of working time" able to "transcend the traditional quantitative parameters".[22] Intensity of work can be generally determined by factors linked to the way the company is organised. If the predominant form of organisation is industrial, it means that pace of work depends, for the most part, on the production tools, production targets or collective work organisation. If, conversely, the company has the nature of commercial undertaking, the pace of work will be determined by external demand and market fluctuations.[23] Needless to say, modern companies do not fit in these two ideal models, but rather combine their characteristics. For example, drivers of ride-hailing companies like Uber operate within an organisation model strictly determined by customer demand, hence labour intensity would be directly linked to external factors. Nevertheless, digital application serving as interface between company and potential clients directly coordinates task allocation among drivers and must be considered company's internal production tool, resulting in both internal and external factors influencing labour intensity.[24]

The use of labour-intensifying technology in a modern workplace comes with some negative consequences. Beyond all the scaremongering about the jobs that will be lost due to technological progress[25] lies even more urgent issue of job deskilling. When the visions of those who believed in technological utopia – the world where machines eventually free the men from drudgery of work – were criticised, it was argued that there could very well be a replacement of men by machines, but only to extent to reduce the labour to "a short turn of some crank".[26] Also Marx's claims about machinery intensifying labour were based on the grounds of technological deskilling. Only when worker's skills are incorporated into machinery, employer (i.e. master of technology) can control work intensity by controlling the speed of machinery and the number of machines the worker must tend to.[27] In this fashion

[21] EMCO, *Quality in Work – Thematic Review*, EU Employment Committee, 2010.
[22] De Luca Tamajo R., nt. (19), 5.
[23] Boisard P., *Time and work: work intensity*, Eurofound, Office for Official Publications of the European Communities, Dublin, Luxembourg 2003, 1-2.
[24] Listing Uber as typical modern employer comes from already confirmed and unwavering tendency of European judges to acknowledge its drivers as employees (in UK case – workers). For case-law overview *see* De Stefano V., Durri I., Stylogiannis C., Wouters M., *Platforms work and the employment relationship*, ILO Working Paper No. 27, ILO, Geneva, 2021.
[25] The questions about job deskilling and displacement caused by technology have been widely dealt with since the dawn of industrial revolution. Despite reigning academic consensus trying to calm down the excitement and fear brought by every potential technological change in the employment, the discussants in all generations were oftentimes stuck in repeating the recurrent pros and cons of "new" technologies in the world of work. For an extensive study of the debate *see* Cherry M. A., *Job Automation in the 1960s: A Discourse ahead of Its Time (and for Our Time)*, in *Comparative Labor Law & Policy Journal*, Vol. 41, 1, 2019, 197-220; also Finkin M. W., *Technology and Jobs: The Agony and the Ecstasy,* in *Comparative Labor Law & Policy Journal*, Vol. 41, 1, 2019, 221-234.
[26] Thoreau H. D., *Paradise (to be) regained,* in *The United States Magazine and Democratic Review*, 13.65, 1843, 451-63. A review of Etzler J. A., *The Paradise within the Reach of all Men, without Labor, by Powers of Nature and Machinery: An Address to all intelligent men, in two parts*, 1843.
[27] Marx K., *Capital. A critique of political economy*, Vol. I, Progress Publishers, Moscow, 1867, 373-374, available online: https://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-I.pdf.

worker's technological subordination alters and further deteriorates his relation with working time, increasingly perceived as a mere presence.[28]

Contemporary advantage of digital technology over worker thus lies in its complementary character. Workers are being stripped off their skills and abilities which are being imitated by sophisticated technology and algorithms. On that note, studies have been conducted to demonstrate possibility of computerization not of whole jobs (composed of plurality of tasks) but of single tasks, and therefore without risk of technological unemployment as such, but rather deskilling.[29] Workers must rely on those human traits that technology is still not able to replicate and fine-tune. Human workers are put at the margins of the technology, so they can do what technology cannot do. According to some authors[30] we are entering in another evolutionary stage of automation called heteromation, characterised by inversion of its complementarity – in automation, technology took over the tasks that humans could not do with ease and efficiency, in heteromation the opposite is the case. Some of low skilled crowdworkers – such as "turkers" from the Amazon Mechanical Turk platform – represent an obvious example of heteromation. Army of always-ready invisible workers carries out a myriad of small human-intensive tasks and the technology gets the credit for the job well done.[31]

Lastly, the intrinsic elasticity and irregular intensity of "digital working time" reflect on worker's perception of its quality and, ultimately, the meaningfulness of the time spent at work. Now, meaningfulness of work, although popular research topic among psychology and management scholars,[32] does not get attention from labour law experts due to its perception as inherently personal attitude depending on individual ethics of subjects concerned.[33] However, most available definitions of meaningful work consider it miscellaneous construct that generally entails at least some of following features: pursuing a purpose, autonomy, social relationships, recognition, self-esteem, exercising skills and self-development.[34] For the sake of this argument all of aforementioned attributes contribute in equal parts to the sense of meaningfulness. While some of them are traditionally studied by

[28] Vardaro G., nt. (1), 122.
[29] David H., *The "task approach" to labour markets: an overview.* in *Journal for Labour Market Research*, Vol. 46, 3, 2013, 185-199. https://doi.org/10.1007/s12651-013-0128-z.
[30] Ekbia H. R., Nardi B. A., *Keynes's Grandchildren and Marx's Gig Workers: Why Human Labour Still Matters*, in *International Labour Review,* Vol. 158, 4, 2019, 653-676. https://doi.org/10.1111/ilr.12146.
[31]Work fragmentation belongs to symptoms of heteromation. Not only splitting jobs into smaller aggregates of tasks entails a possible increase in work intensity with possible health and safety concerns (case of Amazon), but also time spent on executing the work performance is rendered meaningless.
[32] For an extensive summary on literature in this field *see* Bailey C., Yeoman R., Madden A., Thompson M., Kerridge G., *A review of the empirical literature on meaningful work: progress and research agenda*, in *Human resource development review*, Vol.18, 1, 2019, 83-113. https://doi.org/10.1177/1534484318804653.
[33]Such approach would see meaningful work as a result of inner psychological quest of each employee rather than something that can be supplied by an organization, its leaders or through job design initiatives. This theory analyses meaningfulness of work as purely dependent on individual character traits, capabilities, experiences and preferences and thus releases employers from burden of creating the meaning within the work organization. *See* Lips-Wiersma M., Morris L., *Discriminating between "meaningful work" and the "management of meaning*", in *Journal of business ethics*, Springer, 2009, 503 -505. https://doi.org/10.1007/s10551-009-0118-9.
[34]Interesting perspective on how these aspects of meaningful work can change with introduction of robotics in a workplace is offered by Smids J., Nyholm S., Berkers H., *Robots in the workplace: a threat to – or opportunity for – meaningful work?* in *Philosophy & technology*, Vol. 33, 3, 2020, 503-522. https://doi.org/10.1007/s13347-019-00377-4.

organisational psychology as highly subjective attitudes, others fall under more objective theories. Objectively valued work-related features of meaningfulness are autonomy, exercising skills, self-development and, under certain circumstances, also social relationships. Arguably they could constitute suitable subject-matter for labour law in the extent they influence the working conditions and the sense of alienation of worker.

Therefore, on the one hand the meaning of work could be seen as individual and/or social gratification and consequently differ from one person to another; on the other hand the meaningfulness comprehends an objective value as well, which has been ascribed to areas of autonomy and task content and quality. Such features are easily measurable and could provide a solid foundation for legislator's intervention. However, in order to create a plausible legal concept of meaningful (subordinated) work there is still one element missing from the equation – the alienation, or rather its absence. Worker's impossibility to express himself through work process translates into sense of alienation.[35] Fragmented, repetitive and dull tasks make it difficult to manifest worker's individuality and values through working process, triggering a sense of alienated, meaningless work. Here is where the theory of meaningful work as a legal concept meets Vardaro. Meaninglessness touches the same personal area of worker as the concept of existential alienation coined by Vardaro, in that it affects the perception of worker's time at work as a mere presence. And since – according to said scholar – the technologically enhanced concept of subordination contains also this negative existential aspect, it would mean that the vast majority of employment would be subject to the loss of meaning. So, in conclusion, if only alienated, meaningless work is available in the labour market, legislator should definitely embrace the issue with such degrading societal consequences in order to establish a "truly human labour regime".[36]

3. Digital contamination of non-working time.

In addition to labour intensity harming the quality of working time without touching its quantitative parameters, stretching worker's availability beyond formal timeframe results as equally detrimental. New technologies, namely portable devices enabling constant connection like mobile phones or tablets, furthermore, exacerbated abusive culture of overworking already existing in the classical workplace, and brought it outside the four walls of the office. Sometimes workers are motivated to show the commitment to the employer (as giving the full availability could be one of the crucial aspects in climbing the company ladder) or simply to safeguard their position. However, it is not unusual that employers expressly request "always on" attitude from their employees. At any rate, working unpaid

[35] Marx pointed out the need for worker to objectify his individuality, to see manifestation of his life during the activity. *See* Marx K., *Marx's notebook comments on James Mill, Elements d'economie politique*, 1844, available online https://www.marxists.org/archive/marx/works/download/Marx_James_MIll.pdf.

[36] Reference is to French translation of "humane conditions of labour" included as a goal in the preamble of ILO Constitution from 1919. Supiot A., *Labour is not a commodity: The content and meaning of work in the twenty –first century*, in *International Labour Review*, Vol. 160, No.1, 2021, 5. https://doi.org/10.1111/ilr.12205.

additional hours,[37] whatever is the motivation, takes away chunks of employee's free time. Workers lose the dominion over their own time and thus over their own existence, further confirming Vardaro's thesis of technological subordination as alienation from the very existence of worker.[38]

It has been already argued here that the division in working time and free time creates the illusion that work is detachable from worker. Even when a common worker "Gregor Samsa woke from troubled dreams and found himself transformed in his bed into a monstrous vermin",[39] his mind wonders almost immediately towards the job he hates. Right after the perfectly justifiable "What's happened to me?" follows, strangely incoherent exclamation "Oh, God, what a strenuous career it is that I've chosen!". Interestingly enough, it is not his new condition that distresses him the most, but rather the risk it which it puts his livelihood. Ticking alarm clock in his room reminds Gregor about the train to catch – the two ideal representations of technological innovation that have accompanied the (r)evolution of the workplace. The Kafkaesque preoccupation about Gregor's work duties instead of existential transformation into a giant insect brilliantly underlines the human struggle to disconnect, further enhanced by the omnipresent *technè*.

One could assert that participation in the work process represents one of the types of human movement in space and time. This participation is inherently discontinuous in contrast to the continuity of life manifestations. People transfer their non-working problems to the period of work and, conversely, they transmit work problems back to the rest of their life. Arguably, these influences and conditionings are further intensified in connection with the engagement of new technologies inside and outside of the workplace.

Widespread use of internet and smart phones transformed hetero-organization into "obligation of connectivity".[40] The right to disconnect, coined for the first time in France,[41] should release the employees from the burden of continuous availability. Its Italian regulation emerged with the Law No. 81/2017, when, pursuant to Article 19, paragraph 1, included "technical and organizational measures necessary to ensure the disconnection of workers

[37] The term "presenteeism" was coined to address the critical issue of working long hours at the expense of worker's low productivity, health problems and job dissatisfaction. Consequently, it turns out to be very costly for the whole economy, supporting medical costs of mental and other illnesses and unproductive workforce. The overall cost in UK was estimated at 15 billion dollars per year compared to the opposite phenomenon - the absenteeism - weighing only 8 billion a year on the British economy. On the subject-matter *see* the authors of the notion: Cooper C.L., Lu L., (eds.), *Presenteeism at work*, Cambridge University Press, Cambridge, 2018. https://doi.org/10.1017/9781107183780.002

[38] Vardaro G., nt. (1), 121-122.

[39] Kafka F., *Metamorphosis,* Classix Press, 2009, 1.

[40] Expression used in Nogler L., *Tecnica e subordinazione nel tempo della vita*, in *Giornale di diritto del lavoro e di relazioni industriali*, 147, 2015, 352. Eurofound research shows that people who work regularly from home are more than twice as likely to surpass the maximum of 48 working hours per week, compared to those working on their employer's premises. Eurofound, *Telework and ICT-based mobile work: Flexible working in the digital age, New forms of employment series*, Publications Office of the European Union, Luxembourg, 2020.

[41] France was a pioneer when it comes to right to disconnect. As early as 2001, its Supreme Court ruled in Appeal No. 99-42727 that employees were not required to take work home after working hours (Cour de Cassation, Chambre sociale, 2 October 2001, No. 99-42.727). In 2004, the same institution ruled that a worker has the right not to answer a personal telephone after working hours (Cour de Cassation, Chambre sociale, 17 February 2004, No. 01-45889). The right to disconnect - *droit à la déconnexion* - is enshrined in Act No. 2016-1088 or the El Khomri Act (after Labour Minister Myriam El Khomri), which entered into force on 1 January 2017.

from technological equipment" among the pre-requisites of remote work agreement. In Italy the disconnection constitutes merely the collective interest worthy of protection,[42] lacking any sanction mechanisms whatsoever.[43] In addition, its scope is still limited to a category of remote work (*lavoro agile*), thus failing to recognise pervasive character of digital instruments in all employment arrangements. The solution could come, as it often does, from the European Union. Current lack of European regulation on the right to disconnect is in contrast with rising tendency of ICT-based flexible working arrangements across the EU.[44] That is why in January 2021 European Parliament adopted a resolution calling on the European Commission to propose legislation on the right to disconnect at EU level.[45] Until then, the practical enforcement of the right to disconnect remains in the hands of Italian social partners that successfully incorporate concrete provisions safeguarding the non-working time in their collective agreements.[46]

4. Work scheduling and the threat of regulatory hack.

By now we have looked closely only on the "texture" of working time in digital era in relation to its intensity and elasticity, but what we have purposefully overlooked was its vague, undetermined form. Working time as amorphous rubber, as opposed to block of concrete, seems more prone to erratic changes. In fact, new technology entails detrimental effects on work scheduling. Especially workers in gig economy working with on-demand contracts[47]

[42] Zucaro R., *Il diritto alla disconnessione tra interesse collettivo e individuale. Possibili profili di tutela,* in *Labour & Law Issues*, Vol. 5, 2, 2019, 223. https://doi.org/10.6092/issn.2421-2695/10234. Although the Law No. 61/2021, converted from the Law Decree No. 30/2021, entered into force coining for the first time the notion of the right to disconnect, its meaning has been eventually disproved by the Protocol about smart working from 07 December 2021 that reuses the formulation the technical and/or organizational measures necessary to ensure disconnection. *See* Article 2, paragraph 2 lett. f) of the *Protocollo nazionale sul lavoro in modalità agile*, 07 December 2021, available online: https://www.lavoro.gov.it/notizie/Documents/PROTOCOLLO-NAZIONALE-LAVORO-AGILE-07122021-RV.pdf.

[43] Zeppilli V., *Disconnessione: un'occasione mancata per il legislatore?*, in *Rivista Giuridica del Lavoro e della Previdenza sociale*, Vol. 2, 2019, 315.

[44] ICT-based refers to work arrangements carried out at least partly and on a regular or occasional basis outside a person's "main office", be that the employer's premises or a customised home office, using information and communication technologies (ICT). Eurofound research shows that prior to the onset of the COVID-19 pandemic, only 5% of the EU workforce regularly teleworked and just 14% did so either regularly or occasionally. During the height of the pandemic, in July 2020, close to 50% of the EU workforce teleworked exclusively or partially, with 34% of the workforce teleworking in response to public health restrictions. Eurofound, *Right to disconnect: Exploring company practices*, Publications Office of the European Union, Luxembourg, 2021.

[45] European Parliament resolution of 21 January 2021 with recommendations to the Commission on the right to disconnect (2019/2181(INL)).

[46] In particular, the right to disconnect has been included in some of the contractual agreements in the bank sector, such as the Unicredit agreement from 22 April 2016 between Unicredit SpA and FISAC/CGIL and FIRST/CISL. Even though said agreement did not directly mention the right to disconnect, it calls for the respect of workers' resting periods with regards to the use of company communications. In the public sector, the national collective agreement for education and research 2016-2018 defers to the company level bargaining the specification of the general criteria for the use of technological tools in the non-working hours, directly mentioning right to disconnect.

[47]"Work on-demand via apps is a form of work in which the execution of traditional working activities such as transport, cleaning and running errands, but also forms of clerical work, is channelled through apps managed

are susceptible to flexible and unpredictable working schedules. At EU level,[48] fair scheduling and employers' scheduling practices are covered by Directive 2019/1152/EC on transparent and predictable working conditions in the European Union,[49] which responded to a necessity to cover new forms of work linked with technological innovation and digitalisation. It guarantees the platform workers to fall under its scope irrespectively of their employment status. First of all, when establishing that it applies to every worker in the EU who has an employment contract or employment relationship, it suggests interpretation beyond formal contracts of employment.[50] Furthermore, definition of employment relationship should be read in the light of both national legislation as well as of case-law of Court of Justice of the European Union (CJEU). Such hybrid formulation[51] could open the interpretation to functional approach rather than formal one, but on the other hand it causes uncertainty with regards to its application. While Member States are not obliged to change their national definitions of worker, it seems that they would need to autonomously evaluate specific categories like platform workers under the CJEU case-law and eventually decide if to cover them or not when transposing said directive.[52]

With regards to working time organisation, Directive 2019/1152 includes an obligation for employers to inform worker about the number of guaranteed paid hours and the timeframe within which the worker may be required to work.[53] It contains provision stating right to compensation if employer cancels an assignment after a specified reasonable

by firms that also intervene in setting minimum quality standards of service and in the selection and management of the workforce". De Stefano V., *The rise of the "just-in time workforce": On-demand work, crowdwork and labour protection in the "gig-economy",* International Labour Office, Inclusive Labour Markets, Labour Relations and Working Conditions Branch, ILO, Geneva, 2016, 1.

[48] Also some US jurisdictions recently adopted so called predictive scheduling laws, but unfortunately limited to employee status. *See* Manolatou V. K., *Time is money: a quick wage-hour tip on...predictive scheduling laws*, 1st December 2020, available online: https://www.lexology.com/library/detail.aspx?g=b43310d8-f740-489d-8d8d-3d04cbc14c45.

[49] Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union, must be transposed by 1 August 2022.

[50] In Article 1, par. 2, it is stated that "This Directive lays down minimum rights that apply to every worker in the Union who has an employment contract or an employment relationship as defined by the law, collective agreements or practice in force in each Member State with consideration to the case-law of the Court of Justice".

[51] The same hybrid formulation is contained in the Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, published 08 December 2021, when in Article 1, par. 2 it states: "this directive lays down minimum rights that apply to every person performing platform work in the Union who has, or who based on an assessment of facts may be deemed to have, an employment contract or employment relationship as defined by the law, collective agreements or practice in force in the Member States with consideration of the case-law of the Court of Justice." Yet, proposal for a new platform work directive includes different measures also for persons performing work irrespective of contractual designation, expanding even further the scope of directive compared to the transparent and predictable working conditions directive.

[52] The first Italian ruling declaring that rider, worker of app, is an employee, makes eagerly reference to a Directive 2019/1152, stating that Article 2094 of Italian civil code "must be necessarily interpreted in an evolutionary way to apply it or exclude its application to work on a digital platform, which, in itself, can well be subordinated, if only we keep in mind the content of the latest European directive on transparent and predictable working conditions, which contemplates also platform work and is destined to find application in the context of subordinate employment relationships". *See* Tribunale di Palermo, 24 November 2020, No. 3570.

[53] Article 4, paragraph 2 m) of a Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union.

deadline.[54] Finally, in order to prevent abuse of on-demand contracts, Member States can use a rebuttable presumption of the existence of an employment contract with a minimum amount of paid hours based on the average hours worked during a given period.[55] Considering it is the first time ever EU focused on precariousness embedded in the irregular working schedules arrangements, said directive should be valued positively, although it depends on national regulations if it will have tangible impact on platform workers' working time quality.

Nonetheless – on a more critical note – the said directive fails to address the effects of the algorithmic optimization of work opportunities. The algorithm behind scheduling software may be set to avoid the cost-triggering threshold like the overtime entitlement without representing an illegal practice.[56] While algorithm allocating work shifts to workers with less hours may seem generally as a fair measure, the cold automated decision-making and the lack of human empathy and understanding can harm employees in ways that are not anticipated by labour law, and on top of that it can jeopardise the predictability and stability of worker's schedules.[57] As a matter of fact, use of algorithmic management enables to manage the workforce more efficiently through automation and routinization. In doing so they are not necessarily inconsistent with existing laws but they rather use the obsolete regulations in their favour or they find smart ways to lawfully avoid employment norms. This way employers perpetuate a "regulatory hack" – a concept coined to describe "unlawful noncompliance, lawful avoidance strategies and conduct that falls somewhere in between" linked to the use of new technologies in work relationships.[58]

5. Final conclusions.

The AI and algorithms have been causing some unprecedented changes not only in the traditional workplace, but also in the ineffable realm of time. It became insufficient to talk about the "new culture of time"[59] shaping normative framework and work organization; the transformation of category of time under the technological influence appears to be more profound. Deployment of modern technologies in the workplace reflects their cleaving power – i.e. their ability to modify the nature and our understanding of real world phenomena.[60] With regards to working time it means that the whole concept has been "re-ontologized", it has changed its intrinsic features such as texture, form, elasticity and density.

[54] *Ibidem*, Article 10 para. 3.
[55] *Ibidem*, Article 11 b.
[56] Alexander C.S., Tippett E., *The hacking of employment law*, in *Missouri Law Review*, Vol. 82, 4, 2017, 999-1001, available at: https://scholarship.law.missouri.edu/mlr/vol82/iss4/5.
[57] *Ibidem*.
[58] *Ibidem*, 976.
[59] De Luca Tamajo R., nt. (19), 22.
[60] Short explanation of this philosophical neologism can be found in Floridi L., *Dizionario Floridi*, in *Corriere della sera*, 26 November 2021, available online: https://corriereinnovazione.corriere.it/cards/da-inforg-onlife-termini-linguaggio-digitale-spiegato-filosofo-floridi/cleaving-power.shtml.

For the reasons illustrated in this paper – connected to the work intensity as well as increased sense of meaninglessness – the alienation has lost its sole correlation to the product of the labour and organisation of the productive process and rather gained a new dimension of "estrangement from the very existence of the worker"[61]. Employee's non-working time is being constantly "contaminated" via digital instruments that enable constant connection with the main working obligations, and even predictability of working time slots has suffered the impact of digitalisation that was not entirely captured by the legislator.

One could conclude that the real risk of technology-enhanced workplace lies in detrimental effects it has on the quality of workers' time spent in and out of work. It is precisely the rising existential alienation with regards to time elasticity of working arrangements as well as technological impact on perceived meaningfulness of work that should preoccupy the policy makers in the near future.

[61] Vardaro G., nt. (1), 122.

9

Tools for contrasting violations of fundamental rights in the use of artificial intelligence.

Daniela Lafratta[+] – Francesca Pollicino[*]

1. Preliminary remarks. 2. The Mevaluate case: an Italian a starting point. 3. The validity of the consent. 4. New perspectives to counter AI automatisms. 5. High level risk artificial intelligence practices versus fundamental rights. 6. Final remarks.

1. Preliminary remarks.

The Italian Supreme Court of Cassation[1] ruled on the validity of consent to join a digital platform which, through an algorithm, is responsible for creating reputational profiles.[2] The ruling, as far as is known, represents the first decision on the issue. However, while deserving applause, the ruling states that consent when it is integrated. That is when the legal obligation can be said to be known and accepted by the interested party. On the other hand, you leave an argumentative void on profiles harmful to human dignity. Considering the negative implications deriving from the use of algorithms and considering their potential to negatively affect people's fundamental rights,[3] it is necessary to introduce new forms of protection. These must be suitable to allow the development of A.I. and to protect people.

The Proposal for a Regulation of 21 April 2021 establishes harmonized rules on AI and amends certain legislative acts of the Union. The European Commission is aware of the risk deriving from the opacity[4] of automated systems. For this reason, the Commission wanted to introduce a degree of transparency for A.I. systems. high risk. By these we mean the A.I. systems. that violate fundamental rights. In this way, it is hoped that such systems accompanied by relevant documentation and instructions for use, as well as concise and clear

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[1] Cass. 25 May 2021, n. 14381, in *Guida al diritto*, 2021, 23. It is also available in open access at: https://www.cortedicassazione.it/corte-di-cassazione/it/homepage.page .
[2] Comments on the topic in: Santosuosso A., Boscarato C., Caroleo F., *Robot e diritto: una prima ricognizione,* in *Nuova Giurisprudenza civile commentata,* 2, 2012, 494.
[3] Ruffolo U. (ed.), *Intelligenza artificiale. Il diritto, i diritti, l'etica,* Giuffrè, Milano, 2020, *passim.*
[4] Opacity refers to the difficulty of understanding the elements of algorithms that affect their acceptance by people/users. *See* Zuddas P., *Brevi note sulla trasparenza algoritmica,* in *Amministrazione in cammino,* 1, 2020, 1-17.

information, including in relation to possible risks in terms of fundamental rights and discrimination, will be able to be more adhesive to the need for protection of the core of universal and inalienable rights of individuals.

The essay proposes the study of the Supreme Court's pronouncement followed by an in-depth study of the instruments proposed by the European legislator with reference to the processing and use of personal data and the transparency of algorithms. Finally, it is intended to offer some reflections on human surveillance and liability for the violation of fundamental rights resulting from errors, i.e., discriminatory practices, produced by the use of A.I.

2. The The Mevaluate Case: 2. The Mevaluate case: an Italian a starting point.

The expression of consent to the processing of data, collected by an automated system using an algorithm for the objective evaluation of personal data, is an issue of considerable importance for the protection of fundamental rights. The Italian Supreme Court, in ruling No. 14381/2021,[5] which ruled on the Mevaluate case, provides an opportunity for reflection and in-depth study on the validity of consent given by the data subject, an element that stands as a legal prerequisite, essential and indefectible, for lawful data processing.

The dispute originates from Order No. 488/2016[6] through which, the Italian Privacy Guarantor found that the platform of the Mevaluate Onlus Association collects numerous personal data of members for the elaboration of a reputational profile of the person concerned. This practice was used in order to «make socio-economic relations more efficient, transparent and secure»; however, this application's behaviour did not comply with the Italian Privacy Code. The particular relevance of this case also lies in the change of the regulatory *scenario* in the pending layout, as the entry into force of the GDPR determined the convictions behind the Supreme Court's decision.

The Mevaluate system realises a web platform prearranged for the elaboration of reputational profiles concerning natural and legal persons with the aim of countering phenomena based on the creation of artificial or untrue profiles and of calculating, in an impartially way, the reputational rating of the surveyed subjects, so as to allow any third parties a verification of real credibility. The database collects any documentary evidence not from the stakeholders, but from third parties and involves both the moral and professional spheres of the stakeholders. To these documents are added additional ones, optionally produced by the interested parties.

The acquisition of this amount of personal data, almost exclusively from third parties registered on the platform, is based on the consent of the data subject to the processing, because registration on the platform allows access to the evaluations of other subjects through consent to the production, by third parties, of documents on each subject for the purpose of its evaluation. The Authority has given reasons concerning essentially a core of

[5] Cass. 25 May 2021, n. 14381, nt. (1).
[6] GPDP 24 November 2016, n. 488, available at https://www.garanteprivacy.it/home/docweb/-/docweb-display/docweb/5796783 .

aspects that pose as potentially damaging to the social projection of the subjects involved. In fact, the Court argued that, «the rating could heavily affect the lives (including private) of the individuals surveyed, influencing their choices and perspectives and conditioning their very admission (or exclusion) to specific services or benefits; therefore, extreme caution must be exercised in dealing with such sensitive issues, also in view of the fact that the 'reputation' one would like to measure here, insofar as it is closely related to the consideration of individuals and their very social projection, is intimately connected with their dignity, a pivotal element of the data protection regulations».[7] On the other hand, additional profiles are censured, because appear to be not aligned with the parameters of lawfulness, with data minimization and proportionality of the processing. The Mevaluate Association challenged the Garante's measure before the Court of Rome, which partially upheld the appeal, ruling on the conformity of the processing, which, in the judge's opinion, appeared to be provided with the consent of the data subject. In the first instance, it was held, in fact, that the Mevaluate system corresponded to the requirement of lawfulness, since all the activities of uploading information and validating and certifying documents are subject to the consent of the interested party and the voluntariness of his action. In addition, according to the trial court, the affiliates' adherence to the platform also included the acceptance of an automated system using an algorithm for the objective evaluation of personal data, on the assumption that lawfulness consists in the prior awareness of the categories used and the scale of values encoded in relation to the different profiles or types of documents conferred.[8] On the contrary, the same Tribunal agreed with the issues raised by the Guarantor with regard to these profiles against third parties,[9] confirming the unlawfulness of the processing, since the requirements of appropriateness and necessity of the processed data do not exist, since the processing concerns non-associated subjects and, therefore, is not based on the associative relationship that is the direct source of the service.

The Supreme Court, in upholding the appeal brought by the Guarantor, overturned the assessment of the Tribunal and affirmed the principle of law that «on the subject of personal data processing, consent is validly given only if freely and specifically expressed with reference to a clearly identified processing [...] and the requirement of awareness cannot be considered satisfied where the executive scheme of the algorithm and the elements of which it is composed remain unknown or not knowable by the interested parties»,[10] therefore left it to the referring court to reevaluate the concrete case, given the enunciated law principles.

[7] Cass. 25 May 2021, n. 14381, nt. (1).
[8] Trib. Rome 04 April 2018, n. 5715.
[9] The online platform offered the possibility of creating one's own personal profiles but also profiles against third parties, that is, profiles through which it is possible to assess the trustworthiness of individuals not registered on the platform, thus not associated with the NPO, on the basis of freely accessible documentation as, for example, judgments, decisions of administrative bodies, and newspaper articles.
[10] Cass. 25 May 2021, n. 14381, nt. (1).

3. The validity of the consent.

The proposed order represents, to the best of our knowledge, the first legitimacy decision on the subject of the provision of consent to an automated system. The legitimacy judges highlighted and delimited the perimeter within which the requirement of consent can be said to be integrated and what is necessary in order for it to be considered known and fully accepted by the interested party, in an automated calculation system.

In the first instance, the Court of Rome based its arguments on the requirement of lawfulness of the reputational rating, which it found to be fully integrated by analogy, associating the reputational rating with different forms of ratings known at the national and supranational level.[11] Nevertheless, the central issue is not the freedom of consent, or the possible unfairness of the business practice to which the platform might give, but rather the content of the information that must be provided to the data subject is at issue, where the data given or collected are functional for the application of an automated evaluation mechanism.[12] Thus, the peculiar aspect of the case concerns the concrete application of Articles 13 and 14 of the Privacy and Data Processing Regulation. In fact, the Supreme Court, jointly interpreting the definitions of consent contained in the aforementioned provisions, comes to a diametrically opposed conclusion by denying the reconstruction of the judges of merit, based on the existence of rules applicable by analogy and on the relief of consent given by the data subjects.

The processing of personal data complies to the principle of lawfulness when it is validly given: «consent is validly given only if it is freely and specifically expressed with reference to clearly identified processing».[13] Wanting to analyze the requirements of the norm, the condition of freedom of consent[14] pertains to the process of self-determination and data control of the individual who such consent is given. Consent is an act of individual autonomy and self-determination and must represent the free expression of an intentional choice: it will be valid only if the person concerned is able to actually make a choice, without the risk of deception, intimidation, coercion or significant negative consequences in the event that this person does not manifest consent.[15] No undue influence or pressure, direct or indirect, can be exerted on the person concerned, and consent should not be considered as freely given if

[11] We refer to the enterprise rating, governed by Art. 83, par. 10, D. Lgs. 18 April 2016, n. 50, amended by D. Lgs. 19 April 2017, n. 56 and most recently by D.L. 26 October, n. 124, converted with amendments by Law 19 December 2019, n. 157. The business rating represents a tool for measuring the reputation of companies participating in public tenders. The tool was created with the ultimate goal of ensuring safety in the market through a prior screening of companies taking into account in the awarding stage the valid economic requirements that are in accordance with the subject of the contract as well as the "reputation" of the company based on previous contracts performed. For a complete and comprehensive survey of the institution, *see* Renna V.C., *Rating di impresa - Etica dell'algoritmo!*, in *Rivista di diritto amministrativo*, 7-8, 2018, 4 ff.

[12] Comandè G., *Leggibilità algoritmica e consenso al trattamento dei dati personali, note a margine di recenti provvedimenti sui dati personali,* in *Danno e responsabilità*, 2, 2022, 144; Comandè G., *Leggibilità algoritmica e consenso al trattamento dei dati personali*, in *Danno e responsabilità*, 1, 2022.

[13] Art. 23, co. 3, D.Lgs. 30 June 2003, n. 196; Art. 6, Reg. UE 27 April 2016, n. 679.

[14] For more details, *see* Thobani S., *La libertà del consenso al trattamento dei dati personali e lo sfruttamento economico dei diritti della personalità*, in *Europa e Diritto privato*, 2016, 513 ff.; Caggia F., *Libertà ed espressione del consenso*, in Cuffaro V., Ricciuto V., D'Orazio R., *I Dati Personali Nel Diritto Europeo*, G. Giappichelli, Torino, 2019, 249 ff.

[15] Labour Group for data's protection ex Art. 29, *Opinion n. 15, WP 187*, adopted on the 13th of July.

the person who is to give it is unable to make a genuinely free choice, because he or she would be prejudiced when refusing or withdrawing consent. A typical example of a significant imbalance that could undermine free consent is the subordination of the employee to the employer: in fact, employees are almost never in a position to freely express, refuse, or withdraw consent because of the nature of the employer-employee relationsip. On the other hand, when products or services can be obtained only if some personal data are disclosed to the data controller, or subsequently to third parties, the data subject's consent to the disclosure of his or her data, which are not necessary for the performance of the contract, cannot be considered the result of a free decision and is, therefore, invalid under data protection rules. The importance given by of the European Union on the right of access to goods and services, also to avert possible discrimination, is evident from the prohibition on the integration of consent for the provision of products and services.[16] If the person called upon to express consent can potentially be deprived of an opportunity, or suffer negative consequences, the consensual mechanism certainly cannot be said to be free, consequently rendering the consent invalid.[17] It will possibly be the holder's burden to prove otherwise.[18]

With regard to the condition of specificity, it should be noted how it finds its foundation in the need to make the individual informed with respect to the specific purposes for which consent is sought, and this essential prerequisite derives from the more general principle of transparency. The person concerned must have sufficient information before exercising his or her choice. Consent must be accompanied by a precise, unambiguous and easily understandable description of the subject matter with respect to which it is sought so as to enable an appreciation and understanding of the facts and implications of the data subject's action in giving consent to treatment.[19] Therefore, the data subject must receive in a clear and understandable manner accurate and complete information on all relevant aspects, such as the nature of the data being processed, the purposes of processing, the recipients of any transfers, and his or her rights. In addition, for consent to be given knowingly individuals must also be aware of the consequences of not giving consent. In the case of a change of purpose the data subject must be asked again for consent for additional processing

[16] On Art. 7(4), Reg. EU 27 April 2016, n. 679, *see:* Graux H., Graux, D.M., *Article 29 data protection Working Party*, 2018; Article 29 Data Protection Working Party, *Working Paper on the Processing of Personal Health Data in Electronic Health Records*, WP 131, Brussels, 15 February 2007.

[17] On May 4, 2020, the EDPB (European Data Protection Board) published Guideline 5/2020 on Consent under EU Reg. 2016/679, through which causes were identified that appear likely to influence the data subject's behavior to data processing. Within this framework, the following were identified as influencing factors: (i) the imbalance of power, which entails the subjection of the data subject in relations with the public authority or in the employer/employee relationship; (ii) conditionality, i.e., where the provision of a contract or service is conditional on consent to the processing of personal data that are not necessary for the performance of the contract or service; (iii) prejudice, i.e., deception, intimidation, coercion, or the prospect of significant adverse consequences if consent is not given; and (iv) granularity, related to the specificity requirement described above. In the presence of any of these factors, consent is presumed not to have been freely given, and the burden will be on the holder to prove otherwise.

[18] CJEU, case C-61/19, Orange România SA v. Autoritatea Naţională de Supraveghere a Prelucrării Datelor cu Caracter Personal (ANSPDCP), ECLI:EU:C:2020:901.

[19] In this sense, reference is made to Art. 5, Reg. EU 27 April 2016, n. 679, which, listing the fundamental principles applicable to all processing of personal data, identifies in para. 1(b) the principle of "purpose limitation" under which personal data must be "collected for specified, explicit and legitimate purposes, and thereafter processed in a way that is not incompatible with those purposes."

operations.[20] If the processing has several purposes consent should be given for all of them individually.

Where the conditions just described are verified and integrated it will be possible to assume a clearly identified processing.[21]

It seems correct, as a result of this argument, to argue that the condition of lawfulness of treatment is posthumous and subsequent to the prognosis of the validity of consent in the terms seen above. Said otherwise, only where the legal basis of validly given consent is met, then the lawfulness of processing will also be integrated.[22]

The reputational algorithm of the Mevaluate platform appears to lack the due transparency that does not concern only the disclosure but requires full awareness of the elements involved and considered in the algorithm. It follows that consent can be said to have been validly given only in the event that such a requirement can be deemed to have been given with respect to the algorithm's entire executive scheme, which, at that point, can be said to be fully known by the data subject.[23]

It should be noted that, the Guarantor, in his introduction, also denounced the possible repercussions arising from the rating developed by the algorithm. In particular, he raised concerns about the measurement of the individual's reputation.

Considering that the pivotal element of the regulation of personal data protection can be identified in the dignity of those whose data are processed, the need arises to assess the close correlation between reputation, which is intended to be measured, and dignity.[24]

In the case at hand, the balance between the purposes of the GDPR must see the protection of the person[25] prevail, since the dignity of the person concerned is the supreme value to which the legislation on the processing of personal data is inspired, the design of which is functional to the defense of the person and his or her fundamental rights, tending to prevent the abstractly legitimate use of personal data from taking place in such a way as to make it detrimental to those rights, moreover, the protection of the rights of the person must be, in any case, preeminent over private economic initiative protected by Article 41 of the Italian Constitution.[26]

[20] Reg. EU 27 April 2016, n. 679, *considerando* 32.
[21] Cass., 2nd July 2018, n. 17278, in *Guida al diritto,* 2018, 31, 20; Cass. 21st June 2018, n. 16358, in *Guida al diritto,* 2018, 29, 32; Cass. 11 September 2014, n. 19172, in *Rassegna di diritto farmaceutico*, 2015, 1, 22.
[22] Lafratta D., *Algoritmo reputazionale tra requisiti normativi e dignità della persona*, in *Lavoro nella Giurisprudenza*, 2, 2022; Poletti D., *Le condizioni di liceità del trattamento dei dati personali*, in *Giurisprudenza Italiana*, 12, 2019; Comandè G., *Leggibilità algoritmica e consenso al trattamento dei dati personali*, nt. (12).
[23] Lafratta D., nt. (22), 155 ff.
[24] *Ibidem*; COSTANTINI F., *Profilazione e automated decision making in ambito lavorativo nella giurisprudenza italiana*, in *Lavoro nella Giurisprudenza*, 11, 2019.
[25] Comandè G., nt. (12), 37 ff.
[26] Among others: Cass. 8 August 2013, n. 18981, in *Massimario di Giustizia Civile*, 2013; Cass. 18 July 2013, n. 17602, in *Massimario di Giustizia Civile*, 2013; Cass. 08 July 2005, n. 14390, in *Foro italiano*, 2007, 2, I, 511; Di Ciommo F., *Archivi digitali onnivori e diritti fondamentali recessivi*, in *Nuovo diritto civile*, 2, 2020, 29.

4. New perspectives to counter AI automatisms.

The artificial intelligence represents an extraordinary possibility to improve people's life conditions, but at the same time it's a danger not to underestimate too due to his power of engraving deeply on the other's life and consequently on the fundamental rights[27] too. Previously, it is necessary to have present that the issue of the AI governance and consequently it's technological impact by a certain ethical,[28] political and social[29] point of view, it concerns every aspect of the life of individuals going beyond the threshold of the mere protection of personal data and at the same time too involving a potentially infinite series of intimate and personal areas and aspects.[30] Therefore, starting by this logical, it's helpful to imagine how come that the AI systems involve and overwhelm too the logical canons[31] of individual's areas of life. Think, for example, of work, understood in its wide variations, that is, in the many stages that characterize the career[32] of the worker or potential worker[33] or in other disciplines such as consumer law and free competition.[34] In this clear certainty, European institutions given the possibilities, in a certain sense already produced, negative implications deriving from the use of the algorithmics on the previewed terms and conditions, or better say, considering their potential of influencing negatively on the fundamental rights, have started a series of legislative initiatives[35] aiming the regulation of this matter by allowing the development of AI without it lacks adequate safeguards and risk mitigation measures.

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[27] Pollicino O., *L'"autunno caldo" Della Corte di Giustizia in tema di tutela dei diritti fondamentali in rete e le sfide del costituzionalismo alle prese con i nuovi poteri privati in ambito digitale,* in *Federalismi.it,* 19, 2019, 10.
[28] Monreale A., *Rischi etico-legali dell'Intelligenza Artificiale*, in *Diritto pubblico comparato ed europeo,* 3, 2020, 3391-3397.
[29] Gallino L. *Tecnologia e democrazia*, Einaudi, Torino, 2007, 4.
[30] On this theme, *see* Stradella O., *Stereotipi e discriminazioni: dall'intelligenza umana all'intelligenza artificiale,* in *Consulta Online,* 3, 2020, 1-10.
[31] Pollicino O., De Gregorio G., *Constitutional Democracy in the Age Of Algorithms: The Implications Of Digital Private Powers on the Rule Of Law in the Times of Pandemics,* open access https://www.medialaws.eu/constitutional-democracy-in-the-age-of-algorithms-the-implications-of-digital-private-powers-on-the-rule-of-law-in-times-of-pandemics/ .
[32] We want to refer to the whole working "life" of the worker. think about the performance of the job, the health of the working environment, the shift work, controls, career advancement, the recognition and enjoyment of workers' rights. Such aspects are potentially subject to serious unequal treatment resulting from the misuse of digital platforms. For an extensive examination on the subject, please refer to: Zilli A., *Il lavoro su piattaforma*, in Carinci F., Pizzoferrato A. (eds.), *Diritto del lavoro dell'Unione Europea*, Torino, 2021, 314-320.
[33] Algorithms are also already in use for personnel selection. AI systems can evaluate huge volumes of resumes to find the best candidates based on background and specific skills, thereby optimizing the search. But this system has already shown inequities in automated processes and discrimination for profiling activity that is often conducted in ways that do not comply with regulatory requirements for consent and transparency. Algorithmic distortions have, for example, caused serious disparities in the treatment of female applicants for employment in companies such as Amazon and Uber, and it has been shown that AI systems can even "*detect anxiety in a person's tone of voice or body language, attempting to assist employers in making a decision, whether or not to consider the issue and resolve it before it is bad for the employees and the company itself*," on this point *see* Eubanks B.*, Use AI to support and develop a successful workforce,* Kogan Page, New York, 2018, *passim.*
[34] Eitel-Porter R., *Beyond the promise: implementing ethical AI*, in *AI and Ethics*, 1, 2020, 73-80.
[35] In 2020, the White Paper on Artificial Intelligence was issued, in which the strategy adopted by the European Union for the short to medium term is set out and the results of the work of specially established advisory bodies are also presented. *See* Costantini F., *Intelligenza artificiale, design tecnologico e futuro del lavoro nell'UE: i presupposti e il contesto*, in *Il lavoro nella giurisprudenza,* 8-9, 2021, 810.

Particularly, The European Commission has elaborated The Proposal of Regulation n. 2021/106, of the April 21, aiming to dictate harmonized rules on the artificial intelligence,[36] as a reform that regulates the matter in a specific regulatory apparatus and not any more thorough a relative discipline on the protection of the physical individuals with regard to data processing ,contained on the GDPR; and further more can represent the foundation on which to build an autonomous discipline on the subject of AI.

That's why the Commission intended to identify a broad category of "prohibited practices" that being observed in their inherent capacity to impairment fundamental rights, do not find any application discretion and no usage space. In the order of such practices, the proposal differences the use of AI parameterizing and comparing the same to the level of risk of which the practice carries, identifying, the tripartite division between prohibited practices that create an unacceptable risk,[37] a high risk or a minimal basically one. Starting from this logical argumentative scheme, it creates the normative corpus for only the cd systems "at high risk level"[38] on which this contribute intend to be concerned.

Previously and first of all, it should be noted that the goal of the European legislator must be sought with the hoped-for aim of establishing a regulatory framework able to "*increase the safety of the artificial agents*",[39] including those involved on the digital platforms having present the context of the digital single market of the Union and thus harmonizing national laws.

From the today's theme, let's ask the capacities of the tool on site , to prevent and impose adequate protection of the fundamental rights that, as mentioned many times , they result severely exposed and this assumption is confirmed in the letter referred to the considered(1) of the proposal[40] where, the fully aware of the risk emerges , and at the same time it emerges

[36] European Commission, Proposal for a Regulation of the EU Parliament and the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain union legislative acts, COM 2021/106 FINAL 21.04.2021, available at https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0006.02/DOC_1&format=PDF .

[37] Thus, the Explanatory Note attached to the proposed regulation, section 5.2.: "*The list of prohibited practices in Title II includes all AI systems whose use is considered unacceptable as contrary to the values of the Union, for example because it violates fundamental rights. The prohibitions cover practices that have a high potential in terms of manipulating people through subliminal techniques, without their knowledge, or exploiting the vulnerabilities of specific vulnerable groups, such as minors or people with disabilities, in order to materially distort their behavior in a way that causes them or another person psychological or physical harm [...] The proposal also prohibits the awarding of social scoring based on AI for general purposes by public authorities. Finally, the use of "real-time" remote biometric identification systems in publicly accessible spaces for law enforcement purposes is also prohibited, subject to the application of certain limited exceptions".*

[38] High-risk qualification is regulated in Article 6 of the Proposal: "[...] *an IA system shall be considered high-risk if both of the following conditions are met: (a) the IA system is intended to be used as a safety component of a product, or is itself a product, covered by the Union harmonization legislation listed in Annex II; (b) the product, the safety component of which is the IA system, or the IA system itself as a product is subject to a third-party conformity assessment for the purposes of placing that product on the market or putting it into service under the Union harmonization legislation listed in Annex II. In addition to the high-risk AI systems referred to in paragraph 1, the AI systems listed in Annex III are also considered high-risk.*" Essentially, all systems that create a risk to human health, safety, and the protection of fundamental rights fall under the definition.

[39] Costantini F., *Intelligenza artificiale, design tecnologico e futuro del lavoro nell'UE: il caso dei platform workers*, in *Il Lavoro nella giurisprudenza*, 12, 2021, 1124.

[40] "*The purpose of this Regulation is to improve the functioning of the internal market by establishing a uniform legal framework particularly with regard to the development, commercialization and use of artificial intelligence (AI) in accordance with the values of the Union. This Regulation pursues a number of overriding reasons of public interest, such as a high level of protection of health, safety and fundamental rights, and ensures the free movement of AI-based goods and services across borders, thereby preventing*

the volunteer of not hindering the technological development which provides that it takes place through an appropriate use of the systems[41] guaranteeing an ethical approach to problematic.[42] Well, as known, in the generic category of personal data are to be brought back on mind, not only the identification data by such meaning, name last name, birth date and place of birth, residence address etc., but also further sub-categories of personal data. Here is to mentioned that are included the cd "particular data's" otherwise known as personal data's that reveal " *the racial or ethnical original , political opinions , religious or philosophic convictions, unions memberships, biometrical datas meant to identify on an unique way a physical person , data relating to health or sexual life, or of sexual orientation of the person;*[43] other biometrical data: *"personal datas obtained from a specified technical treatment related to physical characteristics, physiological or behavior on a certain person whom consent and confirm the unique identification",* witch even though they are identifying data they seem to be strictly connected to physical and behavior characteristics of a person, such as face, iris, retina, voice digital fingerprints and even calligraphic. For the detection and treatment of such data it is required explicit consent to the processing or the presence of a specific legal purpose.

Starting from those above-mentioned considerations, it would be better underline that the common feature between prohibited and high-risk practices it is given by the inherent suitability of the systems to harm fundamental rights but which, however, have a different gradation of the lesion. It's enough to say on an extreme simple way, that the plus of the prohibited practices it's a result given or from the ability to exploit vulnerability (age or disability) otherwise called extortion of a consent which will therefore result flawed and not compliant with the user's self-determination process that, without the manipulation[44] in act from the " machine" , there would have not been or this way to say from profiling illegality of users in order to extrapolate the so-called "social score", or again, some cases of real-time remote biometric identification.[45]

Instead, on the high-level risk practices, this same level declassifies as unacceptable (prohibited) from the source, otherwise said, on the practices witch result highly damaging potential but although appearing as consensual thorough control and verification.

Member States from imposing restrictions on the development, commercialization and use of AI systems, unless expressly authorized by this Regulation."

[41] Tosoni L., *Intelligenza artificiale, I punti chiave del regolamento europeo*, April 2021, available at www.agendadigitale.eu.

[42] Artificial intelligence (AI) refers to systems designed by humans that, given a complex goal, act in the physical or digital world by perceiving their environment, interpreting the collected structured or unstructured data, reasoning on the knowledge derived from this data and deciding the best action(s) to take (according to pre-defined parameters) to achieve the given goal. AI systems can also be designed to learn to adapt their behaviour by analysing how the environment is affected by their previous actions. Anselmi N., Olivi G., *Intelligenza artificiale e privacy, cos'è intelligenza artificiale? Possibili definizioni*, January 2019, available at www.agendadigitale.eu.

[43] *See* Article 9, Reg. EU 27 April 2016, n. 679.

[44] In Article 5 of the Proposal, the Legislator uses the term "*subliminal techniques*".

[45] On this point we refer to Raffiotta E.C., Baroni M., *Intelligenza artificiale, strumenti di identificazione e tutela dell'identità*, in *BioLaw Journal*, 1, 2022, 175.

5. High level risk artificial intelligence practices versus fundamental rights.

Evaluated on a summary way, the potential of the instrument proposed from the commission, we ought to ourselves to ask on such agreed practices impacts, on the fundamental individual rights. Even though starting from the assumed, shared too, about the capacity of the technology to improve the life of the community, it's a task of the jurist to take a look on the ethical effects of the matter thorough a juridical lecture for the dignity concept read in all its concrete implications of the every day's life and not thorough a mere and abstract evaluation of this one.

A person dignity as an ethical evaluation finds its primary juridical resource on the *Right's Declaration of the man and citizen*, stipulated on France, the late 1789 on which the natural rights, inalienable and sacred of man,[46] take place their declination on the "*fundamental rights*" still now a days , that is the base of every democratic constitution. Dignity, whose instance of protection is not capable of balancing, emerges as an absolute value and on this base it's been in fact sustained that, "*the supremacy of dignity raises it to a criterion for balancing values, without it being itself susceptible to reductions due to balancing. It is not the effect of a balance, but it is the balance itself".*[47] If we want to take a good look on the dignity value, there is a large plateau of guaranteed constitutional rights. For instance, art. 2 of Constitution, finalized of guaranteeing the protection of the human dignity defied as inviolable, to the right of action in court and inviolability the related right to defense, on the art. 24, co. 1 and 2, Cost. or furthermore think of the tools of solidarity guaranteed to those unable to work, essential for guaranteeing them a dignified life. Out from the corpus of regulated and protected fundamental rights, the protection of dignity functions, upon reading what announced by the Constitutional Court, such as the limit of the freedom of the private economic initiative ex art. 41, comma 2, cost.

Therefore, it is correct to sustain that the protection of the human dignity rises to the border for the exercise of fundamental rights and freedoms going so far as to represent an insurmountable limit also of the self-determination of the holder of the right itself.

Having said that, Annex III of the Proposal, contains the list of the practices of AI, considered as high level risky.[48] Right on the first look at them, it emerges the breadth and heterogeneity of the considered cases. Those last ones on the proposal, classified in eight macro- categories they range in one terrain so broad as to represent a vastness of potentially, infinite and concrete cases all attributable to fundamental rights, that although they are

[46] Rousseau J.J., *Il Discorso sull'origine e i fondamenti dell'ineguaglianza tra gli uomini*, 1755, 35, where the Author observed: "*I conceive of two kinds of inequality in the human species: the one, which I call natural or physical, because it is established by nature and consists of the difference in age, health of bodily forces and qualities of intelligence and soul: the other, which may be called moral or political inequality, because it depends on a kind of convention and is established or at least authorized by the consent of men*".

[47] For a full reconstruction, *see* Silvestri G., *Considerazioni sul valore costituzionale della dignità della persona,* Intervento al Convegno trilaterale delle Corti costituzionali italiana, portoghese e spagnola*,* Rome, 1st October 2007.

[48] Annex III, Proposed Regulations: 1. Biometric identification and categorization of natural persons; 2. Management and operation of critical infrastructure; 3. Education and vocational training; 4. Employment, labor management and access to self-employment; 5. Access to and enjoyment of essential public and private services; 6. Law enforcement; 7. Migration, asylum and border control management; 8. Administration of justice.

compromised, will give birth to a long series of negative effects involving without solution the person's[49] dignity. This doesn't appear the appropriate venue for an in-depth examination of individual practices but it's quiet enough to consider the practices of the access on the education's instruction and training, working environment, social services, emergency services, on the evaluation of the personality assessment with reference to the risk of committing crimes or recurrence, or at the management of the right to asylum on border control or assistance to the "machines" as an aid to judges' decisions.

Reaching at this point of examination, we are in possess of all the variables so we can think about the capacity of the tools contained on the proposal taking present of those instruments to be used as contrast tools on the illegal practices protecting so the fundamental rights.

Therefore, in this sense, the proposed regulation follows a management-based approach of risk (Article 9 of the Proposal) or on the *ex ante* evaluation of it and its constant monitoring as well following commissioning of the system of AI. Previewing specific obligation of transparence, on information and preservation of data, it's been provided too on a human survey system which aims to prevent, or reduce to the minimum the violation of fundamental rights. In order to put in field of such techniques, each Member State is required to designate a national authority of check control uncharged to guarantee, evaluate and focus the conformity of the development of diffusion of the use of AI, promoting cooperation between the various national supervisory authorities.

From another point of view, in a dissuasive key, art. 71 of the Proposal, there have been previewed one series of administrative and pecuniary sanctions.

All that said, in the opinion of the writer, there is a perplexity lack of a precise picture of administrative and judicial protection. It's better to say, that it should be maybe introduce a kind of system even on examination phase, able to prevent efficiently to the distortions created by algorithms[50] that more and more frequently shows some grave and preoccupated discrimination capacity. On this sense, the Proposal annex contains, as on art. 71, a vague reference to the Guarantor's procedure without anything disposing in order relation to the procedural tools aiming to protect users harmed by AI practices. That's why in this case, the proposal is not answering over the possible individual actions or collective ones, or better to say, nothing is provided in order of two extremely reelevating profiles. A first aspect is to be found on the responsibility of the AI system which, once ascertained, it opens to the second profile that can be found in the compensatory protection. The nowadays technologies, considering even their capacity of progress, need some individuation parameters, imputability of liability to the injurer in order to respond to the need for compensation for the injured party. Also, it should be relieved that the compensatory protection has always been the bearer of a deterrent function so that it can act as a preventive tool of distortion.

[49] Bacchini F., Lorusso L., *Race again: How face recognition technology reinforces racial discrimination,* in *Journal of Information, Communication and Etchics in Society,* 17, 3, 2019, 321-335; Obermeyer Z., Powers B., Vogeli C., Mullainathan S., *Dissecting racial bias in an algorithm used to manage to health of populations,* in *Science,* 366, 6464, 2019, 447-453; Contissa G., Lasagni G., Sartor G., *Quando a decidere in materia penale sono (anche) algoritmi IA: alla ricerca di un rimedio effettivo,* in *Diritto di internet,* 4, 2019, 619-634.

[50] On the topic, *see*: Ballestrero M. V., *Ancora sui rider. La cecità discriminatoria della piattaforma*, in *Labor*, 1, 2021, 104-114.

Actually, it could guarantee more protection only thorough actions provided already for single categories or specified once but this easily leads to understanding that many categories of people will be without protection.[51]

6. Final remarks.

It is the main objective of the Union to ensure the preservation of human dignity, autonomy and self-determination of the individual, to prevent harm, to promote fairness, inclusion and transparency, and to eliminate distortions and discrimination. However, while the enormous work put in place to achieve these ends deserves applause, it is strictly necessary to supplement the Regulations with tools, including jurisdictional tools, to correct distortions in the AI system. Accompanying these instruments is made morally and ethically appropriate to guarantee the compensatory protection, of those who, because of the distortions or misuse of AI practices result as victims of them suffering discrimination and injury to fundamental rights.

The impact that technologies have on people's inclusion and dignity is increasing in tandem with advances in automation and dematerialization of human activity. Regulation of these kinds of algorithms is needed as of now especially to protect fragile users who in this context of the digital cultural divide are even more at risk of social marginalization than those who know and are aware of how digital mechanisms work. While lack of or reduced access to digital tools can lead to discrimination, isolation, and increased inequality, unskilled and unconscious use generates a high risk of violating fundamental rights. Thus, hope lies in the strength of the law. Only a regulatory system supported by a supra-national network[52] appears capable of sustaining the proper balance and necessary protections in the digital world between production needs and human rights.

[51] Think of border control practices or the use of AI to support judges.
[52] Ammanati L., *Governance e regolazione attraverso reti,* in Ammanati L., Bilancia P. (eds.), *Governance multilivello regolazione e reti,* Vol. II, Giuffrè, Milano, 2008, 186.

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All in one: the multiple functions of algorithmic management.

Mariagrazia Lamannis*

1. Introduction. 2. Algorithmic Management and Managerial Prerogatives. 3. The Lack of Transparency of Algorithms and Italian Case Law. 4. The Third Chapter of the Proposed Directive on Platform Work. 5. The "*ex ante* approach".

1. Introduction.

It is well known that the use of algorithms is crucial to the functioning of digital labour platforms.[1] They may perform various functions, the main ones being: matching workers and clients, directing, evaluating and disciplining workers. All this happens based on a huge amount of data[2] that the algorithm processes to make decisions, suitable to affect the entire duration of the employment relationship – "from hiring to firing".[3]

For this reason, scholars have long stressed the opportunities and risks of algorithmic management, especially with reference to managerial prerogatives. On the one hand, algorithms have in fact automated (in whole or in part) the exercise of managerial prerogatives – thus changing the way in which they are implemented and their impact on the employment relationship and the quality of work. On the other hand, they have increased

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[1] For a general overview of the business model of digital labour platforms (types of platforms and their features, economic relevance and geographical distribution of the phenomenon, workers' profile, main legal issues, etc.) *see* ILO, *Word Employment and Social Outlook. The role of digital labour platforms in transforming the world of work,* International Labour Office, Geneva, 2021. Indeed, a recent insight on the platform economy in Europe has been given by Piasna A., Zwysen W., Drahokoupil J., *The platform economy in Europe. Results from the ETUI Internet and Platform Work Survey,* Working Paper 2022.05, ETUI, Brussels, 2022.

[2] As clearly stated by Aloisi A., Gramano E., *Artificial Intelligence is watching you at work: digital surveillance, employee monitoring, and regulatory issues in the EU context*, in *Comparative Labor Law & Policy Journal,* 41, 1, 95 ff. by quoting Council of Europe, *Consultative Committee of the Convention for the protection of individuals with regard to automatic processing of personal data (Convention 108) – Report on Artificial Intelligence*, Council of Europe, Strasbourg, 25 January 2019, personal data are "both the source and the target of AI applications." On the capacity of labour platforms to "capture" and use data on users as a key element of their infrastructural power *see* Drahokoupil J., *The business models of labour platforms: Creating an uncertain future,* in Drahokoupil J., Vandaele K. (eds.), *A Modern Guide to Labour and the Platform Economy,* Edward Elgar Publishing, Cheltenham-Northampton, 2021, 39 ff.

[3] De Stefano V., Taes S., *Algorithmic management and collective bargaining,* ETUI Foresight brief, 10, 2021, 6.

the continuity and pervasiveness of those powers, through methods essentially unknown to workers and maybe unpredictable before, either because of their technical complexity or because the employer voluntarily avoids disclosing their operation.[4]

Consequently, algorithmic management goes far beyond workers' surveillance: its lack of transparency leads to an information asymmetry with negative repercussions on working conditions (e.g., by causing an intensification of the pace of work that is dangerous to health) and on the possibility of workers (and their representatives) to make specific demands. Put differently, the disappearance of the employer[5] behind the algorithm has made it more difficult to exercise individual and collective rights.

An important step forward in unveiling the criteria behind algorithmic decisions has been taken by case law, including the Italian one, which has sought (indeed had to) to better understand how they operate to qualify the employment relationship or ascertain the existence of discriminations.[6] The European Commission's Proposal for a Directive[7] (henceforth "the Directive") on improving working conditions on the platforms aims at making further progress: it introduces new material rights, both individual (e.g., the right to transparency) and collective ones, to ensure fairness, transparency, and accountability in algorithmic management – also seeking to foster social dialogue on these issues, as recommended by trade unions and some scholars.

Therefore, this paper aims at quickly reviewing the main findings of scholars (Section 2) and Italian case law on the managerial prerogatives assumed by the algorithm (Section 3), i.e., direction, evaluation and discipline of workers, and their role in making the Courts conclude for a certain qualification of the employment relationship or a certain "type" of discrimination (direct or indirect). Then, it will look at Chapter 3 of the Proposed Directive to analyse its goals and their suitability to overcome the main challenges of algorithmic management – actually already questioned by some scholars (Section 4).

Finally, since it seems at first sight that the Proposal does not go so far as to make the introduction of (or changes in) the use of automated decision-making or monitoring systems subject to agreement with the employees' representatives,[8] the paper will discuss the importance of an "*ex ante* approach"[9] (Section 5). This indeed could allow trade unions to

[4] *See* Prassl J. A., *What if your boss was an algorithm? Economic Incentives, Legal Challenges, and the Rise of Artificial Intelligence at Work,* in *Comparative Labour Law & Policy Journal*, 2019, 41 (1).
[5] Degryse C., *Du flexible au liquide: le travail dans l'économie de plateforme*, in *Relations Industrielles/Industrial Relations*, 75, 4, 2020, 670 ff.
[6] On the specific issue of algorithmic discrimination, *see* at least Gerards J., Xenidis R., *Algorithmic discrimination in Europe: Challenges and opportunities for gender equality and non-discrimination law*, DG for Justice and Consumers, European Commission, Brussels, 2021 and Hacker P., *Teaching Fairness to Artificial Intelligence: Existing and Novel Strategies against Algorithmic Discrimination under EU Law*, in *Common Market Law Review,* Issue 4, 2018, 1143 – 1185. For a focus on Italian legislation and case law on the topic, *see* Santagata De Castro R., *Anti-discrimination Law in the Italian Courts: the new frontiers of the topic in the age of algorithms,* WP CSDLE "Massimo D'Antona".IT – 440/2021.
[7] Proposal for a directive of the European Parliament and of the Council on improving working conditions in platform work, Brussels, 9.12.2021, COM(2021) 762 final.
[8] Some of the first to suggest this idea among Italian scholars include Allamprese A., Borelli S., *Prime note sulla proposta di direttiva della Commissione sul miglioramento delle condizioni del lavoro su piattaforma*, in *RGL giurisprudenza online*, Newsletter n. 12.2021. For further reflections on the individualistic approach in Chapter III of the Proposed Directive, *see* Section 4.
[9] De Stefano V., Taes S., nt. (3), 9.

know the "mathematical code" behind the algorithm and to contribute, through collective bargaining, to its design – thus making platforms' business model not only transparent but also compliant with labour standards.[10]

2. Algorithmic Management and Managerial Prerogatives.

As mentioned earlier, the use of algorithms is a characteristic feature of the platforms' business model. Hence, it is not surprising that algorithmic management has been widely tested first in the platform economy and then in traditional industries,[11] where it is gaining ground every day – thanks in part to the creation of generic Artificial Intelligence (AI) products suitable for many industries.[12]

Although the use of completely automated decision-making systems seems to be rare so far,[13] algorithms are replacing or supporting managers, albeit to different degrees depending on the type of system adopted and the industry in which it is employed. In other words, algorithmic management "is more likely to take the form of a systematic and integrated assemblage of human and algorithmic actants for both legal and efficiency reasons".[14]

Indeed, firstly, Article 22 of the GDPR[15] already prohibits fully automated decisions "which produce legal effects concerning *the data subject* or significantly affect him or her".[16]

[10] Ponce del Castillo A., *Labour in the age of AI: why regulation is needed to protect workers,* ETUI Foresight Brief, 8/2020, 11.
[11] *See,* for example, Prassl J. A., nt. (4) and, more recently, Wood A. J., *Algorithmic Management. Consequences for Work Organisation and Working Conditions,* JRC Working Papers Series on Labour, Education and Technology, European Commission, Seville, 7, 3 and 11, 2021.
[12] *See,* also for a comprehensive analysis of the EU's Proposal for an *Artificial Intelligence Act,* De Stefano V., Wouters M., *AI and digital tools in workplace management and evaluation. An assessment of EU's legal framework,* ESPR, STOA, Brussels, European Union, 2022. The Proposal (Brussels, 21.4.2021 COM(2021) 206 final) itself may encourage the use of AI as it aims to "address the risks and problems linked to AI, without unduly constraining or hindering technological development or otherwise disproportionately increasing the cost of placing AI solutions on the market" (*See,* Explanatory Memorandum, 3). The Proposal does not lay down specific provisions on the use of AI in the employment relationship, but considers systems used in the area of "Employment, management of workers and access to self-employment" (see Annex III) to be "high risk". The specific requirements for these systems and the obligations for operators of such systems are set out in Title III of the proposal.
[13] Wood A. J., nt. (11), 11-12. This fact has probably led the European Parliament, in its *Draft Report* on the Proposed Directive on platform work, to suggest the inclusion also of semi-automated monitoring and decision-making systems in the material scope of the Directive. Automated and semi-automated systems should be intended as "any system, software or process that involves the use of data, machines and algorithms to make decisions or uses computations to *aid or replace* management decisions or policy that impact work organisation, opportunities, access, freedoms, rights and safety of workers"; *See* European Parliament, Committee on Employment and Social Affairs, *Draft Report on the proposal for a directive of the European Parliament and of the Council on improving working conditions in platform work*, (COM(2021)0762 – C9-0454/2021 – 2021/0414(COD)), Rapporteur: Elisabetta Gualmini, 3.5.2022, 56 ff.
[14] *Ibidem.*
[15] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
[16] It is important to note that according to Recital 35 of the Proposed Directive on platform work Article 7(1) and (3) "apply as specific rules in the context of platform work, including to ensure the protection of the rights and freedoms in respect of the processing of employees' personal data within the meaning of Article 88 of

Secondly, and on a more practical level, scholars believe that programming algorithmic systems able to "account for the full range of tasks, uncertainty and contingency that human managers deal with" is still a long way off – at least until general AI is developed.

As a result, the interaction between algorithms and managers and the intensity of automation can vary significantly, from mere management assistance to full automation, depending on how much room is left for human judgement and action in the decision-making process.[17]

Nevertheless, all algorithmic management systems share a common trait: they enhance the simultaneous and instantaneous[18] implementation of the key prerogatives of management, i.e., directing, evaluating, and disciplining the workforce. This may affect the imbalance of power in the employment relationship and, consequently, the working conditions and fundamental rights of workers.[19] In fact, managerial prerogatives seem to be mutually reinforcing,[20] as such extensive and pervasive surveillance and control of workers potentially increases the scope of the employer's directing and sanctioning power – sometimes even by delegating some of this control to third parties, such as customers[21] involved in the well-known rating systems.

In addition, two other effects occur: the boundaries between the functions of algorithms and managerial prerogatives are uncertain and blurred (e.g., how are task assignment and

Regulation (EU) 2016/679". *See,* Otto M., *A step towards digital self-& co-determination in the context of algorithmic management systems,* in *Italian Labour Law e-Journal,* 1, 15, 2022, 57.

17 Wood J. A., nt. (11), has developed a "classification of automation in algorithmic management" distinguishing six different levels: 1) no automation; 2) management assistance; 3) partial automation; 4) conditional automation; 5) high automation; 6) full automation. Only the last three levels fall under the definition of algorithmic management, whose distinctive feature is enabling the simultaneous direction, evaluation and discipline of workers. Highly automated systems differ from conditional systems because no human intervention is required, but it is still possible for managers to ignore or overrule the systems; indeed, in a fully automated system, human intervention in algorithmic decision is not possible at all. *See,* also Zappalà L., *Informatizzazione dei processi decisionali e diritto del lavoro: algoritmi, poteri datoriali e responsabilità del prestatore nell'era dell'intelligenza artificiale,* WP CSDLE "Massimo D'Antona".IT – 446/2021, 10. Here the Author distinguishes between the "augmented human manager" – who uses data from workforce analytics tools to manage the company and its human resources – and the genuine "digital or algorithmic management". In the latter case, workforce analytics devices are directly integrated with decision-making systems that "replace the flesh-and-blood manager".

18 Many authors have addressed this issue, also emphasising the consequent alteration of the power imbalance in the employment relationship and its link to information asymmetries. *See,* for instance: De Stefano V., Taes S., nt. (3); Wood J.A., nt. (11); Aloisi A., Gramano E., nt. (2); Aloisi A., De Stefano V., *Il tuo capo è un algoritmo. Contro il lavoro disumano,* Laterza, Bari, 2020, 66 ff.; Zoppoli L., *Lavoro digitale, libertà negoziale, responsabilità: ancora dentro il canone giuridico della subordinazione*, in *Per i cento anni dalla nascita di Renato Scognamiglio,* Vol. II, Jovene, Napoli, 2022, 1494 ff.

19 For an overview of the impact of algorithmic management on working conditions *see,* Gilbert T., *The Amazonian era. How algorithmic systems are eroding good work,* Institute for the Future of Work, May 2021, 20 ff.; on the impact on platform workers' health *see* broadly Bérastégui P., *Exposure to psychosocial risk factors in the gig economy. A systematic review*, Report 2021.01, Brussels, ETUI.

20 *See* De Stefano V., Wouters M., nt. (12) 22; Tullini P., *La salvaguardia dei diritti fondamentali della persona che lavora nella gig-economy*, in *Costituzionalismo.it*, 1, 2020, 56 ff.

21 *See* De Stefano V., *"Negotiating the algorithm": Automation, artificial intelligenge and labour protection,* Employment Working Paper No. 246, International Labour Office, Geneva, 2018, 10; Pacella G., *Il lavoro nella gig economy e le recensioni online: come si ripercuote sui e sulle dipendenti il gradimento dell'utenza?,* in *Labour & Law Issues,* 3, 1, 2017, R.3-R.34; Prassl J. A., nt. (4); Topo A., *"Automatic management", reputazione del lavoratore e tutela della riservatezza*, in *Lavoro e diritto,* 3, 2018, 462. The latter emphasises the risk of replacing the employer's discretion with that of the client, shielded by the objectivity of the algorithm and not subject to any control.

algorithmic reward measures specifically linked in each platform?), and workers are unaware of the reasons and processes that affect their daily work lives, as they are hidden behind the veil (deemed neutral) of the "algorithmic boss".

This lack of knowledge may, in fact, affect workers' ability to detect abuse up front[22] – also due to the technical incomprehensibility of these systems to ordinary people. Furthermore, it could cause dispersion of accountability[23] by breaking the link between powers and the responsibility for exercising them and thus making it unclear to whom claims should be made. And so, although some clearly and agreeably emphasize that the use of an algorithm is a specific organizational decision of the entrepreneur and for which he must therefore be held accountable.[24]

In this scenario, the issue at stake is how to adequately counterbalance those "increased managerial prerogatives"[25] or how to prevent these technologies from undermining the counterbalances to employer's powers that already exist.[26] And still, how to ensure that algorithms pursue legitimate ends and how effectively protect workers from potential adverse effects. These goals, however, obviously require better knowledge and understanding of these systems, in order to assess their compatibility with the fundamental rights of workers and to provide for a regulation – legislative and contractual – that not only minimizes their negative impact on the quality of work, but also "embeds" the protection of the dignity and rights of workers already at the stage of programming the algorithms.[27]

For this reason, both preventive and proactive[28] intervention by legislators and social partners is needed to guide and direct[29] technological and digital progress and make algorithms (and AI in general) not only transparent but, as mentioned above, consistent with labour standards. In this sense, digital labour platforms could also help create decent work opportunities to support inclusive and sustainable development, as the ILO hopes in its latest report on the digital labour platforms.[30]

[22] This, for example, has been highlighted with regard to algorithmic discrimination by Hacker P., nt. (6); Gerards J., Xenidis R., nt. (6) *passim* and particularly at 73 ff., and Peruzzi M., *Il diritto antidiscriminatorio al test di intelligenza artificiale,* in *Labour & Law Issues*, 7, 1, 2021, I. 57.
[23] *See* particularly Section 5 in Prassl J.A., nt. (4).
[24] *See* Gaudio G., *Algorithmic bosses can't lie! How to foster transparency and limit abuses of the new algorithmic managers,* in *Comparative Labor Law & Policy Journal,* forthcoming.
[25] Aloisi A., Gramano E., nt. (2).
[26] Aloisi A., De Stefano V., nt. (18), 83.
[27] *See* Aloisi A., De Stefano V., nt. (18); Treu T., *La digitalizzazione del lavoro: proposte europee e piste di ricerca*, in *Federalismi.it,* 9, 2022, *passim;* Zappalà L., nt. (17).
[28] Dagnino E., Armaroli I., *A seat at the table: negotiating data processing in the workplace. A national case study and comparative insights,* in *Comparative Labor Law & Policy Journal,* 2020, 173-195.
[29] Treu T., nt. (27) *passim.*
[30] ILO, nt. (1), 27.

3. The Lack of Transparency of Algorithms and Italian Case Law.

The relevant number of court cases related to the platform economy[31] has been instrumental in the last few years in "opening a window"[32] on the functioning of algorithms – particularly in the food-delivery and ride-hailing industries. Indeed, understanding the rationale and processes behind algorithmic management is critical both for qualifying the employment relationship and for assessing the existence of discriminations.

Although the judges have used various approaches,[33] they have achieved the result of unveiling – at least in part – the main functions of algorithms used by platforms operating across Europe (e.g., *Deliveroo, Glovo, Uber*), also prompting an exercise in comparative case-law by the judges themselves.[34]

Focusing on Italian case law, the first thing to consider is that Italian judges have tested all possible options for classifying the employment relationship in the case of platform workers and that the Court of Cassation in 2020[35] considered food-delivery couriers to be hetero-organized in the mining of Article 2 (1) legislative decree No. 81/2015 – thus initiating the prevailing orientation in case law.[36]

Secondly, judges have used three distinct approaches, sometimes even together, to verify whether the employment relationship could be considered subordinate:[37] a) examining whether and how the typical managerial prerogatives were exercised through the algorithm; b) focusing on the organisational integration of the worker's performance with the platform; c) looking for aspects that would contradict the contractual classification of workers as self-employed, e.g., the unilateral predetermination of the conditions of the relationship, the restriction of the worker's autonomy also through reward mechanisms.[38]

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[31] *See* Hießl C., *Case law on the classification of platform workers: Cross-European comparative analysis and tentative conclusions,* available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3839603, edited version published in *Comparative Labour Law & Policy Journal,* 42, 2, 2022, and De Stefano V., Durri I. Charalampos S., Wouters M., *Platform work and the employment relationship,* ILO Working Paper 27, March 2021, International Labour Office, Geneva, 30 ff.

[32] Ballestrero M.V., *Ancora sui rider. La cecità discriminatoria della piattaforma,* available at https://www.rivistalabor.it/ancora-sui-rider-la-cecita-discriminatoria-della-piattaforma/.

[33] *See* Hießl C., nt. (31) and, more synthetically, Hießl C., *The legal status of platform workers: regulatory approaches and prospects of a European solution,* in *Italian Labour Law e-Journal*, 1, 15, 2022, 21 ff.

[34] A paradigmatic example is given by Trib. Palermo 24 novembre 2020, n. 3570, in *Diritto delle Relazioni Industriali*, 2021, 1, 214.

[35] Cass. 24 gennaio 2020, n. 1663, in *Rivista Italiana di Diritto del Lavoro*, 2020, 1, II, 76.

[36] *See,* for instance, on Italian case law: Carinci F., *Il percorso giurisprudenziale sui rider. Da Tribunale Torino 7 maggio 2018 a Tribunale Palermo 24 novembre 2020*, in *Argomenti di Diritto del Lavoro,* 1, 2021, 1-25.

[37] Donini A., *Piattaforme,* in Novella M., Tullini P. (eds.), *Lavoro digitale,* Giappichelli, Turin, 2022, 36-37.

[38] This is interesting because even the legal presumption of subordination set in Article 4 of the Proposed Directive is based on five criteria that seem to express a double view of subordination: an organisational one, linked to the indicators of the worker's performance integration in the company's organisation, and a "classical" one related to managerial prerogatives[38]. It is no coincidence, then, that many scholars have stated that these criteria were inspired by the case law of European countries on platform work. *See* Bronzini G., *La proposta di Direttiva sul lavoro nelle piattaforme digitali tra esigenze di tutela immediata e le sfide dell'"umanesimo digitale",* in *Lavoro Diritti Europa,* 1, 2022; Alaimo A., *Lavoro e piattaforme tra subordinazione e autonomia: la modulazione delle tutele nella proposta della Commissione europea,* in *Diritto delle Relazioni Industriali,* 2, 2022, 639-655.

However, regardless of the approach used by judges, those "verification operations", have been made more difficult by the lack of information on the algorithm. In fact, not infrequently, Courts have highlighted the lack of allegation and evidence at trial of the algorithms and their functioning by the platforms, *de facto* building their decisions on facts provided for by the workers and/or trade unions and not contested (or only partially contested) by the defendant in order not to open the "black box".

This was the case, for example, of two important rulings, namely the decision of the Court of Palermo that in 2020[39] considered for the first time in Italy a rider as an employee, and of the decision of the Court of Bologna that on 31 December 2020 ascertained the discriminatory nature of the algorithm used by *Deliveroo* to assign shifts to couriers.

Here a question arises, i.e., whether, having more information, the decision of the judge would have been different. In other words, the matter is if non-transparency of algorithms affects Courts' decisions. Scholars have already addressed this topic,[40] also offering possible solutions, but two points are worth noting.

On the one hand, Article 16 of the Proposed Directive gives the judge the power to order the platform "to disclose any relevant evidence which lies in their control" and which contains confidential information that the judge considers relevant to the claim.[41]

On the other hand, this welcomed provision is restricted to "proceedings concerning a claim regarding correct determination of the employment status of persons performing platform work" – unless Member States will extend its scope when implementing the forthcoming final text of the Directive.

Indeed, from an anti-discrimination law perspective, such a provision could be useful in proceedings to establish the existence of discrimination. In fact, it has been addressed that for the claimant it could be difficult, if not sometimes impossible, also to make out *prima facie* evidence of discrimination without access to data and algorithms – particularly in cases of machine-learning devices where tracing and understanding connections and inferences made by the system is quite hard also for experts.[42] This *prima facie* evidence is needed both in the case of direct and indirect discrimination to make the burden of proof shift on the defendant, thus undermining the idea that indirect discrimination, "focusing on discriminatory effects of algorithms rather than on their operations (…) would [*always?*] offer a way to get around the difficulties"[43] concerning access to algorithms and their intelligibility.

[39] *See* Trib. Palermo, nt. (34).
[40] *See* Gaudio G., nt. (24).
[41] Even though recital 33 says: "Digital labour platforms should not be required to disclose the detailed functioning of their automated monitoring and decision-making systems, including algorithms, or other detailed data that contains commercial secrets or is protected by intellectual property rights. However, the result of those considerations should not be a refusal to provide all the information required by this Directive".
[42] *See* Peruzzi M., nt. (22); Hacker P., nt. (6); Gerards J., Xenidis R., nt. (6) 74; Kullmann M*., Discriminating job applicants through algorithmic decision-making*, 2019, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3373533.
[43] Gerards J., Xenidis R., nt. (6), 71. They also highlight the risk that, due to lack of transparency, "the notion of indirect discrimination might become a conceptual 'refuge' to capture the discriminatory wrongs of algorithms. However, such a trend might increase legal uncertainty given the open-endedness of the objective justification test applicable in this case" (*See* 76, but also 70-73).

Furthermore, as for the boundaries between employment and self-employment, algorithms are blurring the lines between the two types of discrimination, hence posing another "classification challenge",[44] as the debate on the *Frank* case clearly showed.[45] Here, indeed, more information about the algorithm could probably have played a role in interpreting the platform's "deliberate blindness" differently and viewing the discrimination as direct.

4. The Third Chapter of the Proposed Directive on Platform Work.

Moving to the third Chapter[46] of the Proposed Directive on platform work, it aims to promote transparency, fairness and accountability in algorithmic management. To this extent, it establishes substantive and procedural rights for the benefit of workers and their representatives, accompanied by a set of information and (risk or impact) assessment obligations for platforms. However, scholars, the European Parliament, the European Economic and Social Committee and the ETUC[47] have identified some weak points – which are quite similar to those voiced against the Commission's Proposal for an AI Act.

First of all, the scope of the Directive is still limited to platform work, although many of the provisions in Chapter III also apply to self-employed workers (with the exceptions mentioned in Article 10).[48] In addition, the obligations under Article 6 distinguish between the information required depending on whether they are automated monitoring systems (paragraphs 1(a) and 2(a)) or automated decision-making systems (paragraphs 1(b) and 2(b)).[49] Also, the information obligations under Article 6 are subsidiary to those already imposed on the platforms by the Directive 1152/2019,[50] and Article 10 clarifies that, in the event of a conflict between the provisions of the Proposed Directive and Regulation

[44] Gerards J., Xenidis R., nt. (6), 76.
[45] *See,* e.g., Donini A., nt. (37); Ballestrero M. V., nt. (32); Santagata De Castro R., nt. (6); Barbera M., *Discriminazioni algoritmiche e forme di discriminazione,* in *Labour & Law Issues,* 7, 1, 2021, I.1- I.17.
[46] Chapter III is based on Article 16 TFEU and is, therefore, conceived as a specification and supplement of the GDPR for the platform economy. On the legal basis of the Directive *see* directly its *Explanatory Memorandum* (Section 2). On Chapter III *see*, more broadly, Aloisi A., Potocka-Sionek N., *De-gigging the labour market? An analysis of the 'algorithmic management' provisions in the proposed Platform Work Directive,* in *Italian Labour Law e-Journal*, 1, 15, 2022, 30-50; Otto M., nt. (16).
[47] *See,* respectively, European Parliament, nt. (13); European Economic and Social Committee, *Opinion on the Working conditions package – platform work,* Rapporteur: Cinzia Del Rio, 23.03.2022; ETUC, *Resolution on the proposal of the European Commission of a Directive on improving working conditions in platform work and way forward ahead of the ordinary legislative procedure,* Adopted at the Executive Committee Meeting of 16-17 March 2022.
[48] According to Article 10, paragraph 1 only "Article 6, Article 7(1) and (3) and Article 8 shall also apply to persons performing platform work who do not have an employment contract or employment relationship". As a consequence, Article 7(2) and Article 9 do not cover self-employed.
[49] *See* Aloisi A., Potocka-Sionek N., nt. (46), 37. They consider this distinction as "artificial", as in practice the two types of systems are functionally interdependent and operate as a "continuum".
[50] Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union. On the relevance of Directive 1152/2019 and Regulation 1150/2019 for platform work, *see* Ratti L., *Crowdwork and Work On-Demand in the European Legal Framework,* in Carinci M.T., Dorssemont F. (eds.), *Platform Work in Europe. Towards Harmonisation*?, Intersentia, 2021, 173-208.

1150/2019,[51] the latter prevails for business users (including self-employed platform workers) – to whom Article 8 does not apply anyway.

Consequently, Chapter III has a complex material and personal scope and also the whole legislative jigsaw[52] resulting from the combination of all the above-mentioned European directives and regulations is quite structured. Therefore, it would have been better to include in the scope of the Directive all workers who are subject to algorithmic management,[53] or rather, to automatic or semi-automatic monitoring and decision-making systems – to use the words of the European Parliament in its *Draft Report* on the Proposal.[54] There are two reasons for this: simplification of the legal framework and widening the circle of protected workers, since algorithmic management does not only concern platform work.

Another very important criticism is the low importance given to collective bargaining, collective rights, and the role of trade unions in general. While the Proposal provides for the right to information and consultation in Article 9, it does not explicitly refer to trade unions,[55] or to an obligation to bargain collectively over the introduction and/or modification of algorithmic management systems. This also contrasts with national regulations (such as in Italy and Germany) which make the introduction of technological devices subject to negotiation with the social partners, and sometimes even to public approval, if they enable the monitoring of work performance.[56] Therefore, these "old" devices (e.g., cameras), which are often less invasive and pervasive than algorithms, are now potentially subject to stricter regulation than that proposed so far for algorithms and AI tools.[57]

For instance, according to the Italian *Workers' Statute* (Article 4 of Law No. 300 of 20 May 1970), devices that indirectly allow the remote control of workers can only be installed for three purposes established by the law: organizational, productive or safety purposes, and the protection of employers' properties. Moreover, they can be installed only by collective agreements or, in the absence of the latter, by the authorisation of the Labour Inspectorate[58]. This provision gives an interesting example of how legislation and collective bargaining can

[51] Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services. *See* Article 2(1) for the definition of "business user".
[52] *See* Aloisi A., Potocka-Sionek N., nt. (46) 42.
[53] *See*, for instance, Kelly-Lyth A., Prassl J.A., *Improving Working Conditions inthe Gig Economy: The EU's Proposed Platform WorkDirective*, in *Oxford Human Rights Hub,* 9 december 2021, available at https://ohrh.law.ox.ac.uk/improving-working-conditions-in-the-gig-economy-the-eus-proposed-platform-work-directive/; Gaudio G., *L'algorithmic management e il problema della opacità algoritmica nel diritto oggi vigente e nella Proposta di Direttiva sul miglioramento delle condizioni dei lavora-tori tramite piattaforma*, in *Lavoro Diritti Europa*, 1, 2022.
[54] *See,* nt. (13).
[55] Aloisi A., Potocka-Sionek N., nt. (46), 4, consider that this may have been done in order to include in the notion of workers' representatives also non-formal and non-institutional forms of organisation involving platform workers. Under Article 2(1) n. 5 of the Proposal the word "representatives" means "the workers' organisations or representatives provided for by national law or practices, or both". Instead, the European Parliament, nt. (13) would rather refer to "recognised trade unions in accordance with national law and practice or other persons who are freely elected or who are designated by the workers in an organisation to represent them".
[56] Dagnino E., Armaroli I., nt. (28).
[57] *See* De Stefano V., Wouters M., nt. (12) *passim* and particularly 51 and 58.
[58] Two exceptions are provided for in paragraph 2 for working tools and systems recording the access and presence of employees in the workplace.

together provide a framework for assessing the compliance of certain instruments with the law and regulating their impact on workers' rights prior to their use.

By contrast, the Proposed Directive maintains an individualistic perspective, which in some ways may even contradict what is expressed in the draft *"Guidelines on the application of EU competition law to collective agreements regarding the working conditions of solo self-employed persons*"[59] where the European legislator seems to be aware of the importance of collective agreements as a regulatory tool to improve the working conditions of solo self-employed workers. Nevertheless, the EP proposes several amendments to improve the collective dimension of the Proposal, by conceiving information and consultation rights as a step to "understand[60] the functioning of the algorithmic and to collective bargain on it".[61]

For example, the EP recommends extending the information obligations under Article 6 to include workers' representatives and labour inspectorates (even when the system has only been provided to the platform by a vendor) and expanding the information to be provided (e.g., including information on the goals and purposes of monitoring; on the compliance of such systems with the law and collective agreements, on the functioning and mode of operation of features affecting the employment relationship, on the performance evaluating mechanisms etc.). Then, under a new paragraph 4a in Article 6 the features of automated and semi-automated decision-making and monitoring systems that affect working conditions will be subject to collective bargaining.[62] Furthermore, Articles 6 to 9 will be guaranteed to all workers subject to such systems (also in the traditional economy), while the right to explanation (Article 8) will apply to all decisions that have an impact on terms and conditions of employment – regardless of whether the impact is significant.[63] Also, the EP strengthens the role of trade unions in the enforcement phase and introduces a new Article 15a concerning the "promotion of collective bargaining in platform work" by Member States as well as the prevention of anti-union or discriminatory conduct in the exercise of trade union rights and the right to collective bargaining.

To conclude, the "original *habeas corpus* of digital rights"[64] in Chapter III is an unavoidable (but improvable) starting point. But, if we focus on collective rights, it is clear that timely intervention in the logic[65] by which the algorithm is designed and programmed is a further step than simply being informed and consulted about the use or modification of these systems: it means helping to define their purpose and architecture. After all, collective rights

[59] Annex to the Communication from the Commission concerning the Approval of the Guidelines on the application of EU competition law to collective agreements regarding the working conditions of solo self-employed persons, Brussels, 9.12.2021 C(2021) 8838 final.
[60] *See* Otto M., nt. (16), 53-56, for an interesting distinction between the concept of "transparency" and "explainability" to consider when analysing Chapter III.
[61] *See* European Parliament, nt. (13), 104.
[62] "The features of automated or semi-automated monitoring and decision-making systems having an impact on working conditions shall be object of collective bargaining and collective agreements between the parties" (European Parliament, nt. (13), 75).
[63] In line with Article 22 GDPR, Article 8 of the Proposal now provide for the right to explanation "for any decision (…) that *significantly* affects the platform worker's working conditions".
[64] Bronzini G., nt. (38), 9.
[65] Treu T., nt. (27), 204, but *see* also nt. (67) and (68).

and collective bargaining have been traditionally conceived as a way to limit and counterbalance employers' powers, also by addressing information asymmetries.[66]

5. The "*ex ante* approach".

Following the example of data protection law, the regulatory focus must therefore shift to the moment of design,[67] to intervene in the logic of algorithms by giving them a specific purpose (such as improving working conditions) and striking a balance between the needs of the employer and the interests of workers.

As it has been said, it is not a matter of intervening (only) in the effects on certain working conditions, but of directly influencing the digital mechanisms that determine these conditions so that they do not harm the interests and fundamental rights of workers[68]– from data protection to health, to fair wages and work-life balance, just to name a few. In this way, the good potential of the use of technology in the workplace can also be used to ensure that workers' interests are pursued alongside the goal of greater efficiency in production and workforce management.[69]

Indeed, history has shown the ambivalent relationship between technology and work: the former can make the latter "easier, safer, and more productive" while opening up the possibilities of abuse and even exploitation. But this negative effect is not inevitable and legislative and contractual regulation, when it comes to algorithms, should once again avoid this sort of techno-deterministic[70] scenario, always aiming at decent work.

To this end, and in the context of general legislation setting minimum standards, collective agreements could actually play a key role.[71] Collective bargaining would be able to introduce

[66] *See,* very recently, ILO, *Social Dialogue Report 2022: Collective bargaining for an inclusive, sustainable and resilient recovery*, International Labour Office, Geneva, 2022, 28 ff. With regard to information asymmetries, is interesting to note that as early as 1986, Vardaro highlighted a change in the relationship between labour and technology, and between entrepreneurship and technology as a consequence of the new technologies of the third industrial revolution. In fact, according to the author, from the perspective of the entrepreneur, the realm of technology shifted from the plane of control of the functioning of the production process to that of control of the *information* relating to the, tendentially automatic, functioning of the process. In this last case, however, the entrepreneur's control is only mediated because the subject who truly dominates technology is the one who – we might say, like modern algorithm programmers – actually holds the information on the technological mechanism (*See* Vardaro G., *Tecnica, tecnologia e ideologia della tecnica nel diritto del lavoro,* in *Politica del diritto,* XVII, 1 March 1986, 116-117). In other words, even if the employer is not in a position to know (and intervene) directly in new algorithmic technologies, it is he who can guarantee, at least indirectly, access to this information, because it is still him who chooses the use of innovative technologies to carry out his business activities and to be competitive in the market.

[67] Dagnino E., *People Analytics: lavoro e tutele al tempo del management tramite big data*, in *Labour & Law Issues*, 2017, 3(1), I. 27; Ingrao A., *Data-Driven management e strategie collettive di coinvolgimento dei lavoratori per la tutela della privacy*, in *Labour & Law Issues*, 2019, 5(2), 127–143; De Stefano V., Taes S., nt. (3), 6.

[68] Treu T., nt. (27) 204. *See* also De Stefano V., nt. (21) 22 ff., Topo A., nt. (21) 467 ff.,

[69] Dagnino E., Armaroli I., nt. (28).

[70] Prassl J.A., nt. (4); De Stefano V., nt. (21) 1. More broadly on the relationship between technology, work and labour law *see* Vardaro G., nt. (66).

[71] *See,* e.g., De Stefano V., Taes S., nt. (3); Eurofound, *Back to the future: Policy pointer from platform work scenarios,* Luxembourg: Publications Office of the European Union, 2020, available at https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20012en.pdf; Prassl J. A., *Collective voice in the platform economy: challenges, opportunities, solutions, Brussels*, ETUC, 2018.

and regulate new and specific rights related to algorithmic management[72] (e.g., data portability) in a given environment or, according to some scholars,[73] even ban those algorithmic and AI systems that are radically incompatible with fundamental rights and the other legitimate purposes that the law and collective agreements could assign to the algorithm (primarily the principle of the so-called "human in command approach"). Moreover, collective agreements at the industrial or company level could take into account the specificities of the different industries and platform companies, in view of the tailored, flexible and cooperative approach already outlined in the European framework agreement on digitalisation[74] – also giving the parties the possibility to further adapt the rules to changing circumstances. However, at least two final points need to be considered.

On the one hand, there is the issue of access to collective bargaining for the self-employed.[75] It is not possible to address properly this topic now, but it is well known that according to the case-law of the European Court of Justice collective agreements covering self-employed are deemed to be in contrast with Article 101 TFEU and that, quite often, platform workers are still considered self-employed by platforms and Courts. Nevertheless, as mentioned, the European Commission has prepared Draft Guidelines dealing specifically with this issue, in order to clarify that certain categories of collective agreements concerning solo self-employed persons (including platform workers)[76] fall outside the scope of Article 101 TFEU or that the Commission will not intervene against certain other types of collective agreements.

On the other hand, it is obvious that trade unionists and workers' representatives, if not properly trained on AI issues, would suffer from the same limitation of technical comprehensibility[77] that prevents individual workers from understanding how algorithms and AI function. Indeed, the assessment of algorithms requires a precise and high level of expertise, also to bridge the information asymmetries they create.

If trade unions and workers' representatives were prevented from accessing this expertise, also for financial reasons, the possibility to negotiate on the algorithm and generally ensure

[72] *See* De Stefano V., nt. (21) 23 ff.
[73] *See* De Stefano V., Wouters M., nt. (12); Gaudio G., nt. (24).
[74] The Agreement has been signed on 22 June 2020 by BusinessEurope, SMEunited, CEEP, ETUC and the liaison committee EUROCADRES/CEC. *See amplius* Senatori I., *The European Framework Agreement on Digitalisation: a Whiter Shade of Pale?,* in *Italian Labour Law e-Journal*, 2, 13, 2020, 160-175; 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, 105–121.
[75] *See,* e.g., Biasi M., '*We will all laugh at gilded butterflies'. The shadow of antitrust law on the collective negotiation of fair fees for self-employed workers*, in *European Labour Law Journal*, 9, 4, 2018, 354-373; Countouris N., De Stefano V., Lianos I., *The EU, Competition and Workers' Rights*, Research Paper Series, 2, 2021, London, Center for Law, Economics and Society, Faculty of Laws, UCL; Brameshuber E., *(A Fundamental right to) Collective Bargaining for Economically Dependent, Employee-Like Workers,* in Miranda Boto J. M., Brameshuber E. (eds.), *Collective bargaining and the gig economy. A traditional Tool for New Business Models*, Hart Publishing, London, 2022, 227-252; Dorssemont F., *Collective Workers' Rights for Workers in the Gig Economy,* in Carinci M.T., Dorssemont F. (eds.), *Platform Work in Europe. Towards Harmonisation?,* Intersentia, Cambridge, 2021, 209-225; Rainone S., Countouris N., *Collective bargaining and self-employed workers. The need for a paradigm shift*, ETUI Policy Brief, 2021.11.
[76] *See* paragraphs 28-31 of the Draft guidelines, nt. (59).
[77] *See* Otto M., nt. (16), 60; Ponce del Castillo A., nt. (10); Gaudio G., *Algorithmic management e tutela giurisdizionale*, in *Diritto delle Relazioni Industriali,* 1, 2022, 34. The latter also believes, however, that trade unions are in a "strategic position" to gather information and reduce information asymmetries that disadvantage workers.

its transparency would be jeopardised. A good solution here is both training courses organised by the trade unions themselves and access to experts who are available to the trade unions but paid for by the platforms – as set in the Proposed Directive and the German 2021 law on the modernisation of works councils.[78]

To conclude and as has been said, "the regulation of AI must also take into account at the European level that algorithms in the world of work do not only raise technical or legal questions, but also questions of power. Collective actors (…) are a crucial counterweight here *and* fair AI requires their involvement and empowerment. Otherwise, the intended 'human-centered' approach to AI in the world of work remains just a phrase".[79]

[78] Klengel E., Wenckebach J., *Artificial intelligence, work, power imbalance and democracy –why co-determination is essential*, in *Italian Labour Law e-Journal*, 14, 2, 2021, 164 ff.
[79] *Ibidem,* 169.

11

AI-driven recruiting: A consideration on data protection- and anti-discrimination law.

Friederike Malorny* - Til Rieger**

1. Preliminary remarks. 2. Term "artificial intelligence". 3. Data protection law as a limit to AI-driven recruiting. 4. Anti-discrimination law as a limit to AI-driven recruiting. 5. Final remarks.

1. Preliminary remarks.

The implementation of AI into the process of recruiting new employees is no mere futuristic idea: a rather broad variety of developers have already pushed their products far beyond beta statues. Offerings reach, inter alia, from autonomously improving job postings over organizing big datasets of CV's as well as analyzing just these. Furthermore, some systems are even able to decide, which applicant is to choose. At the same time, the use of AI relocates the beginning of the application process to an earlier point in time: The system needs proper training with the highest quality data set possible. Otherwise, the quality of the output (e.g. the analysis or the decision) might be inferior. Only then the actual application process starts. Since AI is a rather new technological phenomenon, lawmakers strive to close the AI-induced gaps. However, popular upcoming regulation attempts – like the AI-Act of the EU – should not distract from applicable law, particularly (national) constitution law, data protection law and anti-discrimination law. The paper focusses on the latter two.

When discussing the legal impact of AI, a reflection on data protection law is inevitable. Since Art. 88 (1) General Data Protection Regulation (GDPR) allows member states to provide more specific rules e.g. for the purpose of recruitment, the described relocation of the application process raises the question, which data protection standards are applicable

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when, which is to be examined in the following. Taking into consideration that labour contracts typically implicate an imbalance of power of the contracting parties, the paper also discusses the legal implications regarding the statements of consent connected to this imbalance within the data protection law.

In addition, regardless of the applied technology, the application process is regularly subject to high anti-discrimination requirements. These requirements mostly originate from EU-Law. EU directives and their transposition into the law of the member states are an integral part of this. Although the discussed technologies are more recent than the technology-neutral statutes of anti-discrimination law, the affected applicants and workers may not be defenceless. The following examines some mechanisms of the German transposition (the German Anti-Discrimination Act) regarding the use of AI algorithms in recruiting. It stresses how algorithms may bypass the catalogue of protected features in the meaning of § 1 of the German Anti-Discrimination Act, especially when it comes to indirect discrimination. Furthermore, the multifactorial based results of AI raise the question, how to deal with the required proof of causality between the protected feature and the discriminating act. Finally, the authors examine the question of the burden of proof in an environment of non-transparent decision-making algorithms.

2. Term "artificial intelligence".

Despite decades of discussion, there is no uniform definition of what is meant by the term "artificial intelligence".[1] In any case, it is a system that is particularly independent,[2] which therefore has the ability to solve problems.[3] At the core is the question of what intelligence is.[4] According to the German dictionary "Duden", the answer is: the "ability [of humans] to think abstractly and rationally and to derive purposeful action from it".[5] Applied to the machine, this would mean that artificial intelligence can be assumed where computational processes or actions are comparable to the thought processes and actions of humans, i.e. they are similar to them.[6] The focus is thus on the ability to learn by oneself. Contrary to

[1] On the concept of artificial intelligence in this context *see* Malorny F., *Datenschutz als Grenze KI-basierter Auswahlentscheidungen im Arbeitsrecht,* in *Recht der Arbeit (RdA)*, 2022, 172; Malorny F., *Auswahlentscheidungen durch künstlich intelligente Systeme*, in *Juristische Schulung (JuS)*, 2022, 290 ff.
[2] *See for example* Burgstaller P., Hermann E., Lampesberger H., *Künstliche Intelligenz –Rechtliches und technisches Grundwissen*, Manz, Wien, 2019, 3; Timmermann D., *Legal Tech-Anwendungen*, Nomos, Baden-Baden, 2020, 61.
[3] Puppe F., *Künstliche Intelligenz. Überblick und gesellschaftlicher Ausblick*, in Beck S., Kusche C., Valerius B. (eds.), *Digitalisierung, Automatisierung, KI und Recht – Festgabe zum 10-jährigen Bestehen der Forschungsstelle RobotRecht*, Nomos, Baden-Baden, 2020, 122.
[4] *See also* Legg S., Hutter M., *Universal Intelligence: A Definition of Machine Intelligence*, in Taddeo M. (ed.), *Minds and Machines*, 2007, 391: "A fundamental problem in artificial intelligence is that nobody really knows what intelligence is".
[5] Translated from German by the authors, available at: https://www.duden.de/suchen/dudenonline/intelligenz, last accessed 13 October 2022.
[6] *Cf.* on different definition approaches: Russell S., Norvig P., *Artificial Intelligense – A Modern Approach*, 4th edition, Pearson College Div, London, 2020, 19 ff.

what is sometimes suggested,[7] this does not include mere else-if-condition. "Artificial intelligence" is thus the generic term under which many different learning methods, types and learning styles are subsumed. In order to be able to legally classify AI-specific questions – such as the distribution of areas of responsibility – it is therefore important to understand which learning methods, technologies and algorithms as well as systems and architectures underlie the respective AI,[8] for example to understand how autonomous the AI is decisively.[9]

An example of a concrete artificial intelligence learning method is Machine Learning,[10] in which algorithms optimize their performance by learning with training data that is assessed using a specific mathematical equation – ultimately training through past data sets.[11] One subfield of machine learning is deep learning. This is a specialized method that uses neural networks modeled after the human brain, which are capable of processing large amounts of unstructured data.[12] The artificial data neuron generates an output from several inputs, which in turn acts as an input for the next data neuron, and so on.[13] The end result is a neural network with countless data neurons as nodes.[14] When a neural network is trained, it elicits which connections have led to a correct result, in order to subsequently weight them more heavily.[15] This weighting is the actual "learning effect" in that "successful" connections are given an ever-greater weight and thus become more and more active.[16]

Depending on the learning procedure used, the outcome of an algorithmic decision may be difficult or impossible to explain and thus non-transparent, which is why it is referred to

[7] Staffler L., Jany O., *Künstliche Intelligenz und Strafrechtspflege – eine Orientierung*, in *Zeitschrift für Internationale Strafrechtsdogmatik (ZIS)*, 2020, 165: "Against this backdrop, many programs labeled with the 'AI' seal tend to belong in the realm of digitization.", translated from German by the authors.

[8] With an overview of the important and future procedures and approaches in the areas of learning methods, technologies and algorithms as well as systems and architectures *see* Welzel C., Grosch D., *Kompetenzzentrum öffentliche Informationstechnologie – Das ÖFIT Trendsonar Künstliche Intelligenz*, 2018, 7 ff.; in the context of algorithms, for example, a differentiation can be made between neural networks and multicriteria optimization, and in the context of architectures, for example, between expert systems and meta-programming; in the legal context *see* also Timmermann D., *Legal Tech-Anwendungen*, Nomos Verlagsgesellschaft Mbh & Co, Baden-Baden, 2020, 60 ff.

[9] Timmermann D., nt. (8), 61 ff.

[10] *See* to other common learning methods: Leis M., Döbel I., Molina Vogelsang M., *Maschinelles Lernen – Eine Analyse zu Kompetenzen, Forschung und Anwendung*, Fraunhofer, München, 2018, 10.

[11] Mitchell T., *Machine learning*, McGraw-Hill Education, New York City, 1997, 2; Borges G., Schweighofer E., Sorge C., *Technische und rechtliche Betrachtungen algorithmischer Entscheidungsverfahren,* 2018, 30; moreover: "Every algorithm has an input and an output: the data goes into the computer, the algorithm does what it will with it, and out comes the result. Machine learning turns this around: in goes the data and the desired result and out comes the algorithm that turns one into the other." Domingos P., *The Master Algorithm*, Penguin, London, 2017, 6.

[12] *See* Campesato O., *Artificial Intelligence, Machine Learning, and Deep Learning*, Mercury Learning & Information, Herndon, 2020, 19.

[13] In detail Höpfner C., Daum J.A., *Der "Robo-Boss" – Künstliche Intelligenz im Arbeitsverhältnis*, in *Zeitschrift für Arbeitsrecht (ZfA)*, 2021, 471.

[14] In detail Höpfner C., Daum J.A., nt. (13), 471; Ertel W., *Grundkurs Künstliche Intelligenz*, 5th edition, Springer Vieweg, Wiesbaden, 2021, 322.

[15] *See* Ertel W., nt. (14); Höpfner C., Daum J.A., nt. (13), 471.

[16] *See* Höpfner C., Daum J.A., nt. (13), 471.

as a "black box".[17] This plays a role in liability in particular,[18] but also, for example, in questions of protection against discrimination.[19]

An example of how AI is already being used in the recruiting process is as follows: Within the application process AI analyses videos of job interviews in order to classify the applicant within the Big Five Personality Model. This model can be used to create completely individual personality profiles based on the reliable expressions of the five personality traits.[20] This way a personality profile of the applicant can be created, which then can be matched with the job profile. In the end, a ranking tells as to which applicant is the best fit.[21] In the following, the question will be explored: What limits are set by data protection- and anti-discrimination law?

3. Data protection law as a limit to AI-driven recruiting.

Data protection limits are provided by the GDPR at the level of European law. At the same time, Article 88 of the GDPR allows the option of national exceptions in employment law. For example, the German legislator has taken advantage of this option and created Section 26 of the German Federal Data Protection Act (BDSG).[22] However, this national exception will not play a role in the following and thus also not the question of whether this Section is to be seen as a regulation in conformity with Union law.[23] Also the international law perspective will not be discussed hereafter.[24]

[17] *See* Borges G., Schweighofer E., Sorge C., *Technische und rechtliche Betrachtungen algorithmischer Entscheidungsverfahren,* 2018, 30 ff.

[18] For an overview of the liability of AI in this context *see* for example: Lewinski K., Fritz B., *Arbeitgeberhaftung nach dem AGG infolge des Einsatzes von Algorithmen bei Personalentscheidungen*, in *Neue Zeitschrift für Arbeitsrecht (NZA),* 2018, 620 (on liability under the German Anti-Discrimination Act in personnel selection decisions); Dzida B., Groh N., *Diskriminierung nach dem AGG beim Einsatz von Algorithmen im Bewerbungsverfahren*, in *Neue Juristische Wochenschrift (NJW),* 2018, 1917; Freyler C., *Robot-Recruiting, Künstliche Intelligenz und das Antidiskriminierungsrecht,* in *Neue Zeitschrift für Arbeitsrecht* (NZA), 2020, 284 (each on liability under the German Anti-Discrimination Act in the application process); Hoeren T., Niehoff M., *KI und Datenschutz – Begründungserfordernisse automatisierter Entscheidungen*, in *Rechtswissenschaft (RW),* 2018, 47 (on data protection aspects).

[19] In this context it is interesting, for example, which differences arise if the applied learning method is supervised and unsupervised or is analyzed in the context of deep learning with neural networks or not.

[20] *See* Kanning U., in Tirrel H., Winnen L., Lanwehr R. (eds.), *Digitales Human Resource Management*, Springer, Wiesbaden, 2021, 25 ff.

[21] As in the case of the AI-based application "Retorio", https://www.retorio.com/de/, last accessed 13 October 2022.

[22] Bundesdatenschutzgesetz (BDSG).

[23] The Wiesbaden Administrative Court has doubts as to whether Section 23(1)(1) HDSIG [= Section 26(1)(1) BDSG] meets the requirements set out in Article 88(2) GDPR and has referred this to the ECJ, *Zeitschrift für Datenschutz (ZD)*, 2021, 393. The ECJ's decision remains to be seen, on this Schild H., *Beschäftigtendatenschutz: § 26 Abs. 1 S. 1 BDSG auf dem Prüfstand,* in *ZD-Aktuell*, 2021, 05470; for the assumption of conformity with Union law of Section 26 BDSG with Union law, *see* Malorny F., nt. (1), 173 ff., with further references.

[24] *For example* Art. 8 ECHR, on this, for example, Flink M., *Beschäftigtendatenschutz als Aufgabe des Betriebsrats*, 2021, 22.

a. Central concepts.

The GDPR regulates the extent to which personal data may be permissibly processed in whole or in part by automated means.[25] In principle, such processing of personal data is prohibited under the GDPR, unless there is an element of permission.

With regard to the recruiting process in employment law, *personal data* is generally processed: For example, the name and date of birth are such personal data within the meaning of Art. 4 (1) GDPR that are typically requested as part of the applicant process.

Art. 4 (2) GDPR regulates when *processing* within the meaning of the GDPR takes place. The detailed enumeration of various usage processes there shows: The term "processing" is to be understood broadly in accordance with the values of the GDPR. As a result, any action is meant with which the state of the data is changed.[26] With regard to the example presented above, the collection of personal data of the applicant by means of video, and the AI-supported selection decision based on the personal data is such change of the state of data.

This AI-driven processing of personal data is also in whole or in part *automated* within the meaning of Art. 2 (1) GDPR. Thus, the scope of application of the GDPR is typically open and it is to determine whether there is a *permission* for the automated processing. General regulations for permissions are in particular Art. 6 and 9 GDPR. Special regulations for permissions are granted under Art. 22 GDPR and – to the extent regulated by member states within the framework Art. 88 GDPR – national law, such as Section 26 BDSG in Germany.

b. Delimitation by differentiation according to phases.

In this context, the question of which regulation is applicable when is best explained if the process of using AI is divided into its phases. The example shown above concerns the *third phase*: the phase in which a concrete selection decision is made with the help of AI. However, the *first and second phase* must be distinguished from this. In the *first phase*, initial personal data is collected to create a new system and then is used to train the AI. In the *second phase* data are then collected for the purpose of making a specific selection decision.

In the *first phase*, personal data must be collected, which can then be used to train the AI. The quality of this training data is decisive for the quality of the decisions made by the AI on this basis.[27] It is conceivable that the AI will be trained with data from the core workforce.[28]

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[25] *See* Pauly D., in Paal B., Pauly D. (eds.), *Datenschutz-Grundverordnung Bundesdatenschutzgesetz: DS-GVO BDSG*, 3rd edition, Beck, München, 2021, Art. 88 margin note (mn.) 1; Wybitul T., *Was ändert sich mit dem neuen EU-Datenschutzrecht für Arbeitgeber und Betriebsräte? Anpassungsbedarf bei Beschäftigtendatenschutz und Betriebsvereinbarungen*, in *Zeitschrift für Datenschutz (ZD)*, 2016, 207.

[26] *See* Reimer P., in Sydow G., Marsch N. (eds.), *DS-GVO | BDSG*, 3rd edition, Nomos, Baden-Baden, 2022 Art. 4 DSGVO mn. 47.

[27] *See* Leis M., Döbel I., Molina Vogelsang M., *Maschinelles Lernen – Eine Analyse zu Kompetenzen, Forschung und Anwendung*, 2018, 12.

[28] *See* also Dzida B., *Big Data und Arbeitsrecht*, in *Neue Zeitschrift für Arbeitsrecht (NZA),* 2017, 542; Götz T., *Big Data im Personalmanagement*, Nomos, Baden-Baden, 2020, 39; Huff J., Götz T., *Evidenz statt Bauchgefühl? – Möglichkeiten und rechtliche Grenzen von Big Data im HR Bereich,* in *NZA-Beilage,* 2019, 73; Kornwachs K., *Arbeit 4.0 – People Analytics – Führungsinformationssysteme*, 2018, 211 ff.; conceivable is also a purchase of data; moreover Hillmer K., *Daten als Rohstoffe und Entwicklungstreiber für selbstlernende Systeme*, Nomos, Baden-Baden, 2021, 255.

From the employer's point of view, this has the advantage that it indirectly takes into account past selection decisions that have proved successful.[29] However, this can be problematic if there were discriminatory tendencies in hiring practices in the past and these are thus cemented.[30] Here, the general regulations for permissions (Art. 6 and 9 GDPR) apply. Neither the German regulation of Section 26 BDSG nor Art. 22 GDPR are applicable according to their wording.

If data is collected for the specific selection decision in the *second phase*, for example in order to record an applicant video, there may be national law applicable, in Germany Section 26 BDSG. Art. 22 (1) of the GDPR only applies if the specific selection decision *has already been made*[31] and is not being prepared. Therefore, Art. 22 GDPR is only relevant for the *third phase*.

Coming back to the example of Retorio, this would be the decision, to take the applicant placed first in the ranking, showing which applicant fits the best. Contrary to what the wording suggests at first glance, the regulation does not establish a right, but a prohibition: the prohibition to make a decision that is based on fully automated processing of data. The underlying telos is as follows: no human being may be subjected to the decision of a machine.[32] Human dignity, regulated in Art. 1 of the EU Charter of Fundamental Rights, guarantees that individuals will not be objectified. In this context one could even say "datafied and algorithmized".[33] But exactly this is the case when large amounts of data are accumulated.[34] Therefore, in accordance with the values of Article 22 (1) GDPR, a *human final decision-making authority* must remain.

c. Human final decision-making authority.

In some cases, it is difficult to distinguish when the decision is still based exclusively on the decision of the AI and when the human being has exercised its ultimate decision-making

[29] However, this also means that the workforce cannot become more diverse, but only homogenous, *see* Götz T., *Big Data im Personalmanagement*, 2020, 23; Knobloch T., Hustedt C., *Der Maschinelle Weg zum passenden Personal*, Bertelsmann Stiftung, Gütersloh, 2019, 15.

[30] Hartmann F., *Diskriminierung aus der Black Box – Neue Herausforderungen durch KI-gestützte Personalentscheidungen*, in *Europäische Zeitschrift für Europarecht (EuZA),* 2019, 421.

[31] Art. 22 (1) GDPR: "…a decision based (…) on…".

[32] *See* Höpfner C., Daum J.A., nt. (13) 467; Gola P., *Handbuch Beschäftigtendatenschutz,* 8th edition, Datakontext, Frechen, 2019, mn. 2453; Martini M., in Paal B., Pauly D. (eds.), nt. (25), Art. 22 mn. 8; Ernst C., *Algorithmische Entscheidungsfindung und personenbezogene Daten*, in Juri*stenZeitung (JZ),* 2017, 1030.

[33] Golla S., in Donath P.B., Bretthauer S., Dickel-Görig M. (eds.), *59. Assistententagung im öffentlichen Recht – Verfassungen – ihre Rolle im Wandel der Zeit*, Nomos, Baden-Baden, 2019, 187; taken up by Höpfner C., Daum J.A., nt. (13), 467.

[34] *Cf.* Höpfner C., Daum J.A., nt. (13), 467; Ernst C., nt. (32), 1030; Golla S., *In Würde vor Ampel und Algorithmus – Verfassungsrecht im technologischen Wandel*, in *59. ATÖR – Verfassungen*, 2019, 186 ff.; Hoeren T., Niehoff M., nt. (18), 47; critically Bomhard D., *Automatisierung und Entkollektivierung betrieblicher Arbeitsorganisation,* Springer, Berlin, 2018, 49 („*dubious protection of feelings*", translated by the authors); Dammann U., *Erfolge und Defizite der EU-Datenschutzgrundverordnung,* in *Zeitschrift für Datenschutz (ZD),* 2016, 313 („*political placebo*", translated by the authors); Schulz S., in Gola P. (ed.), *Datenschutz-Grundverordnung,* 2nd edition, Beck, München, 2018, Art. 22 DS-GVO mn. 2 („expression of a diffuse general unease", translated by the authors).

authority.[35] If, for example, the AI creates a ranking based on the personal data (such as application documents) to indicate the match with an applicant profile entered into the system, it is not compatible with the purpose of Art. 22 GDPR to simply adopt this decision recommendation.[36]

It is also not enough for humans to be able to intervene theoretically; they must substitute their own decision for the decision recommendation.[37] Otherwise, the decision is still based exclusively on automated processing. Something else can only be assumed if there is sufficient room for maneuver for a human decision of his own – this presupposes that the human decision maker has the authority to make such a decision in the first place.[38]

In relation to AI-based selection decisions, this means: In principle, an application is prohibited which, after automated processing of personal data, decides in the final instance on the selection to be made.[39]

d. Explicit consent.

Art. 22 (2) GDPR regulates permissible circumstances according to which a decision in the sense of Art. 22 (1) GDPR is exceptionally possible. The concept of consent is central in this context: According to Art. 22 (2) (c) GDPR, the prohibition does not apply if the decision (which is based exclusively on automated processing) is made with the explicit consent of the data subject. It is problematic how voluntary such consent must be: Can there be any voluntariness at all in a (nascent) superior-subordinate relationship, such as the employment relationship, when it comes to decisions in which the power imbalance is clearly to the detriment of the data subject? Will an applicant who wants to be selected for a position not feel compelled to consent to the processing? Can this be seen as an effective consent under data protection law?

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[35] *See* Höpfner C., Daum J.A., nt. (13), 482; von Walter A., in: Kaulartz M., Braegelmann T. (eds.), *Rechtshandbuch Artificial Intelligence und Machine Learning*, Beck, München, 2020, Chapter 8.4. mn. 7; also Hoffmann-Riem W., *Verhaltenssteuerung durch Algorithmen – Eine Herausforderung für das Recht,* in *Archiv des öffentlichen Rechts (AöR)*, 2017, 36: "Here, however, the question arises as to how far the decision-maker acting in a supplementary capacity is able to detach himself from the automated preliminary decision, the basis and individual steps of which he can often hardly reconstruct due to the lack of transparency of the algorithms and their mode of operation, and to carry out more than a plausibility check on the basis of the result and, if necessary, the justification formulated by the computer.", translated by the authors.

[36] Also Helfrich M., in Sydow G., Marsch N. (eds.), *DS-GVO | BDSG,* Art. 22 DSGVO mn. 44.

[37] *See* Höpfner C., Daum J.A., nt. (13), 482; Martini M., in Paal B., Pauly D. (eds.), nt. (25), Art. 22 mn. 19; Hoeren T., Niehoff M., nt. (18), 53: "It is therefore important to consider whether the person involved in the decision-making process also engages with the decision in terms of its content. This engagement goes beyond mere consent", translated by the authors.

[38] Höpfner C., Daum J.A., nt. (13), 482; Schulz S., in Gola P. (ed.), nt. (34), mn. 16; von Walter A., in Kaulartz M., Braegelmann T., *Rechtshandbuch Artificial Intelligence und Machine Learning*, 2020, Chapter 8.4 mn. 7.

[39] Others demand that only those automated individual decisions are prohibited by Art. 22 I DS-GVO which are similar to profiling in terms of complexity, and justify this with a teleological reduction, for example Geißler K., in Kramer S. (ed.), *IT-Arbeitsrecht*, 2nd edition, Beck, München, 2019, Ch. B mn. 1059; Schulz S., in Gola P. (ed.), nt. (34), mn. 20; Abel R., *Automatisierte Entscheidungen im Einzelfall gem. Art. 22 DS-GVO*, in *Zeitschrift für Datenschutz (ZD)*, 2018, 305.

The voluntary element of consent is decisive: By giving consent, the data subject exercises his or her personal rights under Art. 7, 8 of the Charter of Fundamental Rights (i.e. the right of self-determined personal development vis-à-vis the data processing of third parties).[40] However, this also clearly shows that the data subject must want: it must be his or her will to be subject to the fully automated decision.

However, it is precisely this voluntary element that is called into question if the data subject has the feeling that he or she has no decision because he or she considers himself or herself to be in the "weaker" position ("take it or leave it"[41]). The Union legislator also saw this, which is why it expressed in recital 43 of the GDPR that "consent should not provide a valid legal ground for the processing of personal data in a specific case where there is a clear imbalance between the data subject and the controller (…) and it is therefore unlikely that consent was freely given in all the circumstances of that specific situation."

When does such a case exist in recruiting situations in employment law? If it is a question of establishing an employment relationship at all, there is regularly no room for voluntary decisions. The fact that there is a clear imbalance here to the detriment of the person concerned is already shown by the values of regulations that protect employees, typically regulated in the respective national law. The valuations of the GDPR also show that consent should not be possible in such situations: Article 7 (4) GDPR contains according to its purpose the requirement of accountability, which prohibits linking consent to the conclusion of a contract.[42] This means that recruiting decisions exclusively made by AI are not eligible for consent.[43]

4. Anti-discrimination law as a limit to AI-driven recruiting.

Besides these aspects of the European data protection law, European standards also affect the viewpoint of our understanding of private autonomy. EU-directives regarding anti-discrimination law can restrict private autonomy. The following remarks will shed light on some rather fundamental legal obstacles that the anti-discrimination law produces in the discussed scenario. Therefore, this part of the paper will focus four aspects: first it takes a

[40] *See* in parallel the discussion on the national right to informational self-determination: German Federal Constitutional Court (BVerfG), in *Neue Juristische Wochenschrift (NJW),* 2020, 306 "Recht auf Vergessen I", especially p. 307 mn. 84: "The fundamental right thus guarantees the power of the individual to generally determine for himself or herself the disclosure and use of his or her personal data.", translated by the authors; others point out that the right to informational self-determination as a subjective right is dispositive: Höpfner C., Daum J.A., nt. (13), 483; Schwarz L.C., in *Zeitschrift für Datenschutz (ZD*), 2018, 355.

[41] Voigt M., *Die datenschutzrechtliche Einwilligung*, Nomos, Baden-Baden, 2020, 99; Kutscha M., *Grundrechtlicher Persönlichkeitsschutz bei der Nutzung des Internet*, in *Datenschutz und Datensicherheit (DuD)*, 2011, 463 ff.; Rogosch P., *Die Einwilligung im Datenschutzrecht*, Nomos, Baden-Baden, 2013, 81.

[42] On accountability in general *see* Schneider J., *Datenschutz nach der EU-Datenschutz-Grundverordnung*, Beck, München, 2017, 143; *Engeler M.*, *Das überschätzte Kopplungsverbot,* in *Zeitschrift für Datenschutz (ZD)*, 2018, 59; more detailed on the context outlined here Höpfner C., Daum J.A., nt. (13), 484; Schulz S., in Gola P. (ed.), *Datenschutz-Grundverordnung*, Art. 7 DS-GVO mn. 24; Ingold A., in Sydow G. (ed.), *Europäische Datenschutzgrundverordnung (HK-DS-GVO)*, 2nd edition, Nomos, Baden-Baden, 2018, DS-GVO Art. 7 mn. 31; also Maschmann F., *Führung und Mitarbeiterkontrolle nach neuem Datenschutzrecht*, in *NZA-Beilage*, 2018, 116.

[43] *See* also Höpfner C., Daum J.A., nt. (13), 484.

closer look at the legal categorization regarding a potential discrimination (a.), also touching topics like justification (b.). Afterwards the major factor when it comes to a legal dispute are presented: the burden of proof (c.). The conclusion will also take a glimpse at the upcoming AI-Act and the latest developments (d.). The main research subjects will be the EU directives on anti-discrimination law[44] as well as their legal systematology. Although these guidelines have specific features, they are structurally very similar. Therefore, and for practical reasons, the council directive 2000/43/EC of 29th June, 2000 ("implementing the principle of equal treatment between persons irrespective of racial or ethnic origin") is mainly used here exemplary. Furthermore, for the purposes of this legal analysis, it is assumed that the potentially discriminated persons are candidates. They therefore fall into the personal scope of application of the EU directives.[45]

a. Categorization of algorithmic discrimination.

While the horizontal effects of primary law regarding anti-discrimination like the Articles 20 et seq. of the Charter of Fundamental Rights of the European Union (CFR) are widely discussed, the EU directives on anti-discrimination law constitute rules working indisputably direct between private individuals.[46] In order to limit the effects on the otherwise wide understanding of private autonomy, the directives link a discrimination to certain criteria.[47] Simply spoken it is not allowed to discriminate one because of his race, ethnicity, gender, religion, belief, disability, age or sexual identity. Conversely, this means that the directives do not prohibit discrimination between private individuals because of other traits.[48]
If the AI is now taking one of the forbidden traits into consideration, its decision is without any doubt discriminating:

Example No. 1: Employer E wants to hire new sales managers for his insurance company. He therefore uses an AI-based recruiting system. He instructs the developer that the AI should prefer Germans over people from other countries. The AI rejects every application of non-Germans.

The use of the AI discriminates with no doubt every non-German applicant directly as in Article 2 (2) letter a) of the directive 2000/43/EC is stated. However, this is merely a theoretical example. In practice, developers advertise seemingly 'debiased' systems.[49] This means checking the estimates in datasets for possible systematic biases leading to some sort

[44] Directives 2000/43/EG (ABl. EG Nr. L 180 p. 22), 2000/78/EG (ABl. EG Nr. L 303, 16), 2002/73/EG (ABl. EG Nr. L 269, 15), 2004/113/EG (ABl. Nr. L 373 vom 21/12/2004, 37–43).
[45] E.g. Article 3 (1) letter a) directive 2000/43/EC.
[46] Thüsing G., *European Labour Law*, Nomos, Baden-Baden, 2013, 45 ff.
[47] Some consider this as arbitrary, *see* Barbera M., *Eguaglianza e differenza nella nuova stagione del diritto antidiscriminatorio comunitario,* in *Giornale di diritto del lavoro e di relazioni industriali (GDLRI),* 2003, 402; Däubler W., in Däubler W., Beck T. (eds.), *Allgemeines Gleichbehandlungsgesetz,* 5th edition, Nomos, Baden-Baden, 2022, § 1 mn. 6.
[48] *See* Thüsing G., *European Labour Law*, 2013, 46.
[49] For example, the AI-based application "Retorio", nt. (21).

of discrimination. Therefore, companies test their models against large, scientifically sound datasets, including different cultures. As a result, the systems shall assess applicants the same, regardless of certain attributes like gender, age or ethnicity.

For a legal assessment of these 'debiased' systems, we need to look more closely into the phenomenon the directives call indirect discrimination. Regarding the indirect discrimination, an apparently neutral provision criteria or practice would put persons of a forbidden trait at a particular disadvantage compared with other persons.[50] It occurs, if a rule is the same for everyone but has an unfair effect on people with a certain attribute. It is independent from the intent of the discriminating person.[51]

Example No. 2: Employer E wants to hire new factory workers for her company in Berlin. She uses a 'debiased' AI and instructs the developer to program a preference towards employees that live closer by than 15 kilometres. This excludes people from socially deprived border districts of the city.[52]

In example No. 2, the AI excludes certain groups because of their place of residence. In a broader sense, this phenomenon is a type of district redlining. Redlining means the discrimination of groups in and through a particular geographical location.[53] As stated earlier, the EU-directives state a final catalogue of criteria. In conclusion, this kind of recruiting-practice does not automatically lead to a direct discrimination according to the EU-directives. It rather depends on what group the selection excludes. People with lower income or lower 'social statuses' are not covered by the catalogue of the EU-directives. However, if a certain ethnicity is predominately living in a certain area, the decision can be an indirect discrimination according to Article 1 and 2 (2) letter b) of the directive 2000/43/EG.[54] The example shows, that even though the employer has valid reasons to consider applicants from nearer areas (e.g. that a less commuting time means less termination and a lower fluctuation), the decisions she makes can discriminate unintentionally. To be fair, this is no particular problem of AI. However, it shows how fast entrepreneurial interests can lead to an indirect discrimination.

If entrepreneurs add a recruiting AI as a variable to this equation, the risks of indirect discrimination multiply. The reason for that lies paradoxically in the main strength of AI-Systems: finding *hidden correlations* – meaning correlations in the dataset, humans did not consider. This feature is what makes many AI-Systems superior to human decisions.[55]

[50] For an in-depth view *see*: Thüsing G., *European Labour Law*, 2013, 52.
[51] Also *see* Lahuerta S.B., in Ales E., Bell M., Deinert O., Robin-Olivier S., *International and European Labour Law*, Nomos, Baden-Baden, 2018, 2000/43/EC mn. 16 ff.
[52] The example was adopted from Dzida B., Naemi G., *Diskriminierung nach dem AGG beim Einsatz von Algorithmen im Bewerbungsverfahren*, in *Neue Juristische Wochenschrift (NJW)*, 2018, 1919.
[53] The phenomenon originates from practices in which certain services like insurance or finance don't contract with people from a certain area of living, because it is classified as 'hazardous' for business purposes, *cf.* Locke D.H., Hall B., Grove J.M. *et al.*, *Residential housing segregation and urban tree canopy in 37 US Cities*, 2021, npj. Urban Sustain1, 1-9.
[54] For a consideration of redlining algorithms in the German Anti-Discrimination Act *cf.* Dzida B., Naemi G., nt. (52), 1919; Ernst C., nt. (32), 1032.
[55] A rather famous example is the AI of AlphaGo, developed by DeepMind (Google LLC, Alphabet Inc.). AlphaGo is an AI-based computer program that play the Chinese board game Go. The game is famous for its complexity with approximately 2.1×10^{170} board positions. In March 2016, AlphaGo won four out of five games

However, if these correlations are not visible to the human assessment, it is not possible to estimate the potential of discrimination. Transferring these mechanisms to an AI-based recruiting process, it leads to an AI having a wide range of (personal) data to find correlations in. Here it may be that the algorithm not only detects relationships between non-forbidden features, but also those between forbidden and non-forbidden features. Employers could bypass anti-discrimination law by using proxy characteristics for ethnicity, gender, disability, etc. and make what is in effect a discriminatory decision, which has detrimental effect on a particular group, although not directly linked to a frowned-upon characteristic.[56] In addition, the lack of transparency, which is typical of machine- and deep learning algorithms, favours these effects and makes causal research impossible.[57]

b. Requirements for a justification.

A discrimination may be justified under the directives based on strict circumstances. The directives contain several justifications.[58] At the core of most of them – like in Article 2 (2) letter b) of the directive 2000/43/EG – is the question of the proportionality of the measure.[59] For this, the actual discriminatory act must pursue *a legitimate aim*. In addition, the means of achieving that aim must be *appropriate* and *necessary*.[60]

For a *legitimate aim*, there must be a rational relationship between the de facto disadvantage as a result of the application of a neutral norm and the use of this norm to achieve an external regulatory purpose. The objective pursued by the neutral differentiation is only lawful if it is based on objective factors that have nothing to do with discrimination based on the proscribed characteristic.[61] The reason given for the unequal treatment must correspond to a genuine need of the enterprise.[62] For this purpose, the employer can use algorithm-based

against one of the best players, Lee Sedol. He was the only human player beating AlphaGo in one of its 74 games. The system was able to figure out new moves no player had seen before, *cf.* https://www.deepmind.com/research/highlighted-research/alphago, last accessed 13 October 2022.

[56] *See* von Lewinski K., de Barros Fritz R., *Legitimacy of artificial intelligence in human resources*, in Strohmeier S., *Handbook of Research on Artificial Intelligence in Human Resource Management,* 2022, 337 ff.; Lewinski K., de Barros Fritz R., *Arbeitgeberhaftung nach dem AGG infolge des Einsatzes von Algorithmen bei Personalentscheidungen,* in *Neue Zeitschrift für Arbeitsrecht (NZA),* 2018, 622.

[57] *See* under c. "Burden of proof".

[58] For a perspective on the German Anti-Discrimination Act *see* Oetker H., in Kiel H., Lunk S., Oetker H., *Münchener Handbuch zum Arbeitsrecht – Band 1: Individualarbeitsrecht*, 5th edition, Beck, München, 2021, § 16 mn. 95 ff.

[59] Other justifications regularly exist, for example, in the case of a 'genuine and determining occupational requirement' like Article 4 and 'positive action' in Article 5 of the council directive 2000/43/EC states.

[60] *See* Baumgärtner A., in Gsell B., Krüger W., Lorenz S. et al., *BeckOGK AGG*, Beck, München, 2022, § 3 mn. 87 ff. For an in depth discussion regarding the German Anti-Discrimination Act taking into account the interpretation in conformity with EU law.

[61] ECJ, *Geringere Sozialplanabfindung für rentennahe Arbeitnehmer als Diskriminierung wegen einer Behinderung*, in *Neue Juristische Wochenschrift (NJW)*, 2013, 587 mn. 67 – Odar./.Baxter Deutschland GmbH (regarding disability in the equal treatment framework directive).

[62] For a consideration of the legal implementation in the German section 3 para. 2 German Anti-Discrimination Act of the federal labour court *see* German Federal Labour Court (BAG), *Anforderung „Deutsch als Muttersprache" in Stellenausschreibung – Ausschlussfrist*, in *Neue Zeitschrift für Arbeitsrecht (NZA),* 2018, 39 mn. 60.

systems if this is necessary and appropriate.[63] Due to the large number of different systems and constellations, this is a question of the individual case. Employers can generally rely on this regarding the use of corresponding software if they claim that applicants with certain characteristics can best cope with the tasks involved.

Rather complicated is explaining the appropriateness of the measure. First, it presupposes that the means are suitable for contributing to the realisation of the intended objective. A mere correlation however is not sufficient for justification.[64] Rather, one needs to examine whether there is a causal connection between the feature and the suitability. This evaluation is complicated since algorithms can only determine correlations, not causalities.[65] In other words: they are not 'interested' in causalities. That is why some voices – especially in the psychological literature – say that because of the incidental character of the correlations, recruiting algorithms are not suitable for finding suitable candidates. *Kanning* for example explains that foot size can be measured 100 % objectively and there may be a correlation. However, this does not give any indication of the actual suitability of a person for a certain profession.[66] Others say that the relevant procedures are usually developed based on psychological examinations and that it may well be relevant for the successful accomplishment of the advertised job which characteristics the employee possesses.[67]

Regarding the necessity of the measure, a consideration of personality tests could be helpful that do not ask about emotions but are limited to scenarios of the concrete work environment.[68] In addition, less severe means would be the use of such software that takes into account deviations in pronunciation or behaviour – also possibly by indicating that results could be biased.[69]

These considerations are however not the be-all end-all of the debate. The decisive factor in each case is the individual weighing of the interests – namely the private autonomy and freedom to conduct a business[70] against equality, respective a non-discrimination.[71]

c. Burden of proof: the linchpin of court proceedings.

Discrimination in the sense of the EU-directives by using AI-based recruiting systems is likely, as shown above. In most EU-countries it works as follows: If a person wants to claim damages or compensation in court, the plaintiff must – in principle – present the facts giving rise to the claim first. If he does not fulfil this obligation, he loses the case without the

63 Freyler C., *Robot-Recruiting, Künstliche Intelligenz und das Antidiskriminierungsrecht*, in *Neue Zeitschrift für Arbeitsrecht (NZA)*, 2020, 288.
64 *See* also Baumgärtner A., in Gsell B., Krüger W., Lorenz S. *et al.*, *BeckOGK AGG*, 2022, § 3 mn. 97 ff.
65 Custers B., *Data Dilemmas in the Information Society: Introduction and Overview,* in Custers B., Calders T., Schermer B., *Discrimination and Privacy in the Information Society: Data Mining and Profiling in Large Databases,* 2013, 15.; *see* also Kim P., *Data Driven Discrimination at Work,* in *William & Mary Law Review*, 2017, 857, 875, 920 ff.
66 Kanning U, in Tirrel H., Winnen L., Lanwehr R. (eds.), nt. (20), 19.
67 Dzida B., Naemi G., nt. (52), 1921.
68 Dzida B., Naemi G., nt. (52), 1921.
69 Dzida B., Naemi G., nt. (52), 1921.
70 As stated in Article 16 CFR.
71 As stated in Article 21 CFR.

defendant having to comment on the facts. The legal dispute is inconclusive and not successful. However, the EU-directives regarding anti-discrimination law include a special burden of proof rule. Article 8 (1) of the council directive 2000/43/EC, for instance, facilitates the rules for the burden of proof for the plaintiff (resp. the persons who consider themselves wronged because the principle of equal treatment has not been applied to them). It states:

"Member States shall take such measures as are necessary, in accordance with their national judicial systems, to ensure that, when persons who consider themselves wronged because the principle of equal treatment has not been applied to them establish, before a court or other competent authority, facts from which it may be presumed that there has been direct or indirect discrimination, it shall be for the respondent to prove that there has been no breach of the principle of equal treatment."

This is a two-stage procedure including the presumption of the candidate (first stage) and the prove of the respondent, that there has been no breach of the principle of equal treatment (second stage).[72] The difficulty of proving discrimination is a general problem of anti-discrimination law. However, the use of an AI-based system only intensifies this problem: If the respondent uses such system, it is highly unlikely that the plaintiff will overcome the first stage. If we do not want to let the fact suffice that the respondent uses an AI-based recruiting system – which would mean a general suspicion – the plaintiff must be able to show specifically that the system used has a bias. This in turn requires knowledge and the ability to interpret the functioning of the system. The opacity of machine learning systems however exacerbates this problem quite considerably: it becomes almost impossible for a disadvantaged party to trigger the reversal of the burden of proof.[73] In conclusion, the plaintiff bears the risk of (non-)transparency de lege lata.[74]

d. Conclusion and perspective on the AI-Act and new proposals regarding product liability.

Overall, a mixed picture emerges regarding the anti-discrimination law evaluations in relation to the use of AI-based recruiting algorithms. While especially in the area of categorization of discrimination (a.) well-known problems take on a new dynamic, the use of the systems also gives rise to new legal problems. In addition to the ambiguity around justification (b.), there is a great need for clarification regarding the rules for the burden of proof (c.).

[72] Lahuerta S.B., in Ales E., Bell M., Deinert O., Robin-Olivier S., nt. (51), mn. 46.
[73] Grünberger M., *Reformbedarf im AGG: Beweislastverteilung beim Einsatz von KI,* in *Zeitschrift für Rechtspolitik (ZRP)*, 2021, 233, also with an alternative proposal handeling the burden of proof.
[74] For a possible solution including the requirements of the fullfillment of best practices *see* Grünberger M., nt. (73), 234.

The planned AI-Act[75] does not directly respond to this need for action. However, it does specify several requirements for the systems discussed here. These systems are classified as high-risk AI systems in Article 6 (2) and Annex III No. 4 a) of the proposal. Systems categorized as high-risk represent the core area of the regulation. The classification as a high-risk AI system leads to the application of the requirements of Art. 8 et seq.[76] This most importantly includes a risk assessment and continuous updates. Additionally, high-risk AI systems must undergo tests before being placed on the market.[77] Although the test objective is the fulfilment of the requirements of Art. 8 et seq.[78] it remains unclear which requirements are to be tested according to which criteria. In addition, Article 10 specifies quality requirements for training, validation and testing data sets. However, from a technical point of view, this is highly complex.[79] Besides that, requirements include technical documentation and record-keeping obligations (Art. 11, 12) as well as transparency and information obligations (Art. 13). However, with regard to AI systems that can be used for the intended purpose of preparing third party decisions, the proposal does not contain any explicit transparency and disclosure obligations vis-à-vis the affected person. Rights of appeal, for example to supervisory authorities, are not mentioned.[80] Consequently, no real impact on the problems of the burden of proof is to be expected in this respect.

The situation could be different with the amendments to the Product Liability Directive[81] regarding liability for AI proposed by the European Commission on September 28th, 2022.[82] Here it says:

"Thanks to the new rules, it will be easier, for example, to obtain compensation if someone was discriminated against in a recruitment process that used AI technology."

The European Commission plans on changing rules regarding the burden of proof. Specifically, with the help of a *"presumption of causality"* as well as the right of access to evidence held by contractors and providers, the problems mentioned above discriminated persons face in obtaining evidence could be eliminated. This however does not erase the possible need for an assessment of the culpability.

[75] 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 from 21st April 2021, COM (2021) 206 final.
[76] For an overview of the rules regarding high-risk systems also *see*: Burchardi S., *Risikotragung für KI-Systeme,* in *Europäische Zeitschrift für Wirtschaftsrecht (EuZW),* 2022, 690.
[77] Sesing A., Tschech A., *AGG und KI-VO-Entwurf beim Einsatz von Künstlicher Intelligenz*, in *Zeitschrift für IT-Recht und Recht der Digitalisierung (MMR),* 2022, 29.
[78] Particularly Article 9 (5).
[79] Final report from the German Society for Computer Science: https://testing-ai.gi.de/fileadmin/PR/Testing-AI/Abschlussbericht_ExamAI_-_KI_Testing_und_Auditing.pdf, 35 ff, last accessed 13 October 2022; Sesing A., Tschech A., nt. (77), 29.
[80] Sesing A., Tschech A., nt. (76), 29.
[81] Council directive of 25th July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products, 85/374/EEC.
[82] European Commission, *New liability rules on products and AI to protect consumers and foster innovation*, Press Release, 28 September 2022, https://ec.europa.eu/commission/presscorner/detail/en/ip_22_5807, last accessed 13 October 2022.

The adjustments to the requirements for providing evidence are a step toward strengthening the rights of discriminated persons. In combination with the planned AI-Act, they could still provide an opportunity for entrepreneurs and users of the systems to avert liability with the help of compliance with obligations regarding testing, documentation and observation. At the same time, the transparency risk discussed above is borne by them. However, it shows the difficult relationship between the interests at stake: If the demands on users regarding testing and observing are too high, the new regulations could prove to be an obstacle to innovation. It therefore remains to be seen how high the actual requirements for users of the systems will be.

5. Final remarks.

It is to be expected that both the areas of application and the number of applications will increase in the coming years and that (personnel) selection decisions – not only in labour law – will increasingly be made with the support of AI. As seen, not only the limits of data protection apply here, but also those of discrimination protection and the expected AI regulation. It is the task of legal scholars to further illuminate these in order to be able to outline the legal framework of use as concretely as possible for developers, employers and employees and to increase legal certainty.

12

Employee's right to disconnect in the era of progressive use of ICT and remote work.

Kinga Moras-Olaś*

1. Preliminary remarks. 2. Always available employee – a new culture of work. 3. The right to disconnect – resolution of European Parliament. 4. Does the right to disconnect already exist? 5. Regulations concerning the right to disconnect introduced in some Member States. 6. Final remarks.

1. Preliminary remarks.

The prevalence of ICT and home-based remote work or telework[1] has increased during COVID-19 crisis. Not only business continuity, maintaining employment by employees and keeping the economies running motivated this situation but also and even more health reasons.[2] This way of working additionally facilitated work-life balance during the closure of schools. As the Eurofound survey[3] shows 37% of employees started working from home for the first time because of the crisis. This trend is forecast to continue in the long term.[4]

The period of the pandemic showed clearly, what was already observed earlier, that using ICT and remote work or telework is associated with extending working hours, also unpaid overtime, blurring the boundaries between work and private life. According to Eurofound's survey,[5] 27% of respondents working from home reported that they had worked in their free time to meet work demands. Employees working from home, who have to reconcile work, family, and leisure, are more likely to report suffering from work-related stress and sleeping

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[1] In some countries, like in Poland, a distinction is made between remote working and teleworking.

[2] Eurofound, *Right to disconnect in the 27 EU Member States*, 2020, 56, https://cooperante.uni.lodz.pl/wp-content/uploads/2020/08/wpef20019.pdf, last accessed 15 October 2022.

[3] Eurofound, *Living, working and COVID-19. First findings – April 2020*, 2020, 5. https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20059en.pdf, last accessed 15 October 2022.

[4] Eurofound, *COVID-19 unleashed the potential for telework – How are workers coping?*, 9 June 2020, https://www.eurofound.europa.eu/publications/blog/covid-19-unleashed-the-potential-for-telework-how-are-workers-coping, last accessed 9 October 2022.

[5] Eurofound, nt. (3), 6.

disorders, they are also at risk of social isolation, job burnout, and health problems associated with using of ICT.[6]

It should be of course emphasized that digitalization and the use of digital tools may on the other side lead to benefits and advantages both for employers and employees like increasing flexibility, working-time autonomy, potentially (and in many cases actually) improving work-life balance, or play a part in policies that aim to promote inclusive labour markets.[7]

However, the existence of the aforementioned risks associated with remote working makes it necessary to take measures to protect employees and contributed to the creation of the resolution by the European Parliament of 21 January 2021 with recommendations to the Commission on the right to disconnect. In this document, the European Parliament indicated that currently there is no specific Union law on the worker's right to disconnect from digital tools, including information and communication technology, for work purposes and recommends the adoption of a directive regulating this right and measures to protect employees. In June 2022 European social partners signed a joint 2022-2024 Work Programme which includes the negotiation of legally binding measures regulating telework and establishing a right to disconnect.[8] This may lead, according to art. 155 TFEU, to a collective agreement, which will then be implemented by means of a council directive. Lawmaking through social dialogue has several stages. This process is sometimes referred to as 'negotiated legislation' or 'privatisation of the legislative process.[9] The dialogue towards an agreement is bipartite and the role of the Commission is limited to initiating consultations and supporting the parties in negotiations.[10] As A.M. Świątkowski points out, the participation of social partners in the development of Community labour law and its implementation is the most characteristic feature of European labour law.[11] However, at the moment, no proposals have yet been drawn up, so in the following, I will only refer to the European Parliament's resolution.

The aim of this paper is to outline the context justifying the introduction of regulations regarding the right to disconnect and to discuss the proposal for a directive in this regard.

[6] Eurofound, nt. (2), 6.
[7] *See* Eurofound and the International Labour Office, *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union and the International Labour Office, Luxembourg, 2017, 2.
[8] Bérastégui P., *European social partners signed a joint Work Programme including negotiations on the right to disconnect*, in *Etui*, 4 July 2022, https://www.etui.org/news/european-social-partners-signed-joint-work-programme-including-negotiations-right-disconnect.
[9] Welz C., *The European Social Dialogue Under Articles 138 and 139 of the EC Treaty*, Wolters Kluwer, Alphen aan den Rijn, 2008, 302.
[10] Skupień D., *Porozumienia europejskich partnerów społecznych*, TNOiK, 2016, 84.
[11] Świątkowski A.M., *Implementacja wspólnotowego prawa pracy przez partnerów społecznych*, in Matey-Tyrowicz M., Nawacki L., Wagner B. (eds.), *Prawo pracy a wyzwania XXI wieku, Księga Jubileuszowa Profesora Tadeusza Zielińskiego*, Wolters Kluwer, Alphen aan den Rijn, 2002, 625.

2. Always available employee – a new culture of work.

Technological progress and the performing of work with digital tools, in particular as part of remote/telework work, somehow leads to increasing working time and being in constant readiness. According to the report of Eurofound and ILO workers using digital tools tend to work longer hours than average employees.[12] As indicated in the briefing of the European Parliamentary Research Service "The right to disconnect", "being available" is associated with higher productivity and is considered essential for career development. Moreover, it is observed that in some companies/countries, 'on call' is now becoming the new norm.[13] In this context, appears also the term "work without end"[14] or "24/7/365 jobs".[15] In the framework agreement of the European social partners of 22 June 2020 on digitization it was noted that the digital transformation process brings benefits for employers, employees, and jobseekers, also by increasing new employment opportunities and new ways of organizing work.[16] For employees being always available should be perceived by the employer as something deserving to praise, giving better career opportunities and the possibility of promotion. On the other side always available employee is perceived by the employer as a good worker, seen as more caring. It leads to a so-called vicious circle. Because these employees are ready to be connected and employers are ready to request work from them.[17]

The emergence of an always-available employee culture can have a negative impact on workers' fundamental rights and fair working conditions. It also leads to an imbalance and blurring of the boundaries between private and professional life, overwork, cognitive and emotional overload (which may cause a decrease in the employee's productivity), isolation, and burnout but also may lead to discrimination of women, due to their still traditional role of carer of the home and family, and finally to s, to create an overlap between paid work and personal life.[18] Additionally, after-work electronic communication regarding work may affect employees' mental (emotional well-being) and physical health.[19] As it is stated in the Autonomous Framework Agreement on digitalisation, the employer is obliged to ensure safe and healthy working conditions for employees in every aspect and prevention is key in this

[12] Eurofound, nt. (7), 21.
[13] Müller K., *The right to disconnect*, European Parliament Research Service Briefing, July 2020, PE 642.847, 1. https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/642847/EPRS_BRI(2020)642847_EN.pdf, last accessed 12 October 2022.
[14] Eurofound, nt. (7), 49.
[15] Von Bergen C. W., Bressler M. S., Proctor T. L., *On the Grid 24/7/365 and the Right to Disconnect*, in *Employee Relations Law Journal*, 45, 2, 2019, 3-20, available at: https://www.researchgate.net/publication/335058028_On_the_Grid_247365_and_the_Right_to_Disconnect, last accessed 15 October 2022.
[16] BusinessEurope, SMEUnited, CEEP and ETUC*, European Social Partners Framework Agreement on digitalisation*, 3, available at: https://www.etuc.org/system/files/document/file2020-06/Final%2022%2006%2020_Agreement%20on%20Digitalisation%202020.pdf, last accessed 12 October 2022.
[17] *See* Von Bergen C. W., Bressler M. S., Proctor T. L., nt. (15), 3-40.
[18] Eurofound, nt. (7), 1.
[19] Secunda P. M., *The Employee Right to Disconnect*, in *Notre Dame Journal of International & Comparative Law*, 9, 1, 2019, 14, https://scholarship.law.nd.edu/ndjicl/vol9/iss1/, last accessed 15 October 2022.

respect. One of the measures proposed in this act to ensure appropriate organisation of working time in the context of connecting and disconnecting while working with digital tools is a commitment from management to create a culture that avoids out of hours contact.[20] In addition, it should be noted that this often leads to unpaid overtime, due to the fact that employees are often afraid to raise the issue of pay with their employer.[21] Moreover, it has to be emphasized that long working hours lead to a decrease in productivity.[22]

It is observed that highly mobile workers using ICT to carry out tasks are particularly exposed to exceeding the norms of working time. More and more often it can be said that the workplace is where the appropriate equipment is taken (smartphone, laptop) and where you can continue work that is done after work, not only at home but also while traveling or on vacation.[23] Disconnection is necessary for work-life balance that was lost by constantly staying within reach. Such an increasingly frequent lifestyle affects employees' health and safety.

3. The right to disconnect – resolution of the European Parliament.

Moving to the analysis of the solutions proposed by the European Parliament, it should be noted that the working document of Eurofound The Right to Disconnect in the 27 EU Member States indicates that the right to be offline can be understood in two ways: as an employee's right to refrain from working outside normal or agreed working hours through digital tools, or as an employer's obligation to ensure that employees do not work during rest periods and leave time (the right to be disconnected).[24] This distinction was also noted in Eurofound and the International Labour Office report.[25]

The first understanding can be realized by soft measures like the delivery of pop-up messages reminding workers (or clients) that there is no requirement to reply out of hours. It relies on employee initiative for disconnecting. The second one is rather connected with hard measures – through connectivity shutdowns after pre-defined hours, blocking incoming messages or calls.[26]

The definition of "disconnect" proposed in the draft European Parliament is as follows: not to engage in work-related activities or communications by means of digital tools, directly or indirectly, outside working time. Therefore, the first possible concept was adopted. The notion of working time should be understood as defined in Directive 2003/88 / EC. In this act, working time means any period during which the worker is working, at the employer's disposal and carrying out his activity or duties, in accordance with national laws and/or practice.

[20] BusinessEurope, SMEUnited, CEEP and ETUC, nt. (16), 10.
[21] Secunda P. M., nt. (19), 21.
[22] *Ibidem*.
[23] *Ibidem*, 8.
[24] Eurofound, nt. (2), 1.
[25] Eurofound, nt. (7), 49-51.
[26] Eurofound, nt. (2), 46.

It should be noted that the proposed definition is relatively broad. It outlines two areas of the manner of performing employee duties: related to communication and not related to it. In particular, it should be emphasized that the draft uses the conjunction "or" (work-related activities or communications). The German version of the draft uses the conjunction "oder" (arbeitsbezogene Tätigkeiten ausgeübt werden oder arbeitsbezogene Kommunikation erfolgt) and the French uses "ou" (livrer à des activités ou à des communications liées au travail). Such a remark may be considered controversial, as we intuitively refer to disconnection to communication and the use of appropriate tools for this purpose and of course Internet (however, if the project were to refer only to disconnection from the Internet it would rather use the term 'offline').[27]

Troublesome in the definition quoted may be the reference to direct and indirect engagement in activities or communication. While it is clear that communication is about actively and passively following it, i.e. replying to messages as well as reading them, difficulties may arise in understanding indirect involvement in work-related tasks. It should be said that it may be about preparing the background for the performing of specific tasks, including the use of digital tools and other activities undertaken by the employee in work-related matters.[28]

The European Parliament's proposal in art. 3 requires member states to ensure that employers take the necessary measures to provide that workers can exercise their right to be offline and put in place objective, reliable and accessible systems for measuring working time. This provision refers to the CJEU judgment of 14 May 2019[29] according to which it is necessary to set up a system enabling the duration of time worked each day by each worker to be measured in order to ensure effective compliance with maximum weekly working time and minimum daily and weekly rest periods.

Article 4 of the European Parliament's draft regulates the means of implementing the right to be offline and requires member states to ensure that detailed arrangements are established related to the implementation of this right, by specifying minimum conditions as to their content. This solution is pragmatic, allowing for the specificity of a given workplace to be taken into account. The indicated acts should include: practical arrangements for switching off digital tools, a system for measuring working time, assessing health and safety in relation to the right to be offline, criteria for the application of derogations (in force majeure or other emergency situations), and criteria for determining the right to compensation. According to the draft, it is also necessary to implement awareness-raising measures, including training. In view of the above, it is necessary to define the rules on when it is possible to contact employees, and to indicate when an employee is not obliged to respond to contact outside working hours.[30] However, the key, in my opinion, is first to take action to raise awareness and promote the exercise of the right to disconnect.[31]

[27] Jaworska K., *The right to disconnect*, in *Studia z Zakresu Prawa Pracy i Polityki Społecznej*, 29, 2022, 53. https://www.ejournals.eu/sppips/2022/Tom-29-Zeszyt-1-2022/art/21329/, last accessed 15 October 2022.
[28] *Ibidem*, 53.
[29] C-55/18, ECLI:EU:C:2019:402, Federación de Servicios de Comisiones Obreras (CCOO) vs. Deutsche Bank SAE.
[30] Jaworska K., nt. (27), 56.
[31] Jaworska K., nt. (27), 56; BusinessEurope, SMEUnited, CEEP and ETUC, nt. (16), 10.

Art. 5 of the European Parliament draft, provides for protection regulations for employees against adverse treatment. Under this provision, member states would be obliged to introduce regulations prohibiting discrimination, less favourable treatment, dismissal, and other adverse measures against employees exercising the right to be offline. Finally, evidence facilitation for employees was proposed, consisting in that where an employee demonstrates facts that could give rise to a presumption that they were dismissed or suffered other adverse treatment because they exercised their right to disconnect, the onus will be on the employer to prove that this occurred for other reasons.

The above draft confirms that the right to disconnect sits at the intersection of working time issues, and in particular its daily limitation (the right to rest), and health and safety issues.[32] It is particularly important to put in place protective mechanisms for employees to guard against retaliation. Indeed, as underlined in the European Parliament's resolution, the exercise of the right to disconnect must not give rise to discrimination against employees, to negative consequences in terms of recruitment or career development, or to their victimisation. The protective regulations in question therefore preclude the application to an employee invoking the exercise of the right to disconnect of both disciplinary sanctions and termination of his or her employment contract with or without notice, but also omissions in promotion.

4. Does the right to disconnect already exist?

In some countries, where there is no regulation on the right to disconnect it is believed that existing legislation is sufficient and emphasis should be placed on its effective enforcement.[33] Noting that the uptake of remote working is low in these countries.[34] This is about universal standards regarding working time, the right to rest, and safe and hygienic working conditions. But in fact, when in most member states the right to disconnect is not regulated, and above indicated general regulations are applicable, mentioned threats for the employee are still present and increasing. Thus, the existence of the aforementioned regulations did not prevent the emergence of the risks indicated above.[35]

Regulations indirectly addressing the issue at hand are, at the European Union level, Framework Directive on Occupational Safety and Health, the Directive on Working Time, the Directive on Transparent and Predictable Working Conditions.

As it follows from the Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time,[36] "working time" means any period during which the worker is working, at the

[32] Moras-Olaś K., *Prawo do bycia offline jako podstawowe prawo pracownika*, in *Studia z Zakresu Prawa Pracy i Polityki Społecznej,* 28, 2021, 317, https://www.ejournals.eu/sppips/2021/Tom-28-Zeszyt-4-2021/art/20183/, last accessed 15 October 2022.
[33] Eurofound, nt. (2), 18.
[34] Eurofound, nt. (2), 24.
[35] *See* Lerouge L., Trujillo Pons, F., *Contribution to the study on the 'right to disconnect' from work. Are France and Spain examples for other countries and EU law?*, in *European Labour Law e-Journal*, 13, 3, 2022, 450-465.
[36] OJ L 299, 18.11.2003, 0009 – 0019.

employer's disposal and carrying out his activity or duties, in accordance with national laws and/or practice and "rest period" means any period which is not working time (art. 2). This act introduces a binary approach and does not provide for any intermediate category between work and rest (so, for example, CJEU judgment of 10.09.2015, ECLI:EU:C:2015:578). It also applies in the case of remote working/ teleworking. Thus, any work-related activity, answering a call, writing an email, reading an email etc., should qualify as working time. Further, in accordance with the Directive, member states shall take the measures necessary to ensure that every worker is entitled to a minimum daily rest period of 11 consecutive hours per 24-hour period (art. 3), and per each seven-day period to a minimum uninterrupted rest period of 24 hours plus the 11 hours' daily rest (art. 5). However, according to the European Working Conditions Survey teleworking and working with ICT encourages the exceeding of these limits, as 41% of regular home-based employees had less than 11 hours' rest at least once in the month before the survey.[37] Additionally, ICT-based flexible workers tend to exceed weekly working time limit (48 hours), set in the Directive.[38]

In light of the Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work[39] employer has to assess all risks to which their workers are on can be exposed and adopt appropriate preventive and protective measures.[40] The assessment should include psycho-social risks.[41] From this point of view, disconnection from work is important for health, well-being, happiness, and personal satisfaction, and therefore the right to disconnect is part of the occupational health law.[42]

Employers are required to inform workers of the essential aspects of the employment relationship, which includes where work pattern is entirely or mostly predictable, the length of the worker's standard working day or week and any arrangements for overtime and its remuneration as it is stated in art.4 par. 2 point l of Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union.[43] According to this act 'work pattern' means the form of organisation of the working time and its distribution according to a certain pattern determined by the employer, and 'work schedule' means the schedule determining the hours and days on which performance of work starts and ends. Consequently, the employee must know when he or she starts and finishes work. If the work pattern is entirely or mostly unpredictable, the employer shall inform the worker of the principle that the work schedule is variable, the number of guaranteed paid hours and the remuneration for work performed in addition to those guaranteed hours and the reference hours and days within which the worker may be required to work (art 4 par. 2 point m). Consequently, the employee must be able to predict when he or she starts and finishes work.

[37] Eurofound, *Telework and ICT-based mobile work: Flexible working in the digital age*, New forms of employment series, 2020, 45; Eurofound, nt. (2), 9.
[38] Eurofound, nt. (2), 9.
[39] OJ L 183, 29.06.1989, 0001 – 0008.
[40] Eurofound, nt. (2), 10.
[41] Eurofound, nt. (2), 10.
[42] Lerouge L., Trujillo Pons F., nt. (35), 450 ff.
[43] OJ L 186, 11.7.2019, 105–121.

The above regulations clearly imply a limitation of the employee's daily and weekly working time, the employer's duty to provide information on working time schedules, as well as the employer carrying out an occupational risk assessment also in the context of remote working. However, it can be seen that in the context of the issue at hand, they are insufficient in the sense that they do not explicitly address what is unambiguously linked to the right to be offline, i.e. there is an objective legal loophole as a result of which it cannot be unequivocally stated that an employee outside working hours does not have to be on standby even if the employer expects this. In particular, it is not guaranteed under the current regulations that he will not suffer any consequences for not taking up work.

The right to disconnect is a specific link between the problem of the working time, the right to rest, and safe and hygienic working conditions. The added value in relation to the indicated rights is the explicit reference to the use of digital tools.[44] The proposed regulation is a response to the related threats and the created culture of a constantly available employee.

It is also necessary to consider what values support the regulation of the right of disconnect. The meta-value that the entire legal system is to serve is human dignity,[45] which is referred to in the Charter of Fundamental Rights of the European Union. Protection of dignity is mainly about protection against exclusion.[46] This concept is multidimensional and does not refer only to human labour and the social exclusion associated with it.[47] It should not be equated with freedom from poverty but more broadly, linking it to the full possibility of participation in society through the exercise of human rights and freedoms.[48] Exclusion is to be understood as, inter alia, the existence in the social structure of a position correlated with an impaired/incomplete set of rights or obligations.[49] One of its aspects is exclusion consisting in a lack of access to the full protection of labour law also as a result of incomplete regulation. It should be stated in this context that the absence of a right targeted at protection related to the possibility of disconnecting from the use of digital tools, despite the existence of the above-mentioned general regulations, may lead to the conclusion that the current regulation is incomplete.

[44] Moras-Olaś K., nt. (32), 316.
[45] Liszcz T., *Aksjologiczne podstawy prawa pracy*, in Baran K.W. (ed.), *System prawa pracy, t. I, Część ogólna*, Wolters Kluwer, Alphen aan den Rijn, 2017, 198.
[46] Sobczyk A., *Prawo i człowiek pracujący – między ochroną godności i równości*, in: *Aksjologiczne podstawy prawa pracy i ubezpieczeń społecznych*, in Skąpski M., Ślebzak K. (eds.), Ars boni et aequi Przedsiębiorstwo Wydawnicze - Michał Rozwadowski, 2014, 38 ff.
[47] *See*: Szluz B. (ed.), *Wielowymiarowość wykluczenia społecznego. Diagnoza i profilaktyka*, Občianske združenie Spektrum-Východ, 2015; Pokrzywa M., Wilk S. (ed.), *Wykluczenie społeczne. Diagnoza, wymiary i kierunki badań*, Uniwersytet Rzeszowski, 2013.
[48] Sobczyk A., nt. (46), 39.
[49] Tuleja P., *Prawa jednostki do ochrony przed wykluczeniem a konstytucyjne zadania państwa*, in Kędzia Z., Rost A. (ed.), *Współczesne wyzwania wobec praw człowieka w świetle polskiego prawa konstytucyjnego*, Wydawnictwo Naukowe UAM, 2009, 147.

5. Regulations concerning the right to disconnect introduced in some Member States.

The right to disconnect is regulated in six member states of the European Union: Belgium, France, Italy, Spain, Greece and Slovakia. In few more or less intensive debates are taking place.[50] In Germany right to disconnect is already mentioned in company-level agreements in some enterprises. However, there are some member states in which there is not even a debate on this issue.

According to Eurofound's report of 2020 Regulations to address work–life balance in digital flexible working arrangements[51] four types of regulation can be distinguished in regulating telework/remote work: balanced promote–protect approach, promoting-focused approach, general regulatory approach, and no specific legislation. The first is characterised by the fact that promotes the use of ICT to support flexible working, while seeking to protect workers from the potentially negative consequences of an 'always-on' work culture, in particular by directly regulating the right to disconnect. The second type does not refer to the negative effects of telework or remote work, focusing on the potential benefits of flexible forms of work for work–life balance. Going further, the third type of regulation contains general provisions regulating the use of teleworking or remote working and its impact on work-life balance, without, however, directly linking these issues. Finally, the fourth is the lack of a specific regulation on teleworking or remote working.

France is a pioneer in introducing regulation on the right to disconnect. The right to disconnect should be regulated in collective agreement between trade unions and employers, in companies employing at least 50 workers, however, senior executive managers, who are not subject to working time law, are not covered by the right to disconnect.[52] Social partners, according to French law, are obliged to negotiate, however, in the event that an agreement cannot be reached, the employer is obliged to issue a charter specifying the possibility for employees not to reply to digital messages related to work after working hours.[53] The situation is similar in Belgium, so again the number of employees obliging the employer to negotiate with the unions is 50, however, if an agreement is not reached, the company is not obliged to issue a charter on the right to disconnect.[54] The Spanish law does not impose an obligation for the social partners to negotiate about the right to disconnect, but obliges all employers to have a policy and implement the right to disconnect. It is possible both to reach an agreement with the trade unions on this issue or to issue a charter.[55] Slightly different solutions have been adopted in Italian law, where the right of disconnection applies only to so-called 'smart workers'. This group of workers combine remote work with working in

[50] Eurofound, nt. (2), 15 ff.
[51] Eurofound, *Regulations to address work–life balance in digital flexible working arrangements*, New forms of employment series, Publications Office of the European Union, Luxembourg, 2020, 13. https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef19046en.pdf, last accessed 12 October 2022.
[52] Lerouge L., Trujillo Pons F., nt. (35), 450 ff.
[53] Secunda P. M., nt. (19), 27; Eurofound, nt. (2), 41.
[54] Eurofound, nt. (2), 42.
[55] Eurofound, nt. (2), 43.

employer premises. The right to disconnect should be regulated in individual agreements between the employer and the worker, however collective agreements are also permitted.[56] Last year also Greece and Slovakia introduced regulations concerning right to disconnect. In both member states it refers only to telework, working from home.

Germany, where social dialogue is highly developed, deserves special attention on this issue. Although the right to disconnect is not regulated by any law, many workplaces have internal regulations relating to this right. The literature indicates that this is a model of self-regulation.[57] The first company to introduce a regulation of this kind was Volkswagen. It concerned the use of smartphones by employees (excluding managers and senior technical experts) for whom the connection between the server and the smartphone is disabled between 6.15 p.m. and 7.00 a.m. Employees could not receive emails, text messages or video calls during this time, exceptions can be made for specific projects, but this needs the prior agreement of the works council.[58]

The Eurofound report Right to disconnect in the 27 EU Member States[59] identifies several examples of how the right to disconnect is regulated and it is worth pointing out a few of them: duty to disconnect to respect the minimum duration of daily and weekly rest periods, right to a chosen connection, according to which each employee can choose to leave his laptop at his workplace and switch off his professional mobile phone during his rest and holiday periods as one option for disconnection, or pausing internal mail traffic outside of working hours however, external mails can still be sent and received at any time of the day.

On the basis of the above regulations, it should be pointed out that the obligation of the social partners to negotiate an agreement on the right to disconnect is the best way to introduce this type of regulation. This is because it will allow solutions to be tailored to the needs of the workplace. The law should only regulate the course of action and propose possible measures to counteract the continuous availability/abuse of employee time off. At the same time, it is positive that, if no agreement is reached, the employer should issue a charter. However, there is no axiological justification for the limitation found in French and Belgian law relating to the number of employees. As P.M. Secunda states there is no proof that smaller employers contact their employees through electronic communications any less after work, and in fact it can be just the opposite.[60] Finally, it is important to note that this right should not be restricted only to certain groups of workers or linked only to a certain way of working, nor should the prevalence of remote working have any relevance whatsoever.

6. Final remarks.

[56] Eurofound, nt. (2), 43.
[57] Secunda P. M., nt. (19), 29.
[58] Eurofound, nt. (2), 30, Secunda P.M., nt. (19), 29.
[59] Eurofound, nt. (2), 47 ff.
[60] Secunda P. M., nt. (19), 28.

It is very important to notice, that the right to disconnect should be qualified as an employee's fundamental right, as it is anchored in the Charter of Fundamental Rights.[61] It is also qualified in the literature as a human right for more healthy workplaces.[62] The regulation proposed by European Parliament is a response to the related threats and the created culture of a constantly available employee. In the current legal situation, in which the law in question is not regulated, and there are universal standards regarding working time, the right to rest and those related to safe and hygienic working conditions, one can notice that the lack of the right to disconnect targeting these more and more current and growing threats, gave rise to the risks in question.

In view of the above, there should be no doubt that the aforementioned regulation is necessary, especially on the European Union law level. The reason for that is, that still in some member states, where remote work or telework is used there is even no debate about the right to disconnect. The reason for that may be of course the fact that the percentage of employees working in that way is low but they need to be protected anyway. Additionally, right to disconnect should not be limited to telework, remote work, or entrepreneurs employing some amount of employees. It should be granted to all employees. In my view, extremely relevant to the issue at hand is the training and awareness-raising in relation to right to disconnect, risks concerned with not respecting it, and the importance of achieving a good work–life balance.[63] Without it, it would be impossible to stop the vicious circle mentioned above.

[61] Moras-Olaś K., nt. (32), 313 ff.
[62] Secunda P. M., nt. (19), 5.
[63] *See* also Eurofound, nt. (7), 2.

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Trade Unions, Platform Work and Algorithms: a Difficult Relationship?

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1.Preliminary remarks. 2. Spontaneous associations. 3. Representation without subordination. 4. A (possible) new form of representation. 5. Problematic profiles of trade union actions without subordination. 6. The online exercise of trade union rights. 6.1. The right of assembly. 6.2. Electronic referendum. 6.3. Bulletin board. 7. Beyond the physical production unit. 8. Digital strike 9. Final remarks.

1. Preliminary remarks.

Digital platforms are a crisis factor for the traditional indices of subordination developed by case law.[1] Their peculiarity is that they are not physical spaces, but virtual bases that are a marketplace in which goods and services are exchanged and a labour market.[2] The disintermediation, or «uberization», of the labour market allowed by the platforms transformed the worker, who was previously employed by the company providing the service, into a self-employed.[3]

The platform, through the algorithm it uses, can create an entrepreneurial organization, fed by the data acquired by the network and the system of rating of the workers.

In the job by app algorithm's neutrality is only apparent because the bias (prejudices) consciously or unconsciously of the programmers, together with the system reputation and the mass of the processed data, constitute new forms of algorithmic discrimination.[4]

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[1] Bano F., *Il lavoro povero nell'economia digitale*, in *Lavoro e Diritto*, 1, 2019, 129-148.

[2] Raimondi E., *Il lavoro nelle piattaforme digitali e il problema della qualificazione della fattispecie*, in *Labour Law Issues,* 2, 2019, 57-94.

[3] Ichino P., *Le conseguenze dell'innovazione tecnologica sul diritto del lavoro*, in *Rivista Italiana di Diritto del Lavoro*, 4, 2017, 526-564.

[4] *See* Zilli A., *Il lavoro su piattaforma*, in Carinci F., Pizzoferrato A. (eds.), *Diritto del lavoro dell'Unione Europea*, Giappichelli, 2021, 314-321. On the discriminatory nature of the algorithmic management system *see* Pezzini G., *L'algoritmo Frank è cieco, ma il datore di lavoro ci vede benissimo* in dirittoantidiscriminatorio.it; Lafratta D., *Algoritmo reputazionale tra requisiti normativi e dignità della persona*, in *Lavoro nella Giurisprudenza*, 2, 2022, 154-160; Borrelli S., Ranieri M., *La discriminazione nel lavoro autonomo. Riflessioni a partire dall'algoritmo Frank*, in *Labour Law Issues*, 7, 2021,18-47; Fassina L., *L'algoritmo Franck, cieco ma non troppo*, in *Lavoro diritti Europa*, 1, 2021; De Pretis P., *Le discriminazioni da algoritmo nella gig-economy*, in *Argomenti di Diritto del Lavoro*, 4, 2020, 889-907; Pacella G., *Il lavoro nella* gig economy *e le recensioni online*, in *Labour Law Issues*, 1, 2017, 1-34.

These considerations also affect the labour profile. It is difficult to identify a homogeneous interest and a single collective interest within the various services organized by the digital platform. To this problem, one adds the fact that the traditional trade union only recently has shown interest in the phenomena that happen on the web.[5] Moreover, the lack of attractiveness of trade unions is not surprising for at least two orders of reasons. Primarily, the union remains strongly linked to the employee, despite the qualification of the relationship should be indifferent to the union.[6] Secondly, the past crisis factors of the trade union organization remain, such as the excessive fragmentation of systems of collective bargaining or the multiplication of minor unions that have become more and more frequent.[7]

2. Spontaneous associations.

Within the European Union, the demands of digital workers, especially riders, have found expression outside the traditional trade unions. This is a sign of the formation of a collective identity despite the strong individuality that characterizes the work through a digital platform. Therefore, it seems useful to carry out some reflections on the possibility of rethinking the trade union and forms of representation in a sector that shows vivacity in terms of collective aggregation.

In the UK already in 2012, the IWGB was founded (Independent workers union of Great Britain), represented workers employed in the gig economy who were not unionized or underrepresented. Such Union has coordinated the strikes in London of the drivers of Uber, also promoting the cause in Court. The qualification as an employee of the drivers has recently been confirmed by the British Supreme Court, due to the interference exercised by the platform in the determination of performance.[8]

In Spain, the bike couriers have created the trade union platform RidersxDerechos, through which, by coordinating and carrying out demonstrations, have obtained the opening of a table for negotiations with the platform Deliveroo and the consequent stipulation of an agreement applicable to all the Spanish riders of the company.

Alongside phenomena of new forms of representation, there were also collective phenomena that gave rise to «platform cooperativism».[9]

In France, for example, the cooperative Coopcycle the Coopcycle cooperative has created an app, which works in the same way as other platforms for the management of food delivery, for which an algorithm manages the orders and assigns them to the various workers

[5] Mancini C., *Il sindacato di fronte all'economia di internet: "Idea diffusa" l'intelligenza collettiva della CGIL*, in *Labour Law Issues*, 4, 2018, 40-77.
[6] Lassandari A., *Problemi di rappresentanza e tutela collettiva dei lavoratori che utilizzano le tecnologie digitali*, in *Quaderni Quaderni di Rivista Giuridica del Lavoro e della Previdenza sociale*, 2, 2017, 59-70.
[7] Tullini P., *L'economia digitale alla prova dell'interesse collettivo*, in *Labour Law Issues*, 1, 2018, 1-15.
[8] De Luca G., *Uber: ormai è un assedio. Prospettive future sul diritto del lavoro nella gig-economy alla luce della sentenza della Corte d'Appello di Londra*, in *Diritto delle Relazioni Industriali*, 3, 2018, 977-988.
[9] Scholz T., *Il cooperativismo di piattaforma – La sfida al sistema della sharing economy delle multinazionali*, available at https://www.alleanzacooperative.it/uffici-studi/wp-content/uploads/2016/07/Il-Cooperativismo-di-piattaforma-v1.pdf .

who are connected at that time, with the particularity that is managed by the riders themselves. The experiment was repeated in other European cities, for example, Brussels and Barcelona.

In Belgium, it has been operating for many years, the mutual company Smart which hires the workers employed in the gig economy, committing to collect payments from the platforms to then pay to the gig workers; the company also operates as an interlocutor with the platforms, and in fact, within the food delivery has agreed with riders enrolled in the mutual and the platform Deliveroo.

In Italy, the Riders Union of Bologna (RUB), to represent riders, has led to the adoption of a municipal territorial agreement called «Charter of Fundamental Rights of Digital Workers in the Urban Context». The RUB, in addition to organizing collective protests, has identified the municipal administration like interlocutors and its characteristic sign.

The distinctive and innovative feature of voluntary associations lies in involving not only the entrepreneurial-employer counterpart in industrial relations but also local governments.[10] This new model of industrial relations is defined as "urban syndicalism": a collective dialogue that seeks confrontation also with public institutions, in the capacity of actors and/or mediators, dealing with not only issues of interest of the category represented (improvements in wage conditions and minimum levels of protection) but also issues of general interest, such as environmental and social sustainability, and urban mobility.[11]

The experiences that are developing a show that digitalization is not only due to the disintermediation of work with the reduction of costs, but also how there is the opportunity to rethink representation and representativeness overall. By facilitating connections and exchanges between workers, digitalization makes it possible to identify collective interests, opening new real and virtual spaces for organization, action, and collective conflict,[12] contributing to the re-intermediation of the work.[13]

3. Representation without subordination.

The development of a spontaneous associationism able to unite around new subjects' professional identities and trades, if, on the one hand, it shows how a collective consciousness is also forming in the work through the platform, on the other hand, it highlights that it does not find expression within traditional forms of representation. The traditional trade union remaining linked to the factory and the employed, makes evident their low attractiveness, suggesting that representation should be extended even beyond subordination to include, generically and universally, workers.[14]

[10] Forlivesi M., *Alla ricerca di tutele collettive per i lavoratori digitali*, in *Labour Law Issues*, 1, 2018, 35-58.
[11] Tullini P., nt. (7).
[12] Forlivesi M., nt. (10).
[13] Caruso B., *La rappresentanza delle organizzazioni di interessi tra disintermediazione e re-intermediazione*, in *WP CSDLE* "*Massimo D'Antona*" – IT, 326, 2017.
[14] *Ibidem*

Based on overcoming the rigid boundaries of subordinate work from the autonomous one that has been registered for some time, we must ask ourselves whether it is possible to include it within art. 39 Cost. also employed persons.[15]

Art. 39 Cost. recognizes trade union freedom for all workers, without distinction of the type of relationship. Moreover, from a teleological point of view, the rule provides that all forms of trade union activity are protected, even if not organized in association if it is aimed at protecting the professional interests of a particular group.[16] The only requirement that is required by the Constitution, aimed at the recognition of the union, is that the statute is democratic.[17]

Moreover according to the Constitutional Court, «the right to strike can be exercised not only within the framework of the employment relationship in a technical-legal sense, but also whenever there is a weak position of the worker towards the other party, from which derives the "predisposition to the conflict" that gives rise to that "right to the conflict" constituting the very foundation of the trade union organization and, therefore, of the right to strike».[18]

The case law, thus, recognizes to the worker that he is in a situation of weakness, independently from the qualification, the right to the conflict, and such reconstruction, as will be said, can be considered compatible with the antitrust legislation of the Union.

4. A (possible) new form of representation.

However, not every collective entity of digital workers can be automatically included in the art. 39 Cost., as far as the union must pursue a collective interest. It is, therefore, necessary to identify certain criteria such as the conclusion of a collective agreement with large purchasers, the ability to resort to collective action or, more generally, whenever the collective entity can establish itself as a negotiating partner for the developer, with a view to mutual recognition.[19]

The collective entities that have such characteristics, regardless of the qualification of the worker (employed or self-employed) represented, may benefit from the protection of art. 39 Cost. It will be possible to assume a mixed union with workers of the same branch of the gig economy regardless of the qualification, they will be bearers of equal interests achievable through collective actions.

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15 Casano L., *Contributo all'analisi giuridica dei mercati transizionali del lavoro*, ADAPT University Press, 2021; Ichino P., *Subordinazione, autonomia e protezione del lavoro nella gig-economy*, in *Rivista Italiana di Diritto del Lavoro*, 2, 2018, 294-315; Caruso B., *Impresa, lavoro, diritto nella stagione del Jobs Act*, in *Giornale di Diritto del Lavoro e delle Relazioni Industriali*, 150, 2016, 255-309; Perulli A., *Costanti e varianti in tema di subordinazione e autonomia*, in *Lavoro e Diritto*, 2, 2015, 259-283.

16 Torsello L., *Democrazia e libertà sindacale*, in *Diritto delle Relazioni Industriali*, 1, 2019, 185-210; Ghera E., *L'art. 39 della Costituzione e il contratto collettivo*, in WP CSDLE "Massimo D'Antona".IT 202, 2014.

17 Occhino A., *Nuove soggettività e nuove rappresentanze del lavoro nell'economia digitale*, in *Labor*, 1, 2019, 39-50.

18 Cass. Civ., Sez. lav., 29 giugno 1978, n. 3278, in *Massimario di Giurisprudenza del Lavoro*, 1979, 8.

19 Forlivesi M., *La sfida della rappresentanza sindacale dei lavoratori 2.0*, in *Diritto delle Relazioni Industriali*, 3, 2016, 664-678.

The further issue to be analyzed is that of the organizational structure of the collective entity, by the wide freedom enjoyed by the trade union organization.[20]

To address the issue of the form of representation it is considered necessary to start from the consideration that the advent of new technologies and the strong individualization typical of digitalization leads the subjects to claim special interests over those originally represented by the traditional union.[21] The form of the new representation should, therefore, be almost sartorial for the worker to represent, rediscovering old forms of syndicalism, even that of craft or network.[22]

This new union, unlike the traditional one, should not be limited to trying to rebalance positions of disadvantage in the contractual relationship, but try to promote the living conditions of the working person, ensuring protection for skills.[23]

Regarding the geographical scope of the new representation, industrial relations at the European level could play a key role, due to the transnational nature of the platforms but the difficulties encountered in the organization in the supranational dimension and the absence of collective bargaining.[24] The scale should be *global* [25] because the ownership of the subjects is rooted in an international phenomenon, while the collective organization is expressed and operates in a more geographically circumscribed.

Regardless of the form chosen for rethinking trade union representation, the interests of employees should be mediated by a collective entity. The potential of internet allows workers to organize themselves independently and be able to dialogue directly with the employer.[26]

Direct negotiation between gig workers and app, however, could constitute anti-union and/or discriminatory conduct, as limiting the formation of the collective will, understood not as the sum of individual interests but as a synthesis of the same.[27]

5. Problematic profiles of union action without subordination.

The union that wants to represent and to conclude collective agreements also for self-employed workers must, however, be screened in the light of the legislation of the European Union. In fact, despite art. 6 par. 1 of the TEU gives the same value as the Treaties to the Charter of Nice, recognizing the right to collective bargaining and action (art. 28),[28] the establishment of collective entities representing self-employed workers (including the

[20] Torsello L., *Democrazia e libertà sindacale*, in *Diritto delle Relazioni Industriali*, 1, 2019, 185-210.
[21] Marazza M., *Social, Relazioni Industriali e (nuovi percorsi di) formazione della volontà collettiva*, in *Rivista Italiana di Diritto del Lavoro*, 1, 2019, 58-79.
[22] Forlivesi M., nt. (19). *Contra* Lassandari A., nt. (6); on the craft union *see* Bellocchi P., O*rganizzazione sindacale e contrattazione collettiva*, in G. Proia (eds.) *Organizzazione sindacale e contrattazione collettiva*, II, in Persiani M. e Carinci F. (eds.), *Trattato di diritto del lavoro*, CEDAM, 2014.
[23] Casano L., nt. (15); Brollo M., *Tecnologie digitali e nuove professionalità*, in *Diritto delle Relazioni Industriali*, 1, 2019, 468-491.
[24] Loffredo A., Tufo M., *Lavoro e impresa digitale tra norme nazionali ed economia transnazionale*, in *WP CSDLE "Massimo D'Antona".IT*, 405, 2019.
[25] Tullini P., nt. (7).
[26] Marazza M., nt. (21)
[27] Caponetti B., *Social Media e rappresentanza aziendale: quali scenari?,* in *Labour Law Issues*, 2, 2019, 27-45.
[28] Senatori I., *Rappresentanza collettiva dei lavoratori e ordinamento europeo*, Giappichelli, 2018.

conclusion of collective agreements) and the organization of self-protection actions may be contrary to the European Union's rules on competition.[29]

According to the definition of a company given by the Court of Justice, self-employed persons would be covered by the definition of offering their services in the market.[30] Therefore, a representative organization (also) of such self-employed persons would operate as an association of companies.[31]

Where a trade union organization acts solely to protect the positions of self-employed workers, would not operate as a union, exempted from the prohibition provided for in art. 101 TFEU as an aid to the achievement of social policy objectives, but as an association of companies subject to European competition law. Any agreements would be void under art. 101 TFEU in so far as the internal market and competition cannot be distorted or distorted between undertakings, decisions of associations of undertakings and concerted practices unless it is demonstrated that they pursue a general interest and respect the principles of proportionality and adequacy.[32]

According to the Court of Justice, when an organization representing workers negotiates in the name and on behalf of self-employed workers, it does not act as a trade union but as an association of companies. Whereby the collective agreement negotiated by self-employed persons it is not the result of collective bargaining between the social partners and cannot, given its nature, be excluded from the scope of art. 101 TFEU.

But the same pronunciation lends itself to openings for the eligibility of union activities even for the c.d. "false self-employed":[33] in fact, the status of a worker under Union law cannot be affected by the fact that a person has been employed as an independent provider of services under national law, in this regard it was observed how competition law should be recessive respect to the protection of the false self-employed worker.[34] Concerning this last category, the Court has specified that they are falsely self-employed a) when acting under the direction of the entrepreneur, about the time, place, and object of the service; b) are constantly included in the organization of the client; c) does not have the risk of undertaking.

It was, however, pointed out that gig workers would not fall within the notion of false self-employed provided by the Court of Justice, remaining precluded from access to collective bargaining. To prevent anti-trust legislation from penalising such workers, the Commission is working on a draft law on digital markets that can provide workers with protection in the labour market also through collective bargaining.[35]

[29] Lassandari A., nt. (6).
[30] Biasi M., *Ripensando il rapporto tra il diritto della concorrenza e la contrattazione collettiva relativa al lavoro autonomo all'indomani della l.n. 81 del 2017*, in *Argomenti di Diritto del Lavoro*, 2, 2018, 443-476; Bronzini G., *La nozione di dipendenza comunitaria: una soluzione per la digital economy?*, in *Argomenti di Diritto del Lavoro*, 4-5, 2018, 984-999.
[31] Dallacasa M., *Rileggendo Massimo D'Antona alla luce della giurisprudenza europea su subordinazione e autonomia collettiva*, in *Rivista Italiana di Diritto del Lavoro*, 3, 2019, 375-401.
[32] Doherty M., Franca V., *The (non/) response of trade unions to the "gig" challenge*, in *Italian Labour Law e-Journal*, 13, 2020, 125-140.
[33] ECJ C-413/13, *FNV, Kunsten*; on it, *see* Biasi M., nt. (30), and for the concept of employee, *see* Menegatti E., *The evolving Concept of worker in the EU law*, in *Italian Labour Law e-Journal*, 12, 2019, 71-83.
[34] Biasi M, nt. (30)
[35] Zilli A., nt. (4).

6. The online exercise of trade union rights.

The further challenge that the representation will have to face is closely tied to the exercise of union rights, still tied to the subordinate nature of the relationship and the topographical data of the productive unit, elements both put in crisis by digitalization.[36]

Law no. 300/1970 had the merit of allowing and guaranteeing the entrance of the union inside the factories. The protections recognized by the law are composed of rights intended, on the one hand (art. 1-17, Law no. 300/1970), for individual workers while, on the other hand, for the union as a counterbalancing force of entrepreneurial power (art. 19-27, Law no. 300/1970).[37] Concerning art. 19-27, it is evident that the scenario for which they were conceived, due to the technological process,[38] has radically changed, allowing forms of work in the past difficult to conceive.[39]

The digitalization of work and the increasingly marked trend towards individualism, together with the impossibility (or inability) of the union to intercept the needs of workers, risks abandoning the service providers to themselves.[40] To this criticality is added that, by technological evolution,[41] the employer can deal directly with their employees by effectively preventing the formation of the collective will.

Therefore, it is necessary, to adapt the statutory discipline of trade union rights, to accompany collective bargaining in the regulation of new phenomena such as platform work or smart working.

The technological evolution if on one hand, it is a factor of crisis, on the other hand, is a suitable instrument to allow a smart exercise of the union rights regardless of the space-time location of the performance.[42]

6.1. The right of assembly.

The collective will is formed in spaces of confrontation, where participants can freely express their opinions. For this reason, the Statute, art. 20, provides for the right for all

[36] Caponetti B., nt. (27); Rota A., *Tecnologia e lotta sindacale: il netstrike*, in *Labour Law Issues*, 5, 2,2019, 196-213; Di Meo R., *I diritti sindacali nell'era del caporalato digitale*, in *Labour Law Issues*, 5, 2, 2019, 63-79; Donà S., Marocco M., *Diritto di assemblea ex art. 20 St. Lav. e nuove tecnologie digitali*, in *Labour Law Issues*, 5, 2, 2019, 7-29; Donini A., *Il luogo per l'esercizio dei diritti sindacali*, in *Labour Law Issues*, 5, 2, 2109,1-8.

[37] Magnani M., *Lo statuto dei lavoratori 50 anni dopo: un'agenda per il futuro*, in *Lavoro e Diritto*, 1, 2021, 63-68.

[38] Dagnino E., Tiraboschi M., Tomassetti P., Tourres C., *Il "lavoro agile" nella contrattazione collettiva oggi*, in *WP ADAPT*, 2, 2016, 75-99.

[39] Carinci F., *Rivoluzione tecnologica e diritto del lavoro: il rapporto individuale. Relazione al VIII Congresso nazionale* AIDLASS (Napoli, 12-14 aprile 1985).

[40] Caruso B., nt. (13).

[41] Marazza M., nt. (21). The Author shows that this could be an anti-union conduct *ex* art. 28 St. Lav.

[42] Ciucciovino S., *Lo statuto dei lavoratori cinquant'anni dopo: tra conservazione e aggiornamento*, in *Lavoro e Diritto*,1, 2021, 77-81.

workers to gather in the production unit,[43] but this right can also be exercised outside the office.

New technologies (i.e., MS Teams, Meet, Skype) are valid options to meet every time and everywhere and allow to theorize a right to digital assembly or the assembly.[44]

To ensure the freedom of workers to express themselves freely, the employer must be prevented from having access to the assembly[45] and any employer's claim to participate in it constitutes anti-union conduct. To allow reserved access to the tile assembly, company e-mail addresses could be used to send links and instructions for participation, and it would also be possible to share the agenda and other information materials by e-mail.

Moreover, it cannot be excluded that the company itself provides its employees with an *ad hoc* platform for the digital exercise of the right of assembly. This hypothesis seems to be confirmed by the recent Proposal for a Directive on digital work that provides that *Member States shall take the necessary measures to ensure that digital labour platforms create the possibility for persons performing platform work to contact and communicate with each other, and to be contacted by representatives of persons performing platform work, through the digital labour platforms' digital infrastructure or similarly effective means, while complying with the obligations under Regulation (EU) 2016/679. Member States shall require digital labour platforms to refrain from accessing or monitoring those contacts and communications*. (art. 15)

To sign the minutes and their legal value it seems possible to borrow some provisions from the Code of Digital Administration (d. lgs. n. 82/2005) concerning digital signatures, IT documents and legal value.

The most problematic step seems to be that of security understood both as the privacy of the worker and as a guarantee of secrecy of the assembly. The first question can be answered through the GDPR (Reg. EU 2016/679) on the protection of personal data, if the platform is provided by the entrepreneur and, secondly, to prevent the employer or his delegate from infiltrating the teleassembly,[46] it is possible to provide an access system based on blockchain technology[47] or multi-factorial authentication systems to ensure link certainty. The forecast of an assembly outside the office seems sustainable also in virtue of the art. 20, Law no. 300/1970, u.c. provides that «further modalities for the exercise of the right of assembly can be established by collective labour agreements, including corporate».

[43] Corso F., *I diritti sindacali*, in Proia G. (eds.), *Organizzazione sindacale e contrattazione collettiva*, in Persiani M., Carinci F. (eds.), *Trattato di diritto del lavoro*, vol. 2, Cedam, 2014, 341-415.
[44] Cassar S., *Lavoro 2.0 e diritti sindacali: spunti di riflessione e proposte operative su tele-assemblea e referendum sindacale on line*, in *Lavoro e Previdenza Oggi*, 7-8, 2021, 422-443.
[45] Donà S., Marocco M., nt. (37).
[46] Del Punta R., *Social media and worker's rights: What is at Stake?,* in *International Journal of Comparative Labour Law and Industrial Relations*, 35, 2019, 79-100.
[47] Rigazion S., *Smart-contracts e tecnologie basate su registri distribuiti nella L. 12/2019*, in *Il diritto dell'Informazione e dell'Informatica*, 2, 2021, 369-395.

6.2. Electronic *referendum*.

Technological development can also have positive implications for other trade union rights: the right to affix (art. 25, Law no 300/1970) and the referendum (art. 21, Law no 300/1970). Art. 21 of the Statute allows the company union representatives to propose a referendum to all the workers.

The reference to the company and the production unit made by the standard seems to lean towards a physical conception of the workplace, but - as anticipated, the referendum also seems to be able to take place "outside" the office.

Regarding the exercise on the web of the right to referendum, the experience of the *e-vote*.[48] The concrete modality of exercise of the vote could be organized through the predisposition from part of the union of a platform, to which they could access enrolled and not with credentials supplied by e-mail. The voting platform, however, does not seem to be able to be demanded by the employer, since, in the case of the referendum, the employer seems to be subject to a negative obligation. The entrepreneur is bound only to allow the exercise of the right and not also to act for its effectiveness.

However, it should be remembered that the legislator, also regarding the right of referendum, recognizes the possibility of collective bargaining to provide for additional arrangements. The provision of a voting system capable of involving all workers would reduce isolation and encourage the formation of collective consciousness, also improving relations in the work performed outside the office. Even with this institute of direct trade union democracy, the recent collective bargaining seems to have given prominence by placing the burden on the employer of the burden of providing a specific virtual environment in which the worker can express his preference.

6.3. Bulletin board.

The provision of the possibility of freely posting within the workplace material content trade union is an ancillary right to both the assembly and the referendum because it allows the union representatives to communicate with the workers informing them of the matters that may be discussed in the assembly and/or be the subject of a referendum. The Statute, art. 25, recognizes the right to trade union representatives to have special spaces to be able to display communications (publications, texts and communications) of trade union and labour interests.

For some time, however, it has been believed that an evolutionary interpretation of the concept of "spaces" can also include the web.[49] In particular, the possibility is recognized to establish an online bulletin board that can provide wide dissemination of company and union

[48] Di Maria S., Micelli E., *Le frontiere dell'e-government: cittadinanza elettronica e riorganizzazione dei servizi in rete*, Milano, Franco Angeli, 2004; Schirripa M., *Il ritorno dell'e-voting alla luce della pandemia da Covid-19. Una riflessione sull'esperienza canadese*, in *Federalismi.it*, 22, 2020, 262-277.
[49] Pret. Milano, 3 aprile 1995, in *Rivista Italiana di Diritto del Lavoro*, 2, 1995, 758-773.

information.[50] Furthermore, the possibility of finding information on the Internet would not only make it possible to communicate the access link to the platform for assembly or access to the voting platform but would allow reaching at best the workers who make their performance outside the premises.

In the exercise of this right, the recent collective bargaining on agile work has taken place confirming (and encouraging) the possibility of using an electronic digital bulletin board.

7. Beyond the physical production unit.

Although collective bargaining may provide for additional ways of exercising the right of assembly and referendum on the web, the space constraint of the production unit remains central to the statutory system and threatens to undermine the considerations carried out so far. Art. 35 of the Statute circumscribes the accessibility of the trade union rights referred to in Title III « at each site, plant, branch, office or autonomous department» employing more than 15 employees in the same production unit or several units located in the same municipality. It emerges, therefore, as the locus preferred by the legislator for the recognition of trade union rights is characterized by a (physical) employment criterion.[51]

Traditionally, a production unit can be understood as an element of the enterprise that is characterized by technical and administrative independence and that is not merely instrumental but capable of carrying out work of a fraction of the business activity or the provision of a service.[52]

The connection with the physical data is also reflected in the inter-union order which, around the physical concept of the production unit, has based on the ownership and exercise of trade union rights.[53] To recognize the practicability of the union rights, exclusively to the physical productive unit, risks to preclude or however to compress the exercise of the union rights inside fluid organizations[54] in which the physical place can only be possible.[55]

The workplace is no longer (only) the factory, the factory and the office but is (also) the co-working space, the dwelling, and the city. In the future, perhaps not too distant, the disappearance of physical offices has been hypothesized,[56] and the creation of digital jobs: it seems possible to speak, then, of a digital production unit, because thanks to technological development the office will potentially be everywhere.[57]

To try to follow the technological evolution of the work, it is therefore considered possible to give an evolutionary interpretation of the concept of the productive unit, even

[50] Caruso B., *Il sindacato tra funzioni e valori nella grande trasformazione. L'innovazione sociale in sei tappe*, in *WP CSDLE* "Massimo D'Antona", IT, 2019/394.
[51] Donini A., nt. (37).
[52] *See* Cass. 6 dicembre 2017, n. 29241, in *Giustizia Civile Massimario*, 2018,
[53] Frighetto C., Angeletti L., *Contrattazione e rappresentanza. Un percorso tra i principali accordi interconfederali dal 1993 al 2019*, Pacini Giuridica, 2021.
[54] Magnani M., nt. (37).
[55] Cassar S., nt. (43).
[56] Lucifora C., *Quale statuto per i lavoratori del XXI secolo*?, in *Economia e Lavoro*, 1, 2021, 33-39.
[57] Faioli M., *Unità produttiva digitale. Perché riformare lo statuto dei lavoratori*, in *Economia e Lavoro*,1, 2021, 41-53.

disregarding the physical-spatial data.[58] They can even identify themselves in the virtual place to which the worker connects (for example, server or app).

8. The digital strike.

It remains to make a reflection on the abstention of dematerialized protest: the union, before that in the Statute of the workers, has found support in articles 39 and 40 of the Constitution.

Classically the strike consists of the total or partial abstention from the job from more workers to defend economic or economic-social interests.[59]

The traditional form of the strike as abstention from work has already appeared ineffective so in the system of industrial relations, there were new forms of the web-based strike, called net strike. This new form of trade union struggle can be defined as a manifestation of collective conflict online where, on the indication of the promoters, the participants aggressively occupy the web space.[60] The peculiarity of this new mode of manifestation of the collective conflict is the fact that it can involve not only workers but also subjects outside the employment relationship. There have been some examples of net strikes in Italy.[61] The first, in 2007, concerned IBM workers at Vimercate who were supported by about 2,000 SecondLife platform users who occupied IBM's virtual spaces (so called islands). This form of protest led to the temporary suspension of the activity of the company and the immediate reopening of negotiations between the workers' representatives and the company. The second example dates to 2009 and concerned the Bormioli of Parma. In that case, the collective protest was made explicit through the massive sending of e-mails in predetermined time slots that overloaded and rendered useless the company accounts. This action enabled negotiations to continue with the company on the collective redundancy procedure.

Such forms of collective confrontation do not take the form of abstention from work. Therefore, it is necessary to check if they can find space within art. 40 Cost.,[62] where it seems possible to also include actions and not only abstention.[63]

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58 Donini A., nt. (37).

59 C. Cost. 17 luglio 1975, n. 222 in *Foro Italiano*, 1975, I, 1569-1575; *see* Ballestrero M.V., *Interesse collettivo e conflitto*, in *Lavoro e Diritto*, 3, 2018, 411-432; Bavaro V., *Sul fondamento ideologico della libertà di sciopero*, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 3, 2019, 369-389; Roselli O., *La dimensione costituzionale dello sciopero: lo sciopero come indicatore delle trasformazioni costituzionali*, Giappichelli, Turin, 2005.

60 Rota A., *Tecnologia e lotta sindacale: il netstrike*, in *Labour Law Issues*, 5, 2, 2019, 198-212.

61 *Ibidem*

62 Carinci F., *Il diritto di sciopero: la nouvelle vague all'assalto della titolarità individuale*, in *Giornale di Diritto del Lavoro e Relazioni Industriali*, 3, 123, 2009, 423-469.

63 Rota A., nt. (61); Scarponi S., *Il presidio con blocco merci delle merci (una forma di lotta da ridefinire)*, in *Rivista Trimestrale di Diritto Processuale Civile*, 1985, 77-85. *Contra*, on the qualification issue, *see* Lassandari A., *La tutela collettiva del lavoro nelle piattaforme digitali: gli inizi di un percorso difficile*, in *Labour Law Issues*, 4, 1, 2018, I-XX, where the Author considers that the forms of struggle that result in an active behavior aimed at interrupting or hindering the entrepreneurial activity are closer to sabotage.

Another element to be evaluated to test the legitimacy of the net strike is the impact on the enterprise because the strike can be said to be lawful only on the condition that it does not injure the productivity of the employer.[64]

According to the Supreme Court, the strike must be exercised in such a way that «prejudice ... irreparably the productivity of the company, that is the possibility for the entrepreneur to continue to carry out its economic initiative».[65] *A contrario*, is the illegitimacy of a strike that adversely affects the productivity of the company, destroying or rendering unusable company assets.[66]

9. Final remarks.

In conclusion, there is a need to modernise the exercise of trade union rights so that they allow the union to intercept, regulate and accompany the evolution of digital technologies.[67]

Therefore, the recognition of new forms of exercise of trade union rights, which are a precursor to the formation of the collective will, would, on the one hand, a new season for industrial relations and collective bargaining long weakened by new technologies;[68] on the other hand, it would be able to reverse the trend of individualism that the digitalization of work is determining.[69]

Finally, the complexity of the phenomena is not adjustable (exclusively) by legislative interventions, but they must be accompanied by collective bargaining, the only tool that can quickly adapt to the changes taking place and the extreme variety of situations to consider.

Finally, about gig workers, it should be noted that the European Commission has adopted a proposal for a law on digital markets that can guarantee workers' protection in the labour market also through collective bargaining,[70] but until there is a rethink of the right to collective bargaining separated from anti-competitive law, the access to collective bargaining will be denied to self-employed persons.

[64] La Tegola O., *Il conflitto collettivo nell'era digitale,* in *Diritto delle Relazioni Industriali*, 3, 2020, 639-661.
[65] Cass. 30 gennaio 1980, n. 711 in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 6-7, 1960, 293-332.
[66] Cass. 3 giugno, 2009, n. 12811, in *Diritto delle Relazioni Industriali*, 2010, 1, 200-217; Cass. 19 luglio 201, n. 15782, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 2012, 1, 123-132.
[67] Lucifora C., nt. (57).
[68] Garnero A., Touzet C., *Negotiation Our Way Out: i punti chiave dell'ultimo rapporto OCSE sulla contrattazione collettiva*, in *Diritto delle Relazioni Industriali*, 4, 2019, 1261-1264.
[69] Caruso B., nt. (13).
[70] Zilli A., nt. (4); Rodriguez E., *The right to Collective Bargaining of the self-employed at new digital economy*, in *Hungarian labour law*, 2, 2020, 41-50.

14

European Legislation and AI information systems applicable to HRM.

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1. Human resources information systems. 2. European Commission's proposal for a Directive on Platform workers. 3. The amendments of Parliament's Committee on Employment and Social Affairs: lights and shadows. 4. Final remark.

1. Human resources information systems.

Artificially intelligent (AI) systems are being used more and more in the area of human resource management (HRM). The so called "algorithmic management" is a process by which the AI systems are being used to assess applicants in the recruitment and selection process, allocate work, grant promotions and benefits, assign tasks, provide training recommendations, and terminate workers' employment.

Managing employees in the organization not only is a complex task, but also produces a substantial operational cost, especially when an organization has strict business and security policies of a periodical employees' (re)deployment within itself. Each activity in such process has its expense and ownership. Obviously, there is a very significant and permanent push towards business process improvements in the human resource management. It implies a continuous acceleration and enhancement of AI in HRIS to optimize and strengthen organizational productivity and efficiency. The information systems are built to assemble and elaborate data, to take fast decisions in the shortest possible time, and to be suitable and consistent with the behavioral organizational goals that the company has.

What can be said to be wrong with algorithmic management? Why is there any need to envision (legal or contractual) limits to its utilization?

In principle, artificial intelligence and information technology allow not only the monitoring and supervision of workers activities to extents that were unthinkable in past years, but also the collecting and processing of a huge amount of data on such activities. As

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an example, more and more workers make use of wearable work instruments, such as sociometric badges, that make it possible to register their movements and position minute by minute, measure their work pace and assess their breaks. Such data are often analyzed by artificial intelligence to assess workers' productivity and evaluate their suitability to carry out specific tasks (in this respect, it is right to speak of electronic performance monitoring such as an operative precondition of management by algorithm).[1]

Such as workers in a storehouse that use automated systems of direction, also platform workers are dependent upon the app's algorithm not only to be given the next assignment, but also to be monitored with respect to the speed and diligence by which they carry out the tasks. For instance, customers' ratings and reviews can be used, in the sense that low scores assigned to the workers or a rated performance below the algorithm's standards can lead to the exclusion of the worker from the platform and thus to a "dismissal", which may be also enhanced by the supposed self-employment status of these workers.

People Analytics is among the HR practices that are based on the idea that artificial intelligence can help to manage the workforce in a better way by substituting individual biases of supervisors with metrics founded on the use of "big data", therefore supposedly more objective and neutral, to capture insights on job performance. The idea is based on the assumption that a judgment that is unstructured and subjective may not be rigorous or trustworthy enough to rightly assess talent or create human resources policies. Instead, large pools and amounts of collected data may be more objective and thus suitable to form the foundation for decision-making in the HR space.[2]

In any case, it is very difficult to quantify and limit in advance the flow and amount of information gathered on individuals' online and offline conducts, for instance by social networks and technological devices, given the blurring of boundaries between work and life, and the continuous interconnection with IT devices and digital services.

These systems may run the risk of reflecting their human programmers' biases, thus focusing merely on their ideas on work performance and productivity. Job candidates and workers such as, for instance, people with disabilities or with different features from those expected by the programmers, may be penalized, or rejected. Management driven by algorithm and artificial intelligence at the workplace is thus far from having neutral outcomes and reducing discriminatory practices, on the contrary it could even raise discrimination. Such risk is even more serious when artificial intelligence is self-learning, in the sense that it uses a software able to reprogram its own criteria and metrics to obtain a very general predefined outcome, such as augmenting the productivity of work.

The need for monitoring, as a matter of fact, comes from our legal understanding of employment, which is based on control: the work of an employee is controlled by his employer, who has the right to specifically direct employees' activities "that separates employees from independent contractors". The traditional foundation of the subordinate condition is, in essence, the power of the employer to give instructions and orders, to

[1] *See* De Stefano V., *"Negotiating the algorithm": Automation, artificial intelligence and labour protection*, Working Paper No. 246, International Labour Office (ILO), Geneva, 2018, 31.
[2] *See* Pizzoferrato A., *Digitalisation of work: new challenges to labour law*, in *Argomenti di diritto del lavoro*, 6, 2021, 1340.

supervise the execution of tasks and to penalize the failure of performing work. Nevertheless, in each European Country there are laws and rules aimed at protecting workers from abuses of managerial authority at the workplace. Such provisions are meant to lower managerial powers or to introduce procedural steps to disclose the justification underlying company solutions being adopted. This regulation on one side gives management the unilateral power to control, direct and discipline work, and thus the mental and physical activities of human beings; on the other side, it has to reconcile these unilateral features still respecting workers' human dignity, which is a necessary aspect in democratic societies founded on equality principles. In that sense, rationalizing and limiting managerial prerogatives is an essential function of employment regulation.[3]

It is evident that those protective rules are not sufficient to face the effects of the spread of AI in HRIS because of the invasive potentiality of the new technological tools on private and social life activities; moreover, since the managerial algorithm is often bought and not built directly by the employer, it is objectively difficult to know, predict and syndicate it.

Usually, jobs are carried out through ordinary instruments that can perform a pervasive surveillance on the work execution, moreover there is a very high integration between professional and personal data that come from HRIS, and between tools that have different purposes (recruiting, talent retention, talent acquisition, payroll and HR administration, incentive award plan, promotion, dismissals, etc.). There is now, therefore, a reshaping of the protective perspective, which is moving, on one side, from the ban of remote control to the transparency of the vigilance on both collective and individual levels, on the other side from a ban to automated decision-making to a right to question the decision and call for a human action. It is also essential for any managerial decision suggested by artificial intelligence to be subject to review by human beings who remain legally accountable, together with their organization, for the decision and its outcomes. The instance that decisions are taken following machine-based procedures should never be a sufficient motive to exclude personal responsibility; even if electronic personality were to be introduced in the legal system, human beings should always remain accountable for any decision that may directly affect workers.

2. European Commission's proposal for a Directive on Platform workers.

This new trend, opened by art. 22 of GDPR, has now found more consistency and boost at European level by the Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, 9.12.2021, COM(2021) 762 final 2021/0414 (COD).

The Draft directive on improving working conditions in platform work follows the European Commission's commitment to examine 'ways to improve the labour conditions of

[3] *See* Hendrickx F., *From digits to robots: the privacy-autonomy nexus in new labor law machinery*, in *Comparative Labor Law & Policy Journal*, 40, 2019, 370.

platform workers' and supports the implementation of the European Pillar of Social Rights Action Plan.

It was first published by the Commission on 9th December 2021 (COM(2021) 762 final 2021/0414 (COD) and it was submitted to the European Economic and Social Committee (EESC) for the consultation mechanism under Art. 304 of the TFEU.

The proposal aims to improve the working conditions of persons performing work via a platform by: (i) ensuring a correct employment status; (ii) promoting transparency, fairness and accountability in the algorithmic management of platform work and (iii) improving the transparency of platform work, including in cross-border situations.

With regard to algorithmic management, in particular, Chapter 3 of the proposal ensures the right to transparency regarding the use and operation of automated monitoring and decision-making systems, as well as human monitoring of the impact of automated systems on working conditions, so as to protect workers' fundamental rights and health and safety at work *("Digital labour platforms shall not use automated monitoring and decision-making systems in any manner that puts undue pressure on platform workers or otherwise puts at risk the physical and mental health of platform workers")*. It also provides for appropriate channels to discuss, receive an explanation and request a review of automated decisions. These new rights will be granted to both employed and genuinely self-employed workers.

On 23rd March 2022 the EESC approved its final report on the draft, that supports in principle the Commission's proposal, but criticizes it for being too generic, ambiguous and at times incomplete.

In relation to the automated decision making, in particular, the EESC suggested that provisions should be added "to require digital labour platforms to: (a) develop their algorithms and systems under the "safe-by-design" principle and (b) following the rationale of the proposed AI Act, (…) require digital labour platforms to undergo a conformity assessment of their algorithms, not only before they deploy them but also during the provision of labour /or service by the worker. The conformity assessment should be carried out with a multidisciplinary approach in order to promote a joint assessment by the experts nominated by the trade unions, the platform and the labour, social protection and other relevant authorities. When a conflict arises in the review of an algorithm-assisted decision, workers should have the possibility to have access to an independent arbitration".

Such report was transmitted to the Parliament and to the Council for the first reading under the ordinary legislative procedure and, at present, the EU Parliament's Committee on Employment and Social Affairs, whose Rapporteur is Elisabetta Gualmini, is examining it together with the draft directive. Between 3rd May 2022 and 10th June 2022, The Committee published a draft report and 1023 proposed amendments, which show that while there is consensus on the high importance of the draft directive, its content is strongly debated.

3. The amendments of Parliament's Committee on Employment and Social Affairs: lights and shadows.

The draft report presented at Committee on Employment and Social Affairs has proposed some relevant amendments to the original text, to reduce the information asymmetry, admit a wider access for workers and their representatives to the AI tools applicable and consent an arguing or contrast on the way of algorithm functioning. The commendable purpose is to augment transparency in the using of monitoring and decision-making systems, minimizing the opacity in algorithm-based human resource management.

The most important amendment extends the obligation of human review to all workers who have to interact with algorithms in their work environment without dealing with a platform. For instance, that would be the case for Amazon's warehouse workers, who are constantly monitored and instructed by AI-power tools. It appears clear how these provisions are highly relevant not only for people performing platform work (independently of their employment status) but for every worker whose working conditions are affected by those systems. Indeed, the pandemic has even accelerated the so-called phenomenon of "platformisation" of the economy, which refers to the increasing use of those systems to organize and control work also far beyond platform business. The directive norms on algorithmic management could become a standard, a general framework for all kind of employers, regardless of their legal nature, dimensions, activities.

All the algorithm's elements to assess the workers' performance should be subject to a prior collective information and consultation process, and subsequent collective bargaining. The obligation of information shall concern: "(a) as regards automated monitoring systems: (i) the fact that such systems are in use or are in the process of being introduced; (ii) the categories of actions monitored, supervised or evaluated by such systems, including evaluation by the recipient of the service; (b) as regards automated decision-making systems: (i) the fact that such systems are in use or are in the process of being introduced; (ii) the categories of decisions that are taken or supported by such systems; (iii) the main parameters that such systems take into account and the relative importance of those main parameters in the automated decision-making, including the way in which the platform worker's personal data or behavior influence the decisions; (iv) the grounds for decisions to restrict, suspend or terminate the platform worker's account, to refuse the remuneration for work performed by the platform worker, on the platform worker's contractual status or any decision with similar effects".

The draft report fosters a social dialogue between the workers and the platforms and empowers the workers to freely communicate among themselves, a measure intended to enable them to unionize and lay the foundation for a new right to be interconnected.

A measure covering subcontracting has also been added to prevent the platforms from circumventing the directive *("That information shall be provided irrespectively of the automated or semiautomated monitoring and decision-making systems being managed by the digital labour platform or a subcontracted service provider which sells its management services to the platform")*.

Last, but not least, the draft report proposes that algorithms should not be able to decide on their own on the dismissal of workers or the organization of their working schedule

(*"Decisions that have an impact on working conditions, health and safety and on the contractual relationship or introducing changes to the agreed terms of the employment relationship, and decisions suspending or terminating the contractual relationship and the platform worker's account, shall not be taken by automated or semi-automated monitoring and decision-making systems and shall be taken in line with national law and collective agreements"*).

The proposed amendments are consistent with the declared purpose. The extension of the directive scope of application to all enterprises using AI instruments, the enlargement of the information obligation, on a subjective basis, to workers' representatives, and, on an objective basis, to examination and consultation, the institutional support given to collective bargaining, are all measures converging to the agreed aim of reducing parties' imbalances and preserving human dignity, safety and health at workplace. The new text recognizes the key role of collective regulation and social partners in governing automation and the impact of technology at the workplace, stressing that involvement of workers' representatives in managing and preventing job losses is crucial and that collective actors should actively participate in the governance of technology-enhanced management systems, to ensure a vital "human-in-command" approach and moving away from a purely unilateral dimension of AI work governance.

What is hard to imagine could work, is the provision that bans automated decision-making systems in a large and too much comprehensive area consisting of working conditions, health and safety, the contractual relationship, changes to the agreed terms of the employment relationship, suspension, or termination of the contractual relationship. This is equivalent to assert that automated decision-making systems are not allowed to operate in HRM, which is anachronistic, simply inconceivable and leads to dangerous anti-competitive drifts in contrast with the freedom of economic initiatives.

4. Final remark.

An appropriate human oversight of the decisions taken by algorithms, a specifically regulated human right of intervention and review, a full involvement of the workers' representatives in the acquisition and testing of AI systems with a legislative reinforcement of collective bargaining, are all good legal instruments, in line with the main purposes of the proposed act, to be implemented in the employment relationship practices. Anyway, we don't have to be tempted to embrace an ideological and unrealistic perspective, which is not only ineffective, but even counterproductive because it undermines the stability and impact of the whole regulatory framework.

The directive should keep a fair balance between efficiency, productivity, and the right to decent working conditions. The algorithmic management environment should be regulated and oriented in a human-centered approach, given that ethics-based auditing is not enough to preserve this effective balance; but AI tools should not be banned or unduly restricted in the area of HRM to avoid the adverse effect of business escaping from legal rules and

constraints, vanishing all the efforts done for a guided (in terms of ethics and constitutional values) evolution of AI.[4]

[4] Similarly, *see* Zampini G., *Intelligenza artificiale e decisione datoriale algoritmica. Problemi e prospettive*, in *Argomenti di diritto del lavoro*, 3, 2022, 486: "*In effetti, le proposte della Commissione UE sono lontane dal prospettare uno stravolgimento dei rapporti di forza nel sistema capitalistico globalizzato, ma offrono meritoriamente una base minima di diritti fondamentali* …".

15

Individual and collective protection challenges in digital work: the case of crowdwork.

Ilaria Purificato*

1. Platform work: a brief overview on the origins and the current state of the debate. 2. Objectives of investigation. 3. Crowdwork: an underestimated phenomenon in terms of its spread and the issues it can rise. 4. Some critical aspects of the phenomenon: algorithmic management, transnational nature and heterogeneous models. 5. The Proposal for a Directive on improving working conditions in platform work: approach and proposed regulatory measures. 5.1. Critical issues. 6. A possible solution: a core set of minimum protections for all digital platform workers.

1. Platform work: a brief overview on the origins and the current state of the debate.

Chronologically, the first digital platforms appeared in the early 2000s, and geographically it is the American continent that can "claim authorship", while the phenomenon also began to spread to Europe in 2008.

The first digital platforms to emerge have been those equipped with a business model that allows clients (small and large companies or individuals) to formulate the request for a "task" that is carried out instantly and entirely online by workers belonging to an indistinct "crowd" of individuals who have access to the Internet and can be allocated anywhere in the world.

Due to the global success of this complex phenomenon, a rich literature committed to the effort of understanding its many aspects has begun to be published.

These studies show that at least two basic aspects of this type of work should be considered. The first relates to the core of the business model, which is shown to be common to all digital platforms as they seem to base their architecture on a common organizational frame built on the crowdsourcing model[1] which, then, is customized to meet the needs of individual platforms. According to this model the requests for work by clients (*crowdsourcers*)

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[1] Howe J., *The rise of the crowdsourcing*, in *Wired*, 2006, available at https://www.wired.com/2006/06/crowds/ (last access 20 December 2022).

are managed by an intermediary (the digital labour platform, or *crowdsourcing platform*) and offered by the same to a "crowd" of workers (*crowdworkers*).[2]

The second reveals that, subject to the basic architecture, the work that is performed on – or through – the digital platform is suitable for taking on different methods of execution.

On the basis of these findings, a part of the scholars has proceeded to divide the work that can be performed through digital platforms into two macro-categories, "crowdwork" and "on-demand work via app", respectively.[3]

In the case of "on-demand work via app" activities are performed offline by workers, and the digital platform manages and allocates work opportunities among them through special mechanisms that form an integral part of its design, namely algorithms.

In the first cited form, work activities are carried out entirely online on the digital platform, which, at least apparently, carries out the mere task of putting clients in contact with the "crowd" of workers registered with it. Such an approach, which requires as a *condicio sine qua non* a connection to the Internet network and a registration on the website of the relevant digital platform – accompanied by an acceptance of the contractual terms and conditions unilaterally dictated by it – ensures that the connections that are established between the two groups of users have a potentially global reach.

The interest of scholars, court judgments, and the intervention of the Government and social partners are directed towards the "on-demand work via app", particularly towards the figure of riders.

Courts have played a key role in reconstructing a clearer picture of the protections to be granted to these workers. In fact, these have intervened, firstly, on the issue concerning the legal classification of such workers,[4] then, also on cases of collective discrimination,[5] health and safety at the time of the Covid-19 health emergency, digital illegal employment[6] and, more recently, on issues concerning the application of collective agreements.[7]

At the same time, in a non-remedial perspective, the search for protections by these workers is pursued, primarily, due to the pressure exerted by coalitions of riders (grassroots movements),[8] which have spontaneously arisen in response to the declared difficulty that

[2] Prassl J., Risak M., *Uber, Taskrabbit, & Co: platforms as employers? Rethinking the legal analysis of crowdwork*, in *Comparative Labor Law & Policy Journal*, 37, 3, 2016.
[3] De Stefano V., *The rise of the "just-in-time workforce": On-demand work, crowdwork and labour protection in the "gigeconomy"*, in *ILO Working Papers 994899823*402676, International Labour Organization, 2016.
[4] Trib. Torino 07 maggio 2018, n. 778, in *GiustiziaCivile.com* 15 ottobre 2018, *see* Senatori I., *Subordinazione e autonomia alla prova della gig-economy: la parola ai giudici*; Trib. Milano 10 September 2018, n. 1853, in *Diritto & Giustizia*, 12 October 2018; App. Torino 04 February 2019, n. 26, in *Diritto delle Relazioni Industriali* 2019, 3, 936; Cass. 24 January 2020, n. 1663, in *Guida al diritto* 2020, 9, 40.
[5] Trib. Bologna 31 December 2021, in *Rivista Italiana di Diritto del Lavoro* 2022, 2, II, 247.
[6] Trib. Misure Prev. Milano 27 May 2020, n. 9, in *Rivista Italiana di Diritto del Lavoro* 2020, 3, II, 546.
[7] Trib. Firenze 9 February 2021, in *Rivista Italiana di Diritto del Lavoro*, 2021, 1, II, 130; Trib. Bologna 30 June 2021, in *Rivista Italiana di Diritto del Lavoro*, 2021, 4, II, 788.
[8] For details, *see*, among others, Marrone M., *Rights against the machines! Food delivery, piattaforme digitali e sindacalismo informale,* in *Labour & Law Issues*, 5, 1, 2019, I.3 ff.; Martelloni F., *Individuale e collettivo: quando i diritti dei lavoratori digitali corrono su due ruote*, in *Labour and Law Issues*, 4, 1, 2018, 18 ff.; Purificato I., Scelsi A., with the supervision of Senatori I., Spinelli C., *Representing and Regulating Platform Work: Emerging Problems and Possible Solutions. National report on Italy*, pp. 41-52, available at https://irel.fmb.unimore.it/archive/research-output/national-reports/.

traditional trade unions have in intercepting these workers and making themselves adequate spokespersons for their requests for protections.

The protests organized by these groups of workers have had the effect of encouraging and soliciting the concrete intervention of local administrations[9] and the Government[10] in regulating the phenomenon and, more recently, the trade unions in stipulating[11] and integrating collective agreements.[12]

2. Objectives of investigation.

The recent initiatives of the European Commission[13] have relaunched the open and widespread debate on the correct legal status of platform workers and other controversial aspects of their relationship with digital platforms.

As seen above section 1, this debate has long been focused exclusively on the "work on-demand via apps". Conversely, this contribution focuses on "crowdwork".

The study aims, firstly, to show how crowdworkers also need protections and, secondly, to identify the rights that should be guaranteed to them, starting from the reconstruction of the spread of the phenomenon and the analysis of the way in which models of crowdwork platforms function in practice.

The analysis of aspects related to the protection of such workers is conducted by taking into special consideration the contribution provided by the recent set of measures proposed by the European Union to improve the working conditions of platform workers. Indeed, this intervention has introduced measures to regulate crowdwork where certain conditions are met. In particular, the study highlights the limitations of the Proposal for a Directive on improving working conditions in platform work that could appear in the stages of implementation of crowdwork, in the event it is adopted. In the author's opinion, the action of the European Union, although remarkable, should not be considered completely satisfactory in its approach, which is governed by the autonomy-subordination dichotomy

[9] "Charter of fundamental digital workers' rights" signed in Bologna on 31 May 2018 and "Charter of Rights for Riders and Gig Economy Workers" signed in Naples in early 2020.
[10] Law Decree no. 101 of 3 September 2019, converted by amendment of Law no. 128 of 2 November 2019. It has modified the Legislative Decree 15 June 2015, no. 81.
[11] National Collective Agreement for riders signed by UGL and Assodelivery.
[12] On 2 November 2020, Filt Cgil, Fit Cisl and Uil Trasporti and the employer associations already signatories to the CCNL Logistics, Transport of Goods and Shipments as well as the Protocol of 18 July 2018 signed a new protocol by which the protections related to both work performance and economic and normative treatment provided by the Protocol of 2018 and related to the NCA Logistics were extended to workers under Article 47 bis et ff. of Legislative Decree 15 Junes 2015, n. 81.
[13] The reference is to the package of measures published on 9 December 2021 by the Commission aimed at improving the working conditions of platform workers and supporting the sustainable growth of digital platforms. Specifically, reference is made to: Communication on Better Working Conditions for a Stronger Social Europe: harnessing the full benefits of digitalisation for the future of work; draft guidelines on the application of EU competition law to collective agreements of solo self-employed people (adopted by European Commission on September 29, 2022) and the proposed directive on improving working conditions in platform work.

and focuses little on the effects of the transnational nature of crowdwork. It also presents critical issues of detail, as in the regulation of worker participation.

As a consequence, in the final part, starting from the approach that advocates the allocations of rights to workers in consideration of their legal status, the paper identifies a core set of protections that are deemed to be recognised for all platform workers. It is believed that the functioning of these platforms using algorithmic mechanisms can violate some of their fundamental rights. Such a solution, on the one hand, requires the extension of already existing rights and, on the other hand, implies the introduction of *ad hoc* rights to consider the peculiarities of these forms of work, which are constantly changing.

3. Crowdwork: an underestimated phenomenon in terms of its spread and the issues it can raise.

The category of crowdworkers records numbers that are high enough to be taken into consideration. As well as operating modes of crowdwork infrastructures that are capable of giving rise to situations where workers need to be protected.

With reference to the first point, a recent study on the diffusion of platform work in Italy[14] estimated that there are 570,521 people performing platform work in the population aged 18 to 74, of whom 35 percent work entirely online. This statistic is a sign of the establishment of this kind of platform-based work in Italy as well, which has increased significantly in response to the social and labour restrictions caused by the pandemic, also at the international level.

Other significant information that emerges from the same study concerns payment methods,[15] performance evaluation systems[16] and the effects that such evaluation can have on work activity,[17] to be understood primarily in terms of job opportunities. These factors are useful in order to understand the importance of including online work on a digital platform among the forms of work that needs to be regulated. This trend is also confirmed by international data.[18]

[14] INAPP, *Lavoro virtuale nel mondo reale: i dati dell'indagine Inapp-Plus sui lavoratori delle piattaforme in Italia*, in *Inapp Policy Brief*, January 2022, no. 25.

[15] For about 30 percent of crowdworkers, the digital infrastructure makes the fee payment, while about 60 percent said they receive the fee directly from the client, not considering that about 10 percent said they are paid by an external party.

[16] According to the data, the following are the evaluation criteria applied by crowdwork platforms that gain importance: client rating (44.8%), time of performance (16.4 %) and number of completed assignments (55.2%).

[17] Negative evaluations mainly result in a reduction in the amount of the most profitable assignments (49.7%) and a worsening of the hours in which to perform the assignment (23.8%)

[18] *See* The Online Labour Index (available at the following link: https://ilabour.oii.ox.ac.uk/online-labour-index/) and other studies, as Urzì Brancati C., Pesole A., Fernández-Macías E., *Digital Labour Platforms in Europe: Numbers, Profiles, and Employment Status of Platform Workers*, EUR 29810 EN, Publications Office of the European Union, Luxembourg, 2019; Berg J., Furrer M., Harmon E., Rani U., Silberman S., *Digital labour platforms and the future of work: Towards decent work in the online world*, International Labour Office, Geneva, 2018; Huws U., Spencer N.H., Syrdal D., Holts K., *Work in the European Gig Economy*, FEPS, UNI Europa, University of Hertfordshire, 2017.

In addition to the evidence provided by the data, the real functioning modalities of digital platforms also pave the way for a reflection on the protections that crowdworkers may need. First of all, it is necessary to ascertain whether, in accordance with what is declared by the platforms themselves in their terms and conditions of service, they are authentic mere intermediaries or whether they have a different and more active role in the stages of organizing, managing and controlling the work.

The definition of intermediary, *i.e.* information society, is derived from the notion of information society service established in Article 1(1)(b) of Directive (EU) 2015/1535, according to which it is "any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services". Subsequent interventions of European case law have been helpful in providing a clearer interpretation of the notion, from which it follows that in order for one to qualify as an information society, not only must the four requirements of Article 1 above be found, but it is also required that the mediation service does not constitute "an integral part of an overall service whose main element is a service to which a different legal qualification should be accorded".[19]

Thus, for example, the Court of Justice of the European Union in the *Uber* case[20] issued that what the platform performed could not be defined solely as an information society service, but that, rather, the intermediation activity was an integral part of an overall service in which transport was the main element.

Another element used by the Luxembourg judges in support of their argument is that the platform would have created an offer of services (i.*e.,* that of urban transport "carried out by non-professional drivers using their own vehicle"), which are accessible through an application that represents the IT tool without which drivers would not be "induced"[21] to carry out their activity and passengers would not be able to use their services.

In crowdwork platforms, there cannot be a disjunction between activities provided electronically and activities provided non-electronically as there is in most cases an overall dematerialization of the service provided. At the same time, by the mere fact that the activity is performed entirely online, one cannot infer the presence of an information society service.

As for Uber drivers, if there were no digital infrastructure, even some crowdworkers would not be enabled to perform that activity. Consider, for example, those digital platforms whose work organization model proposes jobs that are even complex in their entirety, but which become simple to perform once they are broken down, thus enabling a number of even low-skilled people to perform them.[22]

Consequently, it is those crowdwork platforms which, not being mere intermediaries, manifest a more intrusive interference in the organizational model of work, raise the main critical issues.

[19] ECJ, *Asociacion Profesional Elite Taxi contro Uber Systems SpainSL*, C-434/15, EU:C:2017:98; ECJ, 19 November 2019, C-390/18, ECLI:EU:C:2019:1112.
[20] ECJ, *Asociacion Profesional Elite Taxi*,nt. (19).
[21] ECJ, *ibid.*
[22] Clickworker (https://www.clickworker.com) is an example.

4. Some critical aspects of the phenomenon: algorithmic management, transnational nature, and heterogeneous models.

Algorithmic management

As a rule, crowdwork platforms are designed and implemented in such a way as to be autonomous "ecosystems" capable of acting without human intervention, albeit emulating them.

Therefore, there is a dissociation of some managerial practices from human know-how and their concomitant reliance on artificial intelligence mechanisms.[23] Thus, even in the more strictly executive phases of the job, the platforms, albeit engaging in different conducts, implement more or less intense and more or less direct forms of work control intended to produce essential information for the algorithms.

Examples include evaluation by controllers at the end of the micro-job, compliance with the execution time of the work and quality standards set by the platform itself, as well as the determination of the remuneration to which the worker is entitled and the automatic elimination of the worker's profile upon the occurrence of certain circumstances. The criteria used by the algorithm (to be understood generically, as a finite sequence of instructions, which, starting from an input, take elementary steps, and arrive at producing an output, a result) to make decisions are unknown. Therefore, the programming codes remain unknown and, apparently, so impenetrable that they are referred to in terms of "black boxes".[24] In other words, the mechanisms behind the functioning of crowdwork platforms tend to trace those theories that in the organizing literature propose to investigate the role played by the algorithm in the ways of managing the employment relationship, among which the algorithmic management[25] gains importance.

In summary, the algorithm would act as an integrated tool in the organizational model of the digital platform, which monitors and supervises the activities that are performed through the platform, making use of the reputational systems and supported by the design features of the digital platform itself. In this way, it ensures an effective system but at the same time has the power to influence aspects related to the worker's participation in the platform such as, but not limited to, job opportunities and the remuneration due to the worker. The risks that workers face are manifold, starting with the possibility of being passively subjected to

[23] De Stefano V., Aloisi A., *Il tuo capo è un algoritmo. Contro il lavoro disumano*, Editori Laterza, Bari, 2020, 84, where the Authors describes it as "An algorithmic analysis system that, using large amounts of data, is able to extract patterns and make predictions in ways that humans associate with their own intelligence".
[24] Pasquale F., *The Black Box Society: The Secret Algorithms That Control Money and Information*, Harvard University Press, Cambridge, 2015.
[25] Rani U., Furrer M., *Digital labour platforms and new forms of flexible work in developing countries: Algorithmic management of work and workers,* in *Competition & Change*, 2020.

discriminatory judgment and "biases" which, voluntarily or not, can be incorporated into the programming of the algorithm by those who are responsible for preparing its architecture.[26]

Transnational nature

Another element that distinguishes crowdwork is the global nature of the work performed online on the digital infrastructure.

The virtuality of the work activity, as well as of the result it produces, means that the workforce suitable for carrying out such activities potentially coincides with Internet users around the world, provided that they comply with the conditions established in the contractual terms.

Essentially, crowdwork accomplishes such a removal of spatial barriers that a worker established in any part of the globe can realize on the digital infrastructure the request of another user, also located anywhere.

If, on the one hand, such a feature has the positive implication of translating into concrete job opportunities for individuals normally at the margins of or excluded from the labour market, on the other hand, it also requires weighing the critical issues that may result from it, including the risk of a race to the bottom regarding working conditions,[27] leading to real forms of social dumping.

In view of the transactional nature of the relationships that can be established on digital platforms, the absence of regulations governing work on digital platforms at the global level becomes a significant issue and potentially capable of undermining the recognition of basic human rights with respect to crowdworkers.

Indeed, in a context in which the relationships established between the parties are naturally characterized by elements of internationality, such a legislative gap creates, first of all, a problem of identifying the law designed to regulate the relationship as well as the appropriate criteria for determining the competent court to rule on any disputes that may arise between the parties.

Heterogenous model

The last factor is the variety of organizational and management models of the crowdwork platforms. As also emerged in the above paragraphs, digital infrastructures operate on the basis of procedures that are very different from one another, which, therefore, make it difficult to develop standardized reflections that can be applied with respect to all operators.

For example, different strategies may be adopted for defining working hours, as well as those that determine the remuneration due to the worker for completing the task and, again, the mechanisms for monitoring performance and evaluating the work performed. Nevertheless, all digital platforms unilaterally set their contract terms, leaving no bargaining

[26] *See,* Matescu A., Nguyen A., *Algorithmic Management in the Workplace*, in *Data&Society*, February 2019, available at https://datasociety.net/wpcontent/uploads/2019/02/DS_Algorithmic_Management_Explainer.pdf (last access 20 December 2022); De Petris P., *La tutela contro le discriminazioni dei lavoratori tramite piattaforma digitale*, in *dirittifondamentali.it,* 2, 2020.

[27] Brino V., *Lavoro dignitoso e catene globali del valore*, in *Lavoro e Diritto*, 2019, 3, 552 ff.

power to the worker. In the same way, in most cases, the terms and condition of the digital platforms, directly or indirectly, qualify workers as self-employed.[28]

5. The Proposal for a Directive on improving working conditions in platform work: approach and proposed regulatory measures.

In recent times, the open issue of work through digital platforms has seen a new step added in its path toward regulation across national borders. The reference is to the proposal for a Directive published on 9 December 2021, by means of which the European legislator decided to intervene by preparing a special discipline in favour of workers on digital platforms.[29] In particular, the proposed directive, aims to improve working conditions through a series of interventions aimed at ensuring the correct legal classification of workers, as well as greater transparency in the management and provision of work through algorithms.

The proposed directive acquires relevance in the present study because it explicitly states that workers who carry out their activities on digital platforms that are entirely online fall within its scope and that the objectives it aims to achieve also involve cross-border work situations.[30] As a result, its detailed provisions can also apply to crowdworkers, providing them with higher levels of protection.

Workers Classification

It is necessary to specify that the proposed directive keeps the distinction between self-employment and employment, and it reserves the recognition of stronger protections for those workers who can be classified as employees. In the text of the proposal this distinction is given by the use of the terms "platform workers" to refer to those workers who have an "employment contract or employment relationship as defined by the law, collective agreements or practice in force in the Member States with consideration to the case-law of the Court of Justice",[31] and "persons performing platform work" for "any individual performing platform work, irrespective of the contractual designation of the relationship between that individual and the digital labour platform by the parties involved".[32]

According to the Article 4 an employment relationship exists between the work platform and the individual performing the work when certain requirements are met, without prejudice to evidence to the contrary that may be provided by the parties. In other words, the cited article introduces a presumption of subordination which is occur when two of the following criteria take place at least:

(a) effectively determining, or setting upper limits for the level of remuneration;

[28] For instance, *see* Clickworker, nt. (22), and 99Designs platform, https://99designs.it (last access 20 December 2022).
[29] For in-depth analysis of issues related to the proposed directive, s*ee*, among others, papers published in the section "theme" of *International Labour Law e-Journal*, 15, 1.
[30] Art. 2, para 1, no. 1, lett. C).
[31] Art. 2, para 1, no. 2.
[32] Art. 2, para 1, no. 3.

(b) requiring the person performing platform work to comply with specific rules governing appearance, conduct towards the recipient of the service or performance of the work;

(c) supervising the performance of work or verifying the quality of the results obtained from the work, also carried out electronically;

(d) effectively restricting the freedom of workers, also through sanctions, to organize their work, in particular the freedom to choose their working hours or periods of absence, to accept or to refuse tasks or to use subcontractors or substitutes;

(e) effectively limiting the possibility to build a clientele or to perform work for third parties.[33]

Algorithmic management

Many typically managerial prerogatives are transferred from human beings to digital procedures that are part of the design of digital platforms. As a result, the use of algorithms and other software essential for their operation has shaped the ways in which organizational control is exercised, which is eventually expressed through the automation of managerial functions, the evaluation of work performed and of workers as well as the exercise of "disciplinary" activities against the latter.

With reference to this aspect, the directive aims to make transparent the ways in which control is implemented by the digital platforms and, at the same time, to keep workers informed about these operations. Thus, Article 6, which also applies to genuinely self-employed workers whose activity is nonetheless organized by the digital platform,[34] establishes that workers must be given adequate information about the automatic monitoring systems that the infrastructure uses to monitor performance, supervise and evaluate the outcome of performance, and specifies that by means of a document which may also be in electronic format, the worker must be informed of the automatic monitoring systems used or about to be used as well as the type of actions that the algorithms implement to monitor, supervise and evaluate the work. The law prohibits digital platforms from processing workers' personal data that are not strictly necessary and related to the performance of the work.

In Articles 7 and 8, forms of *ex post* human control of the actions of automated systems are introduced. Provisions that apply with respect to all workers on digital platforms (except as provided for in Art. 7, para. 2 on health and safety).

Specifically, Article 7 requires digital platforms to periodically conduct monitoring and evaluation of the effects of decisions made by automated monitoring and decision-making

[33] Art. 4, para 2.

[34] *See* what Art. 10 establishes and the information given in the "context of proposal" about this article. Here it is clarified that art. 10 "ensures that the provisions on transparency, human monitoring and review of Articles 6, 7 and 8 – which relate to the processing of personal data by automated systems – also apply to persons performing platform work who do not have an employment contract or employment relationship, *i.e.* "the genuine self-employed".

systems on working conditions through the actions of persons with the necessary skills, training and authority.

Article 8 provides a procedure to ensure that the worker has the opportunity to understand, discuss and clarify the facts and reasons behind the automated decisions that impact him or her. Again, platforms are required to have "contact persons" who have the necessary skills, training and authority.

Transnational nature

The proposed directive addresses the issue of transnationality of digital platform work in some of its provisions. Indeed, as argued by the Commission itself,[35] the transnational nature of online platforms makes it particularly difficult to identify the parties performing the activity and where they are established. Therefore, in these circumstances, the lack of information that makes it possible to estimate the spread of the phenomenon at the national level, the types of contracts predominantly concluded between the parties as well as the content of the terms and conditions that are imposed by the digital platforms, accentuate the difficulty faced by the national authorities in ensuring the proper application of national rules, both in terms of working conditions and taxation.

The provisions referred to are Articles 11 and 12 of the Proposed Directive under consideration.

Article 11[36] provides for a general obligation on digital platforms to declare the work being performed by workers on the digital infrastructure and to share data relating to these activities with the competent labour and social protection authorities in the respective Member States. Given the transnational nature of most digital work platforms, the proposed directive also establishes the criterion on the basis of which the competent authorities are to be determined and, consequently, the Member State whose rules must be applied. Therefore, in order to avoid – or, at least, reduce – the risk of the incorrect application of the provision, this criterion is identified in the place where the activity is carried out by the worker, thus depriving the parties of any discretion in the choice.

With the same ratio and relying on the same criterion for choosing the place, Article 12[37] stipulates that a series of information, expressly listed, must be provided by digital work platforms to the competent labour and social protection authorities, to other national authorities as well as to the workers' representatives. The function is to check that the former complies with their obligations established by law to protect workers on the platform due to their employment status.

[35] *See* what the Commission has said on pages 2 and 3 in the text of the Proposed Directive cited above.

[36] Art. 11: "Without prejudice to Regulations (EC) No 883/200419 and 987/200920 of the European Parliament and of the Council, Member States shall require digital labour platforms which are employers to declare work performed by platform workers to the *competent labour and social protection authorities of the Member State in which the work is performed* and to share relevant data with those authorities, in accordance with the rules and procedures laid down in the law of the Member States concerned".

[37] Art. 12 par. 2: "*The information shall be provided for each Member State in which persons are performing platform work through the digital labour platform concerned.* […]".

As is evident – and as, moreover, was clearly stated by the Commission in the proposed directive[38] – the choice was motivated by a desire to grant relevance only to the criterion of the place of performance of the activity, thereby limiting the scope of the directive to all those digital work platforms that are "simply" active in a Member State.

Collective dimension

The set of measures presented by the Commission on 9 December 2021 also addresses issues related to the collective rights of workers on a digital platform. To the provisions of the proposed directive, the Commission has added the Draft Guidelines on the application of EU competition law,[39] aimed at clarifying the correct interpretation of Article 101 of the TFEU. Indeed, this article can be a limitation to the recognition of collective rights with respect to many platform workers as they are qualified as self-employed.

With regard to the proposed directive, references to workers' representatives and their prerogatives can be found on several occasions. As far as this paper is concerned, the focus is on the main measure proposed to allow workers' representatives to be involved in algorithmic management.

The rights to information and consultation are the form of participation chosen by the proposed directive.

In particular, Article 9 recognizes the right of these workers' representatives to be informed and consulted on a number of aspects which, consistent with the nature of this instrument, are likely to cause, primarily, a change in the organization of the digital platform.[40] Article 9 establishes that the information and consultation of workers' representatives must be ensured in relation to those decisions that may involve the introduction of automated monitoring[41] and decision-making[42] systems, as defined in Article 6(1), or a substantial change in them. However, this provision should only apply to workers on digital platforms who have a contract of employment or an employment relationship with the digital platform, as it is not included in the list of Article 10.

5.1. Critical issues.

Workers Classification and algorithmic management

[38] Recital no. 17 of the proposed directive.
[39] On 29th September 2022 the Commission has approved the Guidelines (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM%3AC%282021%298838).
[40] Art. 4, para. 1, let. C), Directive 2002/14/CE.
[41] Art. 6, para. 1, lett. A): "automated monitoring systems which are used to monitor, supervise or evaluate the work performance of platform workers through electronic means".
[42] Art. 6, para. 1, let. B): "automated decision-making systems which are used to take or support decisions that significantly affect those platform workers' working conditions, in particular their access to work assignments, their earnings, their occupational health and safety, their working hours, their promotion and their contractual status, including the restriction, suspension or termination of their account".

The mechanism of presumption of subordination, as presented in the proposed directive, presents some critical issues regarding its application to crowdwork.

Firstly, the likelihood that the legal presumption of the existence of a subordinate employment relationship may become a reality also for crowdworkers are quite limited.

The reason is to be found mainly in the impossibility that most of the conditions set by Article 4 can occur for this type of workers.

Indeed, it has been argued that crowdwork platforms are hardly referable to the criteria relating to the limitation of the "possibility for the worker to create a clientele or perform work for third parties" and the freedom of the same to organize their own work, as well as the one requiring the worker to comply with rules governing their appearance during performance and regulating their behaviour towards the client.

As a result, the provision of criteria predominantly shaped based on known experiences in the field of on-demand work via application means that most crowdworkers cannot access the protections that the proposed directive associates with the recognition of the status of employed person.

Secondly, situations could arise such that the same digital platform could ideally adopt different organizational schemes depending on the type of service selected by the client. This would imply that there could be instances in which a crowdworker's work could satisfy at least two of the control criteria listed in the proposed directive if he or she performs his or her activity following a particular model adopted by the digital platform and does not fulfil any of them if he or she acts to accomplish a task for which the same digital infrastructure uses a different organizational scheme.

As a consequence, a worker could find himself in the ambiguous condition of having a double "treatment" regime with the same digital platform since, in one case, the condition referred to in Paragraph 1 of Article 4 would be fulfilled, regardless of the legal classification of the worker, by reason of the control carried out by the digital platform, while in the second case, since none of the forms of control listed in Paragraph 2 of the above-mentioned article are carried out, the same condition could not be said to have occurred.

In addition to these considerations, digital platforms, from the very beginning, have built their business models so that existing regulations could not be applied to them. Consequently, it cannot be excluded that, in the event that the proposal is adopted, digital platforms may shape their schemes while waiting for the entire approval process to take place, so that they can continue to control workers in new ways which, as such, are not taken into account by the directive.[43]

Another controversial aspect of digital platform work in general and, even more so in crowdwork, concerns working hours. It happens that, theoretically, it is not the platform that requires the worker to connect at certain times or to accept all job proposals; in practice, however, most of the time the freedom granted to the worker to make his own choices is merely apparent since whatever decision he makes will have repercussions on future job

[43] *See* also Barbieri M., *Prime osservazioni sulla proposta di direttiva per il miglioramento delle condizioni di lavoro nel lavoro con piattaforma*, in *Labour & Law Issues*, 7, 2, 2021.

opportunities, on the possibility of continuing to use the digital platform to work as well as on the quantum he is granted for the accomplishment of the task. The contribution offered by the proposed directive does not serve to resolve doubts in this regard since the issue of "working hours" become relevant only as a criterion to be evaluated for the recognition of the presumption of subordination. On the other hand, crucial issues such as the right to disconnect, the issue related to time zones and, again, how to consider the hours used by the worker in the search for or expectation to receive a job opportunity are not addressed.

The application of Articles 7 and 8 may also face critical issues. A first one could be found in the identification of individuals who can receive the assignment from the digital platform, which is intrinsically linked to the second critical issue, namely compliance with the requirements of competence, training and authority.

Based on the provisions of the last sentence of paragraph 3 of Article 7,[44] it can be inferred that these human figures must be workers included in the context of the organization of the digital platform for which they already perform their main activity. Then the references in both provisions about the necessary levels of competence, training and authority suggest that appropriate training should be provided for such workers. However, mainly due to the high turnover and low-to-medium levels of education of the workers operating on the platforms, such pathways lend themselves to be both essential and difficult to implement, consequently, making it difficult to identify the person to whom the monitoring and evaluation functions should be assigned and more generally can be a reference for the workers.

Another critical issue is related to the circumstance that the automated decisions and processes on which human intervention is required do not only pertain to data protection profiles, but also, for example, to aspects concerning the programming of the algorithm and its operation.

Finally, in some hypotheses, such as those of online work, the implementation of such measures is difficult to achieve, due to the complexity that could already be found simply in identifying the worker to whom to assign the various roles.

Transnational nature

If the articles outlined in the previous paragraph were to be implemented, they would conflict with the criterion established by the Rome I Regulation that gives primacy to the law freely chosen by the parties.[45] They would impose compliance with the criteria of the place

[44] "They shall enjoy protection from dismissal, disciplinary measures or other adverse treatment for overriding automated decisions or suggestions for decisions".

[45] Regulation (EC) No. 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations. Art. 8 of the Regulation establishes that "1. An individual employment contract shall be governed by the law chosen by the parties in accordance with Article 3. Such a choice of law may not, however, have the result of depriving the employee of the protection afforded to him by provisions that cannot be derogated from by agreement under the law which, in the absence of choice, would have been applicable pursuant to paragraphs 2, 3 and 4 of this Article.
2. To the extent that the law applicable to the individual employment contract has not been chosen by the parties, the contract shall be governed by the law of the country in which or, failing that, from which the employee habitually carries out his work in performance of the contract. The country where the work is habitually carried out shall not be deemed to have changed if he is temporarily employed in another country.

where the worker performs his activity, at least with reference to the transparency requirements.

Nevertheless, to respond effectively to the challenges arising from cross-border platform work and in order to prevent the absence of international hard law from undermining the enforcement of basic human rights, as highlighted by the European Union bodies themselves, regional legislative interventions can no longer be considered sufficient, important as they may be.

In the Communication accompanying the publication of the proposed directive, the Commission, in response to the circumstance that many work platforms have a global nature (estimated to be about one-third), sets out the urgency of coordinated action across jurisdictions to establish global labour standards that can, at the same time, spread greater transparency and certainty in the application of the law and foster sustainable growth of digital platform work. For these reasons, the Commission calls on policymakers to make an effort to adopt global governance tools[46] that are able to cope with the fact that digital platforms operate in multiple jurisdictions.[47] In this sense, the Commission's commitment to promote the improvement of working conditions for platform workers is appreciable, also thanks to the intensification of international cooperation relations with the United States and Canada, which represent two of the main non-European countries with the highest concentration of digital platforms and crowdworkers.

The Commission's goal, that is, to ensure, on a global level, decent working conditions for platform workers, however laudable and appreciable, is believed to be difficult. As declared by the Commission itself, such an intervention would require the collaboration of the International Labour Organization. However, it is well known that the Constitution of this organization does not establish that the principles and rules promoted by it have binding effect on the States. It is equally well known that the legislative instruments available to the ILO do not have binding force and, with reference to the Conventions, understood as the main means of introducing international labour standards, only their ratification translates into a constraint for States to comply with the regulatory provisions laid down by them.

Collective dimension

In the opinion of the writer, Article 9 of the proposed directive does not make any innovative contributions with regard to the collective instruments available to workers since there is already a directive at the European level regulating the right to information and

3. Where the law applicable cannot be determined pursuant to paragraph 2, the contract shall be governed by the law of the country where the place of business through which the employee was engaged is situated.
4. Where it appears from the circumstances as a whole that the contract is more closely connected with a country other than that indicated in paragraphs 2 or 3, the law of that other country shall apply".

[46] For more on governance, *see* Brino V., *Diritto del lavoro e catene globali del valore. La regolazione dei rapporti di lavoro tra globalizzazione e localismo*, Giappichelli Editore, Torino, 2020.

[47] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Better working conditions for a stronger social Europe: harnessing the full benefits of digitalisation for the future of work, Brussels, 9.12.2021, COM (2021) 761 final, p. 14.

consultation of employees[48] which could well have been applied also with regard to workers on a digital platform regardless of an express regulatory reference in the proposed directive.

The legislator's choice to attribute two different regimes to workers on the basis of their different legal status may be relevant in the specific context of crowdwork since, in the light of the provisions contained in the proposed directive under consideration, it is possible that part of the relationships existing between crowdworkers and digital work platforms do not have at least two of the indices required for the presumption of subordination to operate. Beyond this consideration, it is necessary to assess the potential that these forms of participation may play in the context of online platform work and to identify any limitations.

First of all, it can be observed that while, on a general level, technological transformation can benefit from such an institution in that it allows workers to participate collectively in the decisions that the decision-making authority of the company must make on organizational and strategic aspects in order to safeguard their interests, on a "micro-level", such a participatory model can also play a significant role in the process of recognizing better working conditions for digital platform workers and, in particular, crowdworkers. Indeed, insofar as it is stipulated that information and consultation procedures may concern decisions made by the company that are likely to entail significant changes to the organizational structure of work and labour contracts, the foundations are laid for including in the subject of these procedures various mechanisms typical of digital infrastructures.

Actually, the potential for such practices must be considered high in view of the concrete architecture of digital platforms, in which almost any mechanism is functional for the control of workers or the 'making of significant decisions for them.

Furthermore, the importance of such practices can also be considered in relation to the inclination of such digital platforms to change their organizational models very quickly. This is a practice that could intensify along with the introduction of regulatory changes affecting the phenomenon of digital platform work. In other words, digital infrastructures that are willing to change their operating mechanisms in order to avoid the application of any regulations that provide for more stringent and onerous regulatory mechanisms in their regard – such as, for example, the introduction of a presumption of subordination upon the occurrence of certain criteria governed by the forms of organization and control practiced by the same – will be required to make extensive use of such forms of worker participation so as to guarantee workers the opportunity to safeguard their interests. When these rights are declined in a working reality such as crowdwork, it is possible that their scope will encounter limits due to both the dematerialization of the workplace and the uncooperative spirit typical of most digital platforms.

With reference to the first order of limitations, one must start from the consideration that the experiment of information and consultation rights, as a rule, takes place according to procedures that require compliance not only with suitable timelines, but also with the availability of places for meetings between the relevant levels of management and representation.

[48] Directive 2002/14/CE.

Due to the completely virtual nature of crowdwork, the idea is proposed that it is necessary to adapt the traditional methods of implementing the procedures in question to the unprecedented characteristics of digital platforms. According to the European framework, for the procedure to be usefully completed, it is required that employee representatives be given the opportunity to meet with the employer. Therefore, first of all, one should think of adequate ways to reproduce in a virtual environment a procedure that is normally practiced on company premises. In this regard, one solution could be to equip digital platforms with special digital spaces, which can only be accessed by employee representatives and those acting on behalf of the digital platform by entering appropriate credentials. Such spaces should be equipped, for example, with mechanisms that can ensure visual contact between the parties and with tools that can ensure compliance with the necessary timelines.

As anticipated above, it is possible to imagine that the effectiveness of the procedures under consideration may be limited by the uncooperative attitude typical of most digital platforms. Indeed, in order for information and consultation rights to achieve their effectiveness, it is necessary that during the procedure the parties operate in a "spirit of cooperation"[49] so as to reconcile the interests of the workers and those of the company. However, the behaviour of most digital infrastructures seems to be oriented solely toward safeguarding their own economic interests. As a consequence, the expected effectiveness of these rights in a more complex process of improving the working conditions of workers on digital platforms is significantly limited.

6. A possible solution: a core set of minimum protections for all digital platform workers.

The analysis conducted poses a finding, namely, that even work that is performed entirely online by Internet users who could potentially be anywhere in the world is also a phenomenon that can raise significant issues in terms of worker protections.

In summary, it has been observed that the organizational models adopted by digital infrastructures are manifold. It has also been noted that the same crowdwork platform can be equipped with both organizational models that are highly restrictive of the worker's freedom and operations that allow it to act as a mere intermediary, leaving the choice between the two up to either the client or the worker.

The European lawmaker's choice to dedicated express attention not only to offline but also to Internet-based work platforms is the same as declaring that regulatory efforts need to be catalysed on both subspecies of this form of work since both pose the same dilemmas originating from the peculiar organizational models adopted and the technology through which the work is conveyed.

However, the *modus operandi* adopted by the European institutions it is not considered very receptive to the typical needs of crowdworkers. In fact, on the one hand, if the set of

[49] Art. 1 para. 3 Directive 2002/14/CE.

measures were to be issued in its entirety, its articulation could prove to be suitable for a reduction in legal disputes for those workers who carry out their work offline and on-site, in respect of whom, in any case, the Member States are already gearing up to guarantee them the necessary protections.

On the other hand, it is argued that the regulations in question do not adequately take into account the typical needs of crowdworkers because they do not evaluate a fundamental characteristic of this type of work, namely its global reach.

Certainly, the challenges presented by digital platforms and, in general, digitalization require the collaboration of all social partners and interventions that will not be depleted in the short term and will have to be flexible due to the rapidity of change that characterizes these models.

In any case, in order to preserve this type of work which, for many people, represents the only opportunity to access the labour market, it is necessary to balance the protection needs of workers – who must be able to take part in it safely – and the freedom of economic initiative of digital platforms.

In the opinion of the Author, a solution to provide the necessary protections for platform workers is not one that conditions the recognition of labour rights on the legal classification of the worker as an employee, but rather one that puts workers at the center and provides them with an essential core of rights, thus, including those who perform their work online, such as crowdworkers, regardless of their legal status.[50]

To this end, it is necessary, first of all, to select the rights that should be granted to these workers in any case and then, to identify the sources present at the various levels that might be suitable for establishing compliance with these protections. With reference to the first element, the concrete ways in which the digital platform operates do not allow to guarantee the synallagmatic nature of the agreement; therefore, it might be desirable to have a legislative intervention that could define the minimum contents of the employment contract and, as a result, ensure that the worker's interests are protected. Then, as regards the issue concerning the identification of the law designated to regulate the contract, the legislation provided for in the Rome I Regulation would theoretically be suitable for regulating this aspect, provided that the most favourable regime provided for employees by Article 8 of the aforementioned Regulation could be applied "simply" to workers, without adjectives.

With regard to working hours, two aspects should be considered with reference to which regulatory intervention is most urgent. The first relates to the failure to set maximum limits to working hours, a factor capable of causing negative effects on the health of workers as well. The second, then, concerns the qualification that should be given to the time during which the worker is not engaged in performing work, but nevertheless is logged on the platform waiting for job offers to be posted.

For example, these could provide the digital infrastructure with special timers programmed to determine the worker's automatic exit from the platform once a predetermined number of hours of connection has been exceeded. Such a measure should

[50] Gyulavári T., *Floor of Rights for Platform Workers*, in Gyulavári T., Menegatti E. (eds.), *Decent Work in the Digital Age. European and Comparative Perspectives*, Bloomsbury Publishing, London, 2022, where the Author identifies a set of minimum rights of platform workers, drawing on "classic" rights e introducing new ones.

not be designed as a tool to expel the worker from the platform, albeit momentarily, but rather as warning tools for the worker. As regards, then, the question of the correct qualification that should be attributed to the time spent by the worker on the platform waiting to view job proposals on his screen, it is believed that this should be the subject of a specific regulatory intervention aimed at establishing that the time interval that occurs between the execution of a task and a new assignment should be considered on the same par as the time that the worker uses to perform the work activity and, therefore, should be remunerated.

Finally, the freedom of trade union associations and the right to collective bargaining should be guaranteed to all platform workers.

Regarding the regulatory technique that should be used, it is not possible to identify an unambiguous answer. Instead, it would be necessary for the different legislative levels to coordinate with each other in order to ensure total and homogeneous coverage of these elements of the relationship. Moreover, collective bargaining should intervene to regulate detailed aspects relating, for the most part, to the relationship with the individual digital platform. As well as voluntary self-regulatory tools that digital platforms may have at their disposal, such as codes of conduct could play an important role in the pursuit of the proposed goal of protections. Lastly the role of the collective dimension will be important, at least in the form of workers' participation.

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Technological evolution and labour law
Between 'sport' and 'entertainment': the e-sports.

Fabrizia Santini – Roberto Pettinelli*

1. The so-called 'LAN Gate' and the denunciation of a regulatory vacuum. 2. Between 'entertainment' and 'gambling': the e-sports. 3. A vertiginously growing phenomenon. 4. Problems related to the discipline applicable to pro-players, today, in the Italian legal system. 4.1. Are e-sports sport? 4.2. Physical effort and virtual sport in Legislative Decree No. 36/2021. 4.3. Can e-sports performance be the subject of a sports employment contract? 5. The *de iure condendo* debate in the national and European legal system.

1. The so-called 'LAN Gate' and the denunciation of a regulatory vacuum.

The clamour raised by the so-called 'LAN Gate' has the merit of having drawn attention, not only in the media, to the dimensions and the pressing need for regulation of a phenomenon that is growing at a dizzying rate.

On 29 April 2022, officials from the Italian Customs Agency (Agenzia delle Dogane e dei Monopoli – ADM) seized the gaming PCs and consoles used to play videogames in three LAN rooms and e-sports bars because they did not comply with the requirements of Art. 110, par. 6 and 7 of the Consolidated Law on Public Security, R.D. No. 773/ 1931 (TULPS).[1]

The extension of the provision to LAN rooms and e-sports bars led to the paralysis of the entire sector.[2] It is not so much a question of the economic repercussions of the administrative fine provided for or of the temporary closure of the establishment, but rather a matter of the objective impossibility, from a technical point of view, of complying with the requirements of the provisions and proceeding with the approval of a gaming PC: the software used, on which it should take place, is in fact totally beyond the control of the gaming room owner.

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[1] These are identification, authorisations and approvals as well as payment of the Entertainment Tax.

[2] *See* www.powned.it/gaming-news/la-senatrice-pergreffi-sui-sequestri-nelle-sale-lan-a-rischio-migliaia-di-posti-di-lavoro-chiediamo-immediato-incontro-con-adm/.

This alone would be enough to make arenas, e-sports bars, LAN rooms and any gaming offerings via gaming consoles (e.g. Playstation) illegal.

But there is more. Pursuant to Art. 24, par. 11-26 of Law No. 88/2009 and Art. 2, par. 2-bis of Decree-Law No. 40/2010 (converted by Law No. 73/2010), in conjunction with Art. 7, par. 3-quater of Decree-Law No. 158/2012 (converted by Law No. 189/2012), it is prohibited in our country to make available in any commercial establishment equipment which, through telematic connection, allows customers to play on gaming platforms offered by online dealers, by parties authorised to carry out remote gaming or by parties without any licensing or authorisation issued by the competent authorities, with sanctions against anyone who unlawfully carries out activities offering games with monetary winnings.

The ADM's Circular No. 0019453 of 6 March 2014 on the use of PCs has, moreover, specified that "the violation occurs in cases where such instruments (PCs, tablet PCs, iPads) are provided to customers for the purpose of allowing them to connect to gaming sites, while there is no violation for the provision of such instruments for different purposes (e.g. to allow free surfing on the web)". This is because – continues the Circular – "the most striking phenomenon of illegality in the area under consideration is constituted by activities that represent, in most cases, modes of offering online games with monetary winnings performed in breach of the regulations in force mentioned above. Such illegal activities are generally camouflaged in order to facilitate their inclusion in the sphere of other activities which, since they do not concern public games with monetary winnings, have purposes, constraints and controls that are quite different from those envisaged and required for games".

This concerns in particular the use, as happened for some LAN rooms that were thus able to positively pass the inspection, of the "travelling show business licence", *ex* Law no. 337/1968, through which "the State supports the consolidation and development of the sector" of equestrian circuses and travelling shows, sanctioning the value of an activity that brings together families and children in locations with no other places of entertainment and amusement. In this perspective, the Law continues, "the exercise of travelling show, in itinerant or stable form", as an exception to Art. 110 of TULPS, only "requires a municipal licence issued in accordance with Art. 69 of TULPS, as well as a performance permit issued by the municipal administration competent for the territory".

However, in order to modernise but also, and above all, to prevent fraudulent usage, the reform of the regulation of amusement machines has repealed the 'special' regime, applied, for example, to large permanent amusement parks, with effect from 1 July 2022, requiring all gaming machines to be (re)approved, regardless of their location.

In this regulatory context, which is outdated and about to become even more strict, the seizures of the ADM constitute an opportunity to denounce the legal system's backwardness with regard to a phenomenon of growing numbers, which now claims due attention from the legislator as well.

For no other reason than because, as far as it concerns our investigative perspective, the collocation of e-sports within the 'entertainment' sector turns the regulation of relations between players, teams, clubs and associations into a contractual act left exclusively to private autonomy.

2. Between 'entertainment' and 'gambling': the e-sports.

The referred rules objectively originate with reference to an entirely different reality, consistent with a state of tight control and presidium of the gaming supply to protect legality and public order. And they fit into a hyper-regulation that certainly does not possess the 'resilience' necessary to allow its applicability to the changed modes of 'gaming'.

But even so, it seems clear that it is a mistake to assimilate the activities offered by LAN rooms or e-sports bars to those of arcade gaming rooms; of pc gaming, consoles and e-sports simulators to entertainment devices (e.g. table soccer, pinball machines).

We could move already by contesting the classification of such devices in the sphere of apparatuses and devices for licit gaming, a formula that turns out to be centered on a concept, that of 'gaming' precisely, which in its ambiguity and latitude ends up encompassing phenomena as diverse as games and videogames, gambling, e-sports and gaming.

Currently, the rules applicable to the latter two would be the rules for prize events in the case of a tournament with non-monetary winnings and the rules for remote skill games in the case of monetary winnings, but these would bring with them the applicability of gambling rules.

But e-sports per se certainly cannot be said to incorporate the requirements of the gambling case, either with reference to Art. 110 TULPS or Art. 718-721 of the Italian Penal Code.

The courts are almost unanimous in this regard, and while starting from the assumption that "the two cases [...] consist of criminal offenses that are not coincident", the former being aimed at preventing not only gambling but "any activity that does not result in mere entertainment", it generally identifies gambling as games of chance in which the purpose of profit is recurring and the winning or losing is almost entirely aleatory, "without the player's skill being decisive" or in any case "the player's skill plays a minimal role".[3]

In this perspective, consistent with its purpose and scope, Art. 110 TULPS prohibits the installation and use of automatic machines and devices in which the hazard and the purpose of profit become "structural elements of the electronic device, with the consequence that the device or machine that has the bet inherent in it should be considered intended for gambling, in the sense that the destination for gambling is a structural feature of the device and not of the mode of use by the operator". Hence, there is a tendency to prevent gambling by prohibiting the installation of gaming machines.[4]

The issue is known to the point that those involved in the 'Amusement' sector have long been demanding the separation of their sector from that of gambling to merge with e-sports into the competence of the Ministry of Economic Development (MISE). And the legislator, for its part, has pledged to review the entire regulatory framework of the sector precisely in

[3] Cass. Pen. Sez. III, 22 May 2002, no. 37148.
[4] Cass. Pen. Sez. III 24 May 2000, no. 10592.

awareness of the possible boom in the supply of official videogame competitions or recognized international e-sporting events, on which it is also possible to bet.

In the meantime, the issue, having pointed out the distance of the e-sports phenomenon, as far as we are interested in it, from what has been known and traced back to the 'game' sector, on closer analysis turns out to be of a very different dimension, concerning the framing and regulation of the activities of players, teams, competitions, associations, new professions involved and, only lastly, of the locations where the videogames are played, both in a competitive and non-competitive form.[5]

3. A vertiginously growing phenomenon.

The many voices raised against the application of Art. 110 TULPS to LAN rooms and e-sports bars have denounced a phenomenon that from a niche event has become a generational model, has given rise to new professional figures and at the same time does not find adequate space in current regulations, not only with regard to the places where it is practiced.

The IIDEA 2022[6] report estimated the presence in Italy of 475,000 greedy fans who follow an e-sports event every day and 1.620.000 fan who follow multiple e-sports events per week, placing Italy second in Europe in terms of number of e-sports enthusiasts, behind only Spain. These are upper-middle-income users, with a good attitude to online shopping, generating a global market that is expected to grow from $1.376 billion in 2021 to $4.921 billion in 2027, with an average annual growth rate of 23.66 percent. In Italy, a total turnover of 45 million euros related to e-sports is estimated.

The direct economic impact of the sector, i.e. directly related to employment, in particular, is over €30 million. Of this, 65% (€20.4 mln) is realized by e-sports teams, followed by organizers with 16% (€5.1 mln) and publishers with 4% (€1.1 mln). The remaining 15% (€5 mln) comes from other types of companies operating in the e-sports world, such as hardware manufacturers, developers and other categories that cannot be assimilated to the previous ones. The indirect economic impact, i.e. generated by all expenses related to the world of e-sports, is more than €15 million.

The absence of a specific organic discipline is thus holding back the development of a very fervent sector that is even believed to be capable of recovering the interest of a new generation tending toward disinterest in traditional sports: the *League of Legends* final in Paris attracted more spectators than the Super Bowl, hence the proposal to open the Paris Olympics in 2024 to e-sports.

[5] From the Presentation of the Prop. No. 3626, *Discipline of electronic or virtual sports (e-sports) and related professional and economic activities*, 24 May 2022.
[6] *See* Italian Interactive Digital Entertainment Association, https://iideassociation.com/dati/esports.kl.

However, after an initial opening of the International Olympic Committee (IOC) to the recognition of e-games as a sporting activity,[7] the violent nature of some games and the necessary fulfilment of a whole series of conditions, has held back their ascension to the Olympic program.

And if, as it seems, the relationship between traditional sports and e-sports is one of convenience, it is a rise that is at least not indispensable. E-sports through traditional sports would seek cultural and commercial legitimacy but, to date, it seems more that it is traditional sports that would benefit from an 'affiliation' with e-sports. The Olympic Games serve the function of providing a global showcase for disciplines that the rest of the time remain in the shadow of the major sports, which is then the commercial and political motive that leads to the push for unrepresented sports, such as skateboarding and surfing, to join the federations. The latter nonetheless are expressions of subcultures seeking their own visibility, a condition far from e-sports, a competitive version of a global cultural phenomenon already in itself capable of attracting investment and new opportunities for economic growth.

Take for example what is happening in Asia. The Olympic Council of Asia (OCA) now a year ago identified titles that "reflect the popularity and growth of e-sports in China and Asia" for the 2022 Asian Games to be held in Hanghzou. The event will mark the second time that e-sports are being played for medals in a multi-sport competition, following the 2019 South-east Asian Games in the Philippines, which in turn was preceded by the demonstration event in Jakarta for the 2018 Asian Games.

4. Problems related to the discipline applicable to pro-players, today, in the Italian legal system.

What has been said above suggests that the analysis should be distinguished, taking as reference only e-sports proper (i.e. played through sports videogames): a *species* of the broader *genus* covered by e-games, but also, as far as is known, the most profitable.[8]

Far beyond the mere question of the legality of the rooms used for the practice of e-sports, the regulatory vacuum leaves uncovered the question of the discipline applicable to the relationship that exists between e-sporters and teams, in all those (increasingly widespread) cases in which the e-sporters are true 'professionals' (so-called *pro-players*)

[7] "Competitive e-sports" – it is written in a 2017 statement – "can be considered a sporting activity, and the players involved practice and train with an intensity that can be compared to that of athletes in traditional disciplines".

[8] Next to e-sports are e-games shooters, beat 'em up, real-time strategy, MOBAs, card games and battle royale. On the phenomenon, *see* Jenny S.E. et al., *Virtual(ly) athletes: where eSports fit within the definition of "Sport"*, in *Quest*, 2017; Hallmann K., Giel T., *eSports – Competitive sports or recreational activity?*, in *Sport Management Review*, 2018, 4; Abanazir C., *E-sport and the EU: the view from the English Bridge Union*, in *The International Sports Law Journal*, 2018, 102 ff.; Kane D., Spradley B.D., *Recognizing ESports as a Sport*, in *The Sport Journal*, 2017; Ierussi J., Rombolà C., *Esports: cosa sono?*, in *Rivista di diritto sportivo*, 2018, 307 ff.; Bastianon S., *Dal bridge agli esports: semplici giochi o vere attività sportive? Prime riflessioni e spunti per un dibattito*, in *Rivista di diritto sportivo*, 2020, 182 ff.; Zambelli L., Strinati A., *Analisi sistemica del fenomeno eSport. I videogames come sport e la necessità una governance*, in *Federalismi*, 2021, 204 ff.; Raimondo P., *Sport vs esports. Una difficile convivenza*, in *Federalismi*, 2022, 127 ff.; Werder K., *Esport*, in *Business & Information Systems Engineering*, 2022, 393 ff.

registered by sports clubs.[9] The issue is relevant in two aspects: one concerns the possibility of qualifying the e-sports performance as a sport for the purposes of the application of Law No. 91/1981 and Legislative Decree No. 36/2021 (in force from January 1, 2023); the other, subordinated to the first, concerns the possibility of classifying the relationship in professional terms.

The first one is a qualification question of the e-sports discipline, the second one is a qualification question of the e-sports performance.

4.1. Are e-sports sport?

Pending the entry into force of the Legislative Decree No. 36, in the absence of a specific notion of sport within binding legislative sources,[10] sport can be defined in two senses, to which two antithetical conceptions correspond in contemporary thought.

One, dating back to the 1992 European Sports Charter,[11] denies any value to disciplines incapable of sublimating man's physical qualities through the harmonious movement of the body. Sport is activity, exercise, physical movement.[12] An essential part of its mode of being is the athletic effort. Consequently, a discipline without a predominant physical component could not qualify as sport. Such identification would be prohibited because it is extraneous to its nature.

These conclusions are not the mere product of a non-binding source,[13] but have their most prominent exponent in the Court of Justice. Sport – it is argued in *The English Bridge Union* – is characterized by a not insignificant physical component.[14] This would be reflected in the usual meaning that sports practice assumes in everyday language. Therefore, despite the acceptance of their educational value and aptitude to promote the health of citizens, according to this theory, so-called mental sports (such as, specifically, bridge) would be incapable of serving as a vehicle for the manifestation and evolution of human personality.

[9] The phenomenon after all is familiar with contractual relationships as complex as they are "predatory". (Smith N., *Inside 'contract hell': Esports players say predatory contracts run 'rampant'*, in *The Washington Post*, 4 March 2022). They stipulate not only the pro-players' duty to make their athletic performance available to the team, but also to undergo regular training (both mental and physical) to develop muscle tone, reflexes and hand-eye coordination, in coordination with trainers and coaches, and to maintain a healthy lifestyle in order to achieve maximum performance levels. In certain cases, teams require the pro-player to perform actions aimed at increasing the club's notoriety and value, e.g. giving interviews or sharing posts on social-networks. In still others, the player is required to pay the team a portion of the prize money in case of victory, as well as participate in partner or sponsor advertising initiatives. Instead, the club obligates itself to pay the gamer a compensation, often with bonuses parameterized to achievements. (Carfagna P.A., *Exploring the Esports Approach of America's Three Major Leagues*, in *Journal of Sports & Entertainment Law*, 11, 2022, 130 ff.).
[10] Liotta G., Santoro L., *Lezioni di diritto sportivo*, Giuffrè, Milan, 2009, 1 ff.
[11] The Charter does not have binding force: *see* Bastianon S., nt. (8), 190.
[12] According to Art. 2 of the Charter, sport means "all forms of *physical* activity which, through casual or organised participation, are aimed at maintaining or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels".
[13] Bastianon S., nt. (8), 190.
[14] More precisely, the sport would require "an activity of a physical nature or, in other words, an activity characterised by a not negligible physical element": CJEU - Case C-90/16, *The English Bridge Union*.

Such a consideration of sport is, however, flawed by a logical error. In fact, a theory (such as that expressed in The English Bridge Union) that interprets the law taking into account the usual meaning of the term to be interpreted and then denies the object of interpretation the meaning it has in common language turns out to be pure contradiction, since a large part of the European tradition (and certainly ours) considers to all intents and purposes as sports disciplines the so-called mental sports.[15] Hence it is clear that behind the inconsistency lies the arbitrariness of a syllogism that ignores the major premise and finds no support in a definition of sport aware of its many facets.

The apriorism into which the Court of Justice has fallen also constitutes a betrayal of Articles 6 and 165 TFEU. Articles 6 and 165 TEU legitimize the Court of Justice to infer the notion of sport by attending to its concrete manifestation modalities, with respect for the autonomy of the sports system of Member States, but they cannot lead the Court to erect itself as a source of applied law, making itself a defining reservoir of notions that assume a directly regulatory function. Hence, in order to identify the notion of sport, it would have been necessary to give of the term to be interpreted a punctual definition free from cognitive apriorism: one that would allow what actually sport means through an all-round analysis of its disciplines.[16]

In conclusion, the result reached by the Court can therefore not be considered satisfactory.

The other position was theorized by Advocate General Maciej Szpunar in the conclusions of *The English Bridge Union*. Here, based on a wide-ranging survey of sports disciplines, the physical component was deemed irrelevant. On the contrary, in order to be said to be sporting, it would be sufficient for the discipline to have a mental component that is relevant and decisive for its outcome. Indeed, as suggested by the etymon *desport* (i.e. fun) referring the word to a condition of the spirit, sport would designate any discipline characterized by the ability to improve mental or physical condition in a way that generally benefits the health and well-being of citizens.

More precisely, having elided the corporal component, a reconduction to a system of the points in common of every sporting discipline makes possible to consider as sport a discipline at the recurrence of three conditions: it must require an effort, even if only mental, aimed at winning a challenge with others or overcoming individual mental or physical

[15] In fact, a large part of the European tradition for all intents and purposes considers as sport disciplines mental sports or sports without a relevant physical component, such as chess, shooting or archery, which, after all, are recognized as Olympic sports by IOC. Therefore, understanding sport in its essence, it could not be exclusively relied on the performance physical nature.

[16] More precisely, the cited articles limit the Union's operational spaces to actions to support, coordinate and promote the action of member states so that a European sports culture is developed. Therefore, they do not legitimize any incursion aimed at limiting Member States' sport system autonomy. Hence, a hermeneutical activity directed at identifying the discipline applicable to phenomena definable only in light of their mode of manifestation in social reality should have privileged a perspective of inquiry capable of synthesizing a notion of sport adequate to reflect its entire genus. Moreover, this hermeneutic approach had already been practiced by the same Court in other precedents (CJEU - Case C-495/12, *Bridport and West Dorset Golf Club*; Case C-22/15, *Commission v. Netherlands*), in which the assessment of the sporting nature of activities was sublimated by the inquiry around the adherence to the fundamental values of sport, in terms of the harmonious development of the qualities of the body, willpower and spirit, the joy of effort, the educational value of good example and respect for universal fundamental ethical principles (CJEU - Case C-18/12, *Žamberk*).

obstacles or limits; the exercise of a skill (physical or mental) capable of producing benefits for psycho-physical well-being is indispensable; and the set of rules that compose it allow it to be recognized, according to the common perception or formally by the Federations, as a sporting activity. On the contrary, the term 'sport' could not be invoked in relation to merely relaxing activities, of mere leisure, in which competition is only simulated for the purpose of entertainment or exercised for merely commercial purposes.[17]

Determined in such terms, the notion would allow to overcome the limitations imposed by The English Bridge Union, realizing a more coherent distinction between what is sport and what is not. In fact, the approach seems to more closely reflect the characterizing features of disciplines generally considered as sports in the national sports systems of the main European countries, even when the physical component is more than marginal. In this order of ideas, in fact sport lends itself to be qualified as any discipline whose final result depends on an athletic performance, albeit without a relevant and decisive physical component for its outcome, which is the result of the combination of the athlete's talent and qualities acquired through training, and which requires competitive effort.

4.2. Physical effort and virtual sport in Legislative Decree No. 36/2021.

The described notion of sport appears conceivable in the Italian legal system as well, as a result of the enactment of Legislative Decree No. 36. According to Art. 2, par. 1, (nn) of the reform decree, which contains the first normative definition of sport, the term refers to "any form of physical activity based on respect for rules". At first reading, this proposition might suggest that it is meant to exclude from its scope all activities that are insusceptible to result in significant physical effort.

But, moving beyond appearances, we quickly realize the real complexity of the notion. Just consider, in this regard, that, a little further on, subparagraph (f) of Article 2 gives the physicality required of sporting activity a specific meaning that it is necessary to grasp, eschewing an interpretation of the lexeme according to ordinary language. Precisely, physical activity corresponds to "any movement exerted by the muscular-skeletal system that translates into an expenditure of energy greater than that required under conditions of *rest*".

In fact, the Italian legislator seems to have embraced a notion of physical activity different from the one placed at the faltering basis of *The English Bridge Union* and, precisely, a negative one, detached from the (predominantly physical or mental) nature of the sporting discipline and identified, rather, in the concept of absence of a state of rest resulting from active exercise (*rectius*, from an effort, physical or cognitive).[18]

[17] In this last regard, the supposedly purely consumerist nature of sports videogames is no obstacle to recognize e-sports sporting nature (Abanazir C., nt. (8), 109). E-sports performance, now professionalized, is in fact not carried out for mere entertainment purposes (no more than a basketball game is, at least). It is carried out for competitive purposes and the videogame is a tool for athletic performance.

[18] Note that, in a recent study (Wiehler A. *et al.*, *A neuro-metabolic account of why daylong cognitive work alters the control of economic decisions*, in *Current Biology*, 32, 16, 2022) prolonged cognitive effort has been proven to cause physical fatigue, resulting in the accumulation of potentially toxic substances within the prefrontal cortex. Although in a different perspective, we can agree with the definition found in ancient Roman sources. The athlete is one

If the aforementioned Article had been able to constitute a limit to the framing of mental sports within the scope of sports, it would, moreover, have been difficult to justify the non-recognition of disciplines well known to the Italian sports system (chess and draughts, just to say). Instead, a broad definition has been proposed that emancipates sport from the mere physicality of the athletic gesture, anchoring it rather on the primary function of each discipline: the elevation and exaltation of the spirit descending from the commitment and focus necessary for the fulfilment of the efforts indispensable to face a competition, with others or even just with oneself. Reinterpreted in these terms, the practice of sports, as an act of exercise, first and foremost, of the willpower, finds its sublimation in the self-discipline and self-determination necessary, in an ideal continuous overcoming of limits, to accomplish, in the concreteness of the sporting path, the complex of psycho-physical sacrifices useful to the process of acquisition and implementation of sporting skills, in respect of the values inherent in all disciplines: the desire to excel, the competitive spirit, the pursuit of technical excellence, the personal well-being.

In the wake of this dimension of personal growth, after all, lies the same *ex lege* functionalization of sporting activity to declared objectives of improvement of psycho-physical condition, development of social relations and, only ultimately, obtaining results in competitions of all levels (art. 2, (nn)).

In short, the legal sense warns us that sport assumes importance because it is an educational factor for humans and, therefore, an expressive form and occasion for the development of personality.[19]

Attention has been given up to here to restate and better clarify the proposed notion of sport, decoupling it from its physical dimension. It is now necessary, as a complement to the remarks made, to give an account of the benefit achieved, if it is adopted. The key result consists in the possibility of considering as sports the performance of the e-athlete rendered in favor of sports associations, without making distinctions based on athletic gestures.

E-sports, in fact, can be practiced either through video-graphic interfaces with reduced physical involvement (except in relation to inputs operated on the controller by finger movement), albeit with a generally medium to high expenditure of mental energies (so-called e-sports *tout court*), or through a joint use of video-graphic interfaces and tools that replicate the real sports equipment, with an expenditure of both physical and mental energies similar to that of the chosen sport (so-called simulated e-sports).[20]

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who acts *virtutis enim gratia* (D. 3.2.4; also 11.5.2.1: *quod virtutis causa*; 11.5.3: *ubi pro virtute certamen*), so that athletic performance is such if it is inspired by an emotional tension to self-improvement and by the demonstration of a conscious and persevering attitude to the achievement of victory (even if only on one's limits), even in the face of adversity of fate: *gloriae causa* (D. 9.2.7.4).

[19] It is then not necessary that the discipline be practiced in amateur, dilettantistic or professional way, on the basis of a consideration of sport based on athletic purpose. It is no coincidence that the law also defines sport ("for all") even the "basic" activity promoted in favor of all segments of the population in order to allow each individual the chance to improve his or her physical and mental condition and to reach the level of sporting performance corresponding to his or her abilities (Art. 2, (ee)). Rather, what matters is that the discipline, whether organized or not, is nevertheless based on compliance with rules (Art. 2, (nn)). Which, however, does not mean that sport must be recognized by CONI, but that "the rules must be uniformly shared, whatever their source, autonomous or heteronomous" (Liotta G., Santoro L., nt. (10), 9).

[20] The same distinction is found in the *Memorandum of Understanding*, in §4.3.

The proposed theory makes possible to bring the whole phenomenon, on the legal side, back to unity, with advantages in terms of simplification and applicative equality of the discipline regulating the relationship between pro-player and sports club. However, it will be recalled that sport comes into consideration on the normative level in view of specific elements related to its function. Therefore, in order to subsume e-sports within the scope of law, their existence must be ascertained.

Some recent investigations, carried out around the concrete ways in which the discipline is carried out, make the conclusion easier: the performance of pro-players, even in the face of a reduced involvement of the physique (except in relation to the command inputs operated on the controller through the movement of the hands, fingers or certain parts of the body), turns out to be the result of a medium-high cognitive effort capable of directly conditioning the performance and the final result, due to the expenditure of complex technical skills for the execution of movements on the controller. The mental energy expenditure is recognized to be capable of bringing about sensitive "reactions on the player's body": a positive effect "on metabolism and heart" and the production of "the same cortisol levels as car drivers, caused by high pulse rates reaching as high as 160-180 beats per minute, as occurs during a car race or during a marathon".[21] E-sports, moreover, are found to respond to the rules outlined for the traditional sports benchmark; have assumed a competitive component, so much so that they take place in leagues or tournaments endorsed by national leagues; and are perceived as sports at the national and international level, so much so that they are favored by the creation of teams even within major sports associations.

The above makes it possible to establish a fixed point regarding the equivalence between virtual and traditional sports.

4.3. Can e-sports performance be the subject of a sports employment contract?

The recognition of the sportive nature of e-sports has an immediate effect on the applicable discipline: it constitutes the basis for the relationship that binds the pro-player to the association to be considered governed by the special provisions of sports labor law, regardless of the concrete manner in which the e-sports performance (simulated or not) is carried out. In fact, the exercise of "sports activity" is an indispensable prerequisite for the application of the discipline of sports labor law (see Art. 1 and 2 of Law No. 91/1981; 2, (dd) Legislative Decree No. 36).

This requirement, however, is not sufficient. In fact, when from the activity we move on to examine sports performance, we can see that this acquires primary relevance for labor purposes insofar as it is practiced with characteristics capable of making configurable a work performance: professional (according to the perspective of l. n. 91) or dilettantistic (according to the broader perspective of the reform), as we will explain.

[21] Raimondo P., nt. (8), 134-135.

It is then necessary to investigate, concretely, the performance required of pro-players in order to understand in what terms, according to the categories known to Italian law, it can be qualified.

Any reflection on the sports performance of the pro-player in Italian labor law cannot but start from the meaning and nature that it presents, understood in its proper sense as sports activity deduced as the subject of the obligation relationship, except then to coordinate the assertion with the particular provisions of the sports labor system.

It should therefore be said immediately that the performance required of pro-players evokes the characters of the obligation *ex* Art. 1174 of the Civil Code, the function of which highlights the subjection of the activity deduced in the contract to the realization of an interest, even a non-pecuniary one, of others (the creditor's interest). Indeed, the core of e-sports athletes' contracts involves an exchange between the e-athlete's participation in competitions and a remuneration, which often varies depending on the results achieved.[22] Teams are responsible for managing the physical training and psychological preparation of players, who are obligated, in turn, to comply with the technical instructions and prescriptions given for the pursuit of competitive goals. Players are also required to take actions to increase club awareness, e.g. by sharing digital content on their social media channels, by meeting with fans or by participating in sponsor advertising initiatives.

In short, the conduct required of pro-players appears unquestionably bent on the realization of a legal-economic utility, which makes it possible to attribute to it the characteristics of a performance in the technical-legal sense. In fact, competitive commitment arises in function of the realization of the sports association's interest. Athletic performance represents together the object of the obligation and the means by which the tension toward the fulfilment is realized.[23]

What has been said above might provoke perplexity in those who are familiar with Italian law and are, therefore, used to knowing the dogmatic difficulties of recognizing in the proper sense (i.e. under Art. 1174) the athlete's performance performed outside a certain area of the sports world. Some clarifications are, therefore, necessary.

First of all, it is true that, in the force of Law No. 91, the sports system is polarized into "two worlds"[24]: the 'professional' one, the only one in which athletic performance can be subject to an employment relationship, and the 'non-professional' one, relegated to a limbo characterized by relationships having a ludic cause (so called 'causa') and in which the sporting activity is considered to be put in place for the fulfillment of an existential interest of the athlete (thus, not others', but his or her own).[25]

[22] Smith N., nt. (9).

[23] Athletic performance, of course, also satisfies a player's interest: e.g. pecuniary interest in greater earnings or non-pecuniary interest in the enhancement of fame and reputation. In accordance with Art. 1174, however, it must tend, even if it then leads to reciprocity, to the priority satisfaction of the sporting association's interest, which is its creditor. *See* Del Prato E., *Sulla prestazione sportiva*, in AA.VV., *Fenomeno sportivo e ordinamento giuridico*, ESI, Naples, 2009, 317 ff.

[24] Tosi P., *Sport e diritto del lavoro*, in *Argomenti di diritto del lavoro*, 2006, 717.

[25] In the force of Law No. 91, this second world, called 'dilettantistic', refers to a composite reality: to female athletes, amateurs in the proper sense, those who are denied sport membership card, as well as those who practice sports disciplines not regulated by the Italian Olympic Committee (CONI), such as e-sports (Indraccolo E., *Il complesso mondo dello sport tra professionismo e dilettantismo*, in *Rassegna di diritto ed economia dello sport*,

However, the professional nature of the performances (and, therefore, access to Law No. 91) is not determined by the will of the parties and, therefore, by the concrete set-up of interests outlined in the contract. On the contrary, the existence of a legal requirement of the sports employment contract is bound to the exercise of the power attributed to each Federation's autonomy, with an almost unquestionable discretion,[26] of recognizing sectors of activity where the practice of sports is considered the result of professional activity.

On the level of juridical consequences, the described dichotomy determines a real system "anomaly",[27] based on financial worries (related to the cost of charges deriving from labor legislation), but susceptible to cause a retreat of the fundamental core of the labor constitutional guarantee (Art. 4 and 35 of the Italian Constitution), beyond the small number of professional federations.[28] Despite the necessary gratuitousness imposed on contracts, in fact, athletes who cannot be qualified as professionals (female athletes, amateurs in the proper sense, those who are denied sport membership card, as well as those who practice sports disciplines not regulated by CONI) often only formally engage in sports activities for the achievement of an ideal purpose or personal interest (so-called pure 'dilettanti' or, in more current terminology, amateurs). On the contrary, in practice, their sports performance is carried out with continuity, similar modalities to those of professionals and in accordance with the realization of an interest of the sports association. They are paid, albeit under the guise of bonuses and reimbursements (made fiscally convenient by Art. 67 TUIR), a remuneration.

A tension is thus created between the concrete cause of the contract and the abstractly typified case. In spite of the fact that the relationship is concretely oriented to the satisfaction of the creditor's interest under Art. 1174, the structure of Law No. 91 in fact excludes the possibility of qualifying the performance provided as the fruit of an employment relationship,

2019, 235 ff.). Of dilettantistic athletes, after all, a negative definition is given: they are "all registered members who carry out sporting activities on a competitive, non-competitive, amateur, recreational motor or as a leisure time pursuit, with the exclusion of those who are defined as professionals", regardless of the destination of the sporting activity (*see* repealed d.m. December 17, 2004). This justifies the replacement, sometimes made in the literature, of the term 'dilettantism' with 'non-professionalism', which, indeed, seems to better frame a category that is quite varied, to say the least (Zoli C., *I meriti e le criticità della legge 91/1981 e la sua inapplicabilità al professionismo di fatto*, in *Rassegna di diritto ed economia dello sport*, 2012, 537 ff.; Gragnoli E., *Prospettive risolutive al problema del rapporto di lavoro nel dilettantismo sportivo*, in *Rassegna di diritto ed economia dello sport*, 550 ff.). In Legislative Decree No. 36, on the other hand, dilettantism concerns only federal sectors not classified as professional, but the notion is also placed in antithesis to amateur sport and has, therefore, more specific meaning.

[26] The parsimony with which the recognition took place was not even curbed by the devolution to CONI of the task of dictating "criteria for the distinction of dilettantistic sports activity from professional sports activity", laid down in Art. 5, para. 2, (d) Legislative Decree No. 242/1999 (*see* now Art. 38 Legislative Decree No. 36). In the experience of practical implementation of classification criteria useful, in the intention of the legislator, to reduce the discretionary power of each Federation (Vidiri G., *Il lavoro sportivo tra codice civile e norma speciale*, in *Rivista italiana di diritto del lavoro*, I, 2002, § 2), CONI has essentially abdicated its delegated function. The definition of the prerequisites of professionism has been approached by referring to late and objectively undefined notions such as the recognition of the sport in professional terms by the International Federation and the "considerable economic relevance of the phenomenon" (Art. 13 Del. No. 1613/2018); a requirement, this one, intended to reflect a certain concern for the financial sustainability of professionism in 'minor' Federations.

[27] Realmonte F., *L'atleta professionista e l'atleta dilettante*, in *Rivista di diritto sportivo*, 1997, 373.

[28] Just four: Italian Football Federation, Italian Cycling Federation, Italian Golf Federation and Italian Basketball Federation. No longer are Italian Boxing Federation and Italian Motorcycle Federation.

lacking, precisely, the requirement relative to the recognition of the professional nature of the discipline.

This phenomenon, known as '*de facto* professionalism' or 'false dilettantism',[29] at the moment, also occurs in the e-sports sector, for which CONI has not yet concluded a recognition path.

But the Court of Justice, anticipated by other ways by legal literature,[30] has succeeded in opening a breach in this partition wall, recognizing sporting activity in terms of "gainful employment or remunerated service" by reason of the fact that, when the exercise of sport constitutes an economic activity, the prevalence of the European notion of worker makes indifferent the "mere fact that a sports association or federation unilaterally classifies its members as amateur athletes"[31] and necessary, instead, the enhancement of the concrete purpose (i.e. cause) of the contract.[32]

The consolidation of the definition technique practiced by the Court of Justice and the consequent contractualization of e-sports performance would therefore allow domestic jurisprudence to rediscover the athlete's humanity and, therefore, his need to seek a form of livelihood through a (sports) work that, in line with the moral values of the person, fosters the development of his personality and promotes his ability to contribute to the progress, including spiritual one, of society (art. 4 of the Italian Constitution). Consequently, it can be considered admissible that the pro-player, as a '*de facto* professional', while not being able to benefit from the application of the special discipline provided by Law No. 91, can see the employment nature of the performance recognized and claim in Court, at the very least, the applicability of the protections dictated by the general labor system (in particular, those provided for subordinate employment under Art. 2094 of the Civil Code).[33]

The second clarification to be made concerns the 2021 reform. Indeed, the legal issues posed by Law No. 91 have been only partially downplayed by the overcoming of the previous dichotomy.

Indeed, it is true that, from January 1, 2023, the sports worker will be imposed as a "trans-typical" figure,[34] endowed with a unified definition that will identify its speciality with respect to individuals who perform sports activities for ludic-recreational purposes, the amateurs. Pursuant to Art. 2, par. 1, (dd) and 25 of Legislative Decree No. 36, in fact, the athlete, coach, manager, technical director, sport director, athletic trainer and referee who, without any distinction of gender and regardless of the professional or dilettantistic sector, engage in sporting activity for a remuneration, will be considered sports workers.

[29] Vidiri G., *La disciplina del lavoro sportivo autonomo e subordinato*, in *Giustizia civile*, 1993, 207.
[30] *See* Tosi P., nt. (25), 721 ff.
[31] *See* for the first quote CJEU - Cases C-36/74, *Walrave*; C-13/76, *Donà*; and for the second one Case C-51/96 and C-191/97, *Deliège*. In a similar sense, Cases C-415/93, *Bosman*; C-176/96, *Lehtonen*; C-438/00, *Kolpak*; C-519/04, *Meca-Medina*.
[32] It means that the athletic performance of pro-players can be qualified as a work activity, without being opposed to this by federal choices.
[33] Rocchini E., *Dal dilettante al lavoratore sportivo. Prime osservazioni sulla riforma dello sport*, in *Massimario di giurisprudenza del lavoro*, 2021, 410.
[34] Biasi M., *Causa e tipo nella riforma del lavoro sportivo. Brevi osservazioni sulle figure del lavoratore sportivo e dello sportivo amatore nel d.lgs. n. 36/2021*, in *Lavoro Diritti Europa*, 3, 2021, 11.

Unlike in the past, the possibility of pursuing, through the practice of sports, an economic purpose (of making it, in a certain way, a primary source of livelihood and existence) is recognized in both the professional and dilettantistic sectors. The qualification effort now gives primary importance to the cause of the contract, to its synallagmaticity, in which the monetary payment constitutes term of the exchange with the athletic counter-performance.[35] The sports association's interest finds satisfaction in the athlete's participation in competitions, even regardless of modalities of execution and duration of training, and the athlete's performance is determined in function of the achievement of the best possible athletic result (*ex* art. 26, par. 3, (b)).[36]

This new consideration of the sports worker is, however, subject to an additional requirement. In fact, for the purposes of signing sports labor contracts, the law still requires a prerequisite relating to a factor external to the contract: that the performance be carried out in federally recognized sectors as professional or dilettantistic (see Art. 2 (dd), (hh), (ll), 25 and 38). Outside of them, however, sports associations are granted the right to make use exclusively of amateurs and, therefore, of individuals who make "available their time and skills to promote sport, in a personal, spontaneous and free way, without profit, not even indirectly, but exclusively for amateur purposes" (Art. 29, par. 1).

The presence of the described requirement makes the regulatory terrain not particularly fertile for e-sports. On the contrary, the regulatory vacuum in which the e-sports phenomenon moves manifests a point of resistance in the legislation, due to the persistence of a dichotomy between *homo faber* and *homo ludens*[37] still drawn, albeit in a residual measure compared to the past, around a criteria that is independent of the real structure of interests connected to the practice of sports (thus, the cause of the contract), but descended from federal decisions.

The lack of federal recognition means that the enrollment of pro-players can only take place through sport membership within so called 'Enti di Promozione Sportiva', which are recognized as having the purpose of promoting and organizing sports activities (and we consider e-sports to be such) with recreational and educational purposes and which,

[35] In other words, the reform still maintains a distinction in categories of athletes. However, unlike in the past, this is based on the nature of the performance required of the athlete: sports activities having a job nature, subject to a contract of employment for both professionals and dilettantistic (Art. 25-27), and sports performance of an amateur nature, intended for the pursuit of the athlete's existential interests, as in volunteer work (Art. 29). The abandonment of the necessary gratuitousness of amateur performance determines the reversal of the regulatory framework, previously based on the axiom of the equivalence between dilettantes and those who carried out their sporting activity in their free time (ergo, in a time not devoted to the pursuit of sources of economic sustenance and, therefore, for the satisfaction of an athlete's personal interest, distraction or pleasure). And introduces, instead, the principle of functional equiordination of the sports labor contract as a source of protection of the contractor-athlete due to the specific qualities of the performance deduced in the contract and, in particular, the serious dedication to the exercise of sporting activity, to which remuneration should be recognized (Art. 2, par. 1, (dd); and 25).

[36] It should be pointed out that the result of athletic competition desired by the sports association cannot be understood as an element of the content of the athlete's obligation, but rather as the destination and goal to which his or her conduct must tend in order to fulfill it, because of the element of competitiveness – and therefore of alea in the result – inherent in any sporting event.

[37] Ferraro F., *Il calciatore tra lavoro sportivo professionistico e dilettantismo*, in *Lavoro Diritti Europa*, 3, 2019, 5.

therefore, have been able to establish "within their own structures 'Sectors' dedicated to eSports".[38]

At the level of state law, however, it determines the lack of access for pro-players to the discipline of sports work and nullifies, from our angle of observation, the general recognition of the job nature of dilettantistic performance. In fact, considering that, formally, the performance deduced in the contract assumes an amateur nature, the possibility of adapting the expansive force of labor law to the changed form of sports activity suffers from the similar interpretative difficulties related to '*de facto* professionalism', born under the aegis of Law No. 91. With this, again, incurring the aporia of formally excluding the onerousness of the bond, despite the fact that in substance the sport performance is functionalized to a sports association's interest, which translates into the claim of fulfilment and finds counter-performance in the payment, albeit disguised, of compensation.[39]

In the relationship with the club, therefore, access to the protections of the labor system for pro-players remains conditional upon the application (or claim in court) of the general work discipline, with due respect for the concrete function assumed by the relationship and the definition of worker assumed in the European legal system. On the other hand, the possibility of analogical application of the special rules on sports labor law is excluded, under penalty of violation of Art. 14 Preleggi.[40]

It should be mentioned, however, of the recent openness of CONI to initiating a pathway for the recognition of e-sports within each Federation. After all, the IOC had already considered "competitive eSports" as a sporting activity worthy of inclusion in the 2024 Olympics[41] and, in order to ensure the discipline's accreditation as Olympic under Art. 45 of the Olympic Charter , had encouraged International Federations to develop an e-sports sector within their own structures.[42]

CONI's intervention aims to remedy the federal latency, placing itself in terms convergent with the IOC's guidelines for ensuring that the values of the Olympic movement are extended to the e-sports sector. It is for these reasons that CONI has abandoned the initial idea of recognizing for the sporting purposes of a special e-sports Federation, in order to share a path of flanking the world of traditional sports with the wide plateau of virtual sports. And, on the basis of the signing with the E-Sport Italy Committee of a *Memorandum of*

[38] Ierussi J., Rombolà C., nt. (8), 315.
[39] It should be remembered that in the e-sports sector, the practice followed by sports clubs is to pay the pro-player a salary disguised as travel allowances, reimbursements and bonuses. Although they do not qualify as professionals in spite of the name, we are in fact referring to high-level athletes (sometimes considered true sports stars), whose services are carried out in the interest of the sports club that directs their activities. To individuals, moreover, who are capable of negotiating economically profitable terms, not only *pro sudore* (Gai. Instit., 3.146), but also by reason of the fact that, by participating in competitions alone, they provide financial benefits to the entire show business, enabling the organizers to produce a sporting entertainment that is attractive to the public and conveys the products of the videogame companies, and the teams to provide "their sponsors with an advertising performance that finds its support in the sporting activity itself" (CJEU *Deliège*, nt. (31)).
[40] *See* Spadafora M.T., *Diritto del lavoro sportivo*, Giappichelli, Turin, 2012, 95 ff. In any case, the application of labor laws raises the contract to a balancing function versus the utilitarianism on which federal assessments have hitherto been based.
[41] Remember nt. (7).
[42] Instead, the establishment of national e-sports federations seems to be discouraged.

Understanding on January 14, 2022, it has invited the national Federations to establish internally, in compliance with the provisions of the respective international Federations, a specific sector that would regulate and manage the e-sports version of the traditional disciplines represented.

The correlation between e-sports and corresponding traditional sports under Federal authority is fostered by a definition of e-sports in sufficiently elastic terms to deem it to include the electronic version of any traditional sports discipline performed through videogames and sports simulators at a competitive level, without limitation of genre or type, as long as it is in line with and in compliance with the principles of sports order issued by CONI and IOC (Art. 1, para. 3; and 3).[43]

At present, however, it is uncertain whether the Protocol will actually succeed in contributing, as hoped, to bringing citizens, of any age, closer to electronic sports activity, as well as to the dissemination of "a culture of responsible electronic gaming", as well as to the enhancement of the work that the transformation of sports activity implies, thanks to the emergence of new professional technical figures.[44] It does not appear, in fact, that any FSN or DSA has yet adhered to its provisions.

However, if the Protocol were to be implemented, there would be an important consequence in terms of the e-sports labor relationship. Indeed, it would be possible to eradicate e-sports work from the regulatory vacuum in which it pours and to recognize the professional character (dilettantistic and professional, depending on federal choices) of the e-sports relationship. Such a result could be reached, otherwise, only if CONI admits e-sports, for the purpose of recognition, into the List of Eligible Sports Disciplines for inclusion in the CONI Register or allows their inclusion in the statutes of FSNs and DSAs, which are now prohibited (Art. 3). At present, however, the removal of the ancillary function recognized to e-sports in relation to traditional sports seems difficult to presage.

After all, the general employment discipline, although broader in scope than that provided for sports workers, does not always prove suited to the peculiarities of the relationship. The special regime, on the contrary, would guarantee, in the management of the relationship, a greater ductility, due to the inapplicability of some penetrating constraints placed regarding remote controls, medical examinations, *ius variandi* and dismissal (individual and collective),[45] as well as the provision of some exceptions regarding non-competition agreements, fixed-

[43] The framing of e-sports within the scope of traditional sports disciplines, which is instrumental in excluding other e-games from the Protocol's field of application, was also dictated in order to prevent so-called war games or killer games from qualifying as e-sports (*see* Abanazir C., nt. (8), 110). The difficulty of tracing such games back to the world of sports was also discussed in the IOC statement of December 8, 2018: "some egames are not compatible with the Olympic values and therefore cooperation with them is excluded".

[44] These are not only coaches, directors and e-sports referees, for whom, incidentally, what has been reported for pro-players would apply *mutatis mutandis*; but also hardware and software installation and set-up technicians snf event organizers, who are outside the scope of those covered by the law as professional athletes (Art. 2, Law No. 81; 2, (dd) Legislative Decree No. 36). On the extension issue, *see* Tosi P., nt. (25), 721.

[45] *See* Art. 26 Legislative Decree No. 36.

term contracts and contract transfer, which flexibilize the market taking into account the brevity of the athletes' competitive career.[46]

5. The *de iure condendo* debate in the national and European legal system.

In conclusion, the recognition of e-sports, with the consequent application of sports law, would have the advantage of immediately filling a regulatory gap with a protectionist discipline, realizing equal treatment between real and virtual sports that share the same values, and above all, triggering, even in the e-sports sector, all those guarantees necessary to prevent illicit betting and illegal behavior, which seem to cause great concern.[47]

On the other hand, it is realistic to think that this will lead to bringing into the area of regulation only a very small part of the gaming world. As anticipated, IOC have already made a distinction between four categories of videogames: virtual sports where there is physical activity on the part of the player; virtual sports where there is no physical component; games of fantasy and strategy; and games of pure entertainment. Apart from the practical difficulty of identifying the scope of each, the IOC encouraged International Federations to recognize the first two categories. Thus leaving the largest part of the phenomenon, precisely the one that most involves minors of age, once again potentially without protections and controls.

Indeed, the signal given by the IOC has not remained isolated, going on to reveal a clear position of the Committee with regard to e-sports. Even in the road map to the 2028 Olympics, there is mention of physical virtual sports and not e-games. Not only that. Within the Summer Olympics there was an officially recognized nations' videogame competition, the *Olympic Virtual Series*, where there were no e-games (videogames, that is, with a rooted and living competitive circuit) but virtual simulations of traditional sports, such as baseball cycling, rowing, sailing and motorsports (perhaps the only one among them that could boast a videogame with any tradition, *Gran Turismo*): nothing more different, in short, from *League of Legends*, *Dota 2*, *Starcraft* and *Call of Duty*, those that are in the common idea today brought back to the 'real' e-sports. And in this perspective, it cannot even be surprising then that in May, in the midst of the 'LAN Gate', a *Protocol on the use for sporting purposes of amusement devices without monetary winnings* was signed between ADM and CONI, which allows athletes registered with CONI-affiliated sports federations and belonging to ASDs and SSDs registered with the Register of Sports Companies "to be able to freely use devices such as billiards, foosball, darts that for athletes constitute real playing fields", without any reference to other devices.

[46] The decline in skills associated with advancing age is common to e-sports. It results that gamers become unable to compete at a high level as early as around age 25, when reaction speed begins to decrease (Hallmann K., Giel T., nt. (8), 4).

[47] In Italy, the lack of recognition of e-sports as a sporting discipline has prevented effective regulatory countermeasures. In particular, in the presence of cases relating to hypotheses of sports fraud, Law no. 401/1989 applies. However, the regulation is difficult to apply to e-sports, since it only protects sports competitions organized by federations recognized by CONI. So, it would be important to include among these those deputed to the organization of e-sports championships. The solution envisaged remain, however, subject to the recognition by CONI of e-sports, as well as the creation of an independent federation.

The impression one gets is that a CONI recognition, even where there will be one, will be limited to virtual reproductions of traditional sports, with no real competitive circuit behind them, far removed from what younger generations, players and fans, perceive as e-sports.

Thus, in order to obviate the problems related, on the one hand, to the extension and application of dated norms to profoundly changed customs and habits, and, on the other hand, to embarking on paths that may soon prove unsuitable to achieve the intended objectives, a legislative action that delivers us an organic regulation of the entire sector seems the preferable solution, as the experience of those few countries that have so far endowed themselves with a discipline in this regard demonstrates. They have opted, in the face of the obvious complexities, not to go down the path of sports recognition and, in order not to fall into the meshes of gambling, have created a separate legal case, capable of developing a fertile environment for the organization of competitions while protecting all the players involved in the market.

In our system to date there are 2 proposals for laws on e-sports: the Proposal *Discipline of electronic or virtual sports (e-sports) and related professional and economic activities* – No. 3626 submitted to the Chamber of Deputies on May 24, 2022, modelled after the Code, also under discussion, of e-sports of the Republic of San Marino, itself inspired by French legislation; and the more concise Proposal *Discipline of videogame competitions (e-sports) and related professional activities* – No. 3679, submitted on July 13, 2022.

While it is beyond the economy of this contribution to analyse in detail the provisions of the two proposals, it is nevertheless useful in revealing the regulatory trends. With e-sports competitions subtracted from the ADM, explicitly stating that they "are not considered games of skill or gambling" or "contests and prize operations" and therefore "may be freely conducted within the national territory" (Art. 1, prop. 3679), the proposed regulations also revolve around two cardinal elements: the definition of "e-sports activity" as well as that of "player".

Regarding the first one, Prop. No. 3626 identifies a very broad scope of application, at least in theory, with reference to a list prepared by the forming Italian Federation of Virtual Sports. According to Art. 3, e-sport is to be considered any form of psychophysical activity aimed at obtaining results in professional, dilettantistic or amateur virtual competitions in a given e-sport discipline; these are activities in which skills and, in a more or less intense way as appropriate, endurance, dexterity, strength or their combinations are expressed, by computer tools proper to each discipline, eventually adapted for the specific needs of persons with disabilities.

According to the proposal, however, e-sports disciplines will only enter the list following accreditation by CONI, thus re-proposing the potential critical issues just above already highlighted.

On the other hand, with regard to the notion of player, declined into professional, dilettantistic and amateur, a still uncertain approach appears: Prop. No. 3679 indifferently indicates its ascribability to subordinate, self-employed or occasional work, while Prop. No. 3626 points to the "natural person who performs e-sports activities, individually or as part of an e-sports team" under a "fixed-term" contract and which is "assimilated to the contract

of self-employment, it being understood that the player must comply with the technical instructions and prescriptions for the achievement of the team's competitive goals". With that, the traceability of the activity performed to a recognized e-sport will first open up the framing of players as self-employed, with possible revival of all issues related to the unavailability of contractual type.

The 'LAN Gate' has even reached the European Parliament, with the clear intention of also spurring the EU legislator to draft and subsequent adopt a regulation to avoid possible divergences between different countries in the European Union. The 'universalist' vocation of competitions cannot be ignored. And without an EU directive there would be a risk of having Member States with significant regulatory divergences on a sector that being digital native tends to be without territorial barriers. The most pressing problem, therefore, at the EU level, is to prevent the creation of competitions between companies from different countries on the basis of local legislation, placing in a dominant position those that grow within States with a more modern regulation.[48] Recall in this regard that the application of the TULPS and the resulting authorization regime provided by Italian law has no precedent in any other jurisdiction worldwide and is apt to place our country at a distinct disadvantage. Even where there is particularly detailed legislation such as in France, in order to encourage the growth of the e-games market, there is still only a mere notification to the competent authorities without any form of prior authorization or certification.

When consulted about the situation in Italy, the European Commission replied that there is no intention to propose a directive on gambling, but we are well aware that e-sports are not attributable to gambling and therefore no intervention in this area can be said to have been ruled out.

The community relevance of electronic competitions can be detected at several levels. While an intervention in the matter would generally be in line with the EU's commitment to promote sports, it must also be considered, for example, that, like disciplines of the mind in general, e-sports have a high level of accessibility, whatever the degree of the athlete's disability, placing them also in line with the provisions of Art. 165 TFEU. An EU intervention in this area could also be considered inherent to the realization of the Digital Single Market that the European Union has been struggling to build since 2015.
From the latter angle of view, innovating the European Single Market and making it fit for the digital age implies the creation of a community in which citizens and companies have transparent and fair access to online products and services, regardless of nationality and residence, within a clear and stable legal framework. Competitive videogames still present a regulatory patchwork field in an uneven ecosystem that is exposed to obvious external disruption. If, in order to stimulate innovation and address market fragmentation by bringing similar situations back to homogeneity, we can already count on 29 legislative proposals, it does not seem possible not to also include the issue of e-sports within the scope of the European Union's legislative interventions.

[48] *See* Coraggio G., Chan Sun Mei, Fitzpatrick N., White P., Lee P., *Esports Laws of the world*, in *DLA Piper*, www.dlapiper.com/en/global/insights/publications/2019/11/esports-laws-of-the-world/.

17

Inclusive Digital Workplaces for Persons with Disabilities.

Carla Spinelli*

1. Digital inclusion for people with disabilities. 2. Digital reasonable accommodation. 3. Remote work as reasonable accommodation. 4. The Italian experience during the pandemic: lessons for the future? 5. The way forward.

1. Digital inclusion for people with disabilities.

The *United Nations Convention on the Rights of Persons with Disabilities* (UN CRPD), adopted in December 2006 to "promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities" (as stated in article 1.1), has injected new life into the protection systems for disabled people in the States Parties. According to the social model of disability adopted by the UN CRPD, the aims that are to be pursued have been identified with the social inclusion and active citizenship of people with disabilities in mind.[1]

The European Union, which ratified the UN Convention with Decision No. 2010/48 after actively contributing to the definition of its content, has assigned the central importance in its commitment in favour of persons with disabilities. In this context, the Convention has strengthened anti-discrimination protections already offered to persons with disabilities in accordance with European Union rules (article 19 TFEU, articles 21 and 26 CFREU and, with specific regard to employment, Directive No. 2000/78/EC) and broadened the concept of disability, thereby increasing the already high number of persons covered by such protection.

Evidence of this can be found in the EU Commission's choice to make the effective implementation of this Convention one of the cornerstones of its European Disability Strategy 2010-2020, but also and above all in the decisive role that the Court of Justice has

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[1] Pietrogiovanni V., *Disability and Work. The International and Supranational Legal Framework*, in *Revista Derecho Social y Empresa*, 2015, 30 ff.

assigned to the Convention in its interpretation of EU legal sources, especially as a parameter for conforming the meaning of European secondary legislation.

As far as work and employment are concerned, States Parties to the UN CRPD recognize the right of persons with disabilities to work on an equal basis with others; this includes the right to the opportunity "to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible".[2] At EU level, the enactment of the Employment Equality Directive No. 2000/78/EC has brought the regulatory models of Continental Europe closer to the Anglo-Saxon ones, focusing on the introduction of anti-discrimination law, also on the grounds of disability.

Persons with disabilities are one of the groups to which specific attention has been devoted by the *2030 Agenda for Sustainable Development*, launched by a UN Summit in New York on 25-27 September 2015 to provide the framework for inclusive global sustainable development efforts for the current decade. The corresponding Sustainable Development Goals make explicit reference to persons with disabilities, including them in the context of decent work and economic growth (SDG 8.5).

In a time of transformative change in the world of work, driven by technological innovations, the *ILO Centenary Declaration for the Future of Work*, adopted in June 2019, highlights the necessity for a human-centred approach and incorporates an explicit reference to the need to ensure equal opportunities and treatment for persons with disabilities (Part II.A.viii). Taking into account the possibilities offered by the so-called Fourth Industrial Revolution, the technological transformation can, if carried out in an inclusive way, offer persons with disabilities better access to the labour market.

Dealing with developing new skills for new jobs, the new *EU Disability Strategy for 2021-2030* makes explicit reference to this topic. More precisely, it is stated that support will be provided for Member States in securing assistive technologies and in providing an accessible digital learning environment and content, as announced in the Digital Education Action Plan 2021-2027.[3]

Greater awareness that new technologies can represent both opportunities and challenges for persons with disabilities can be found in the European Parliament Resolution of 10 March 2021 on the *Implementation of Council Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation in light of the UNCRPD*. In this respect, for example, Artificial Intelligence (AI) applications can create important opportunities for disabled people if they are designed for all, otherwise they may encompass considerable threats to the employment of persons with disabilities. Therefore, the European Parliament underlines that accessibility must be included as a pre-condition in any EU initiative, and that the EU should take action to support the application of universal design and ensure the availability and affordability of assistive technologies.

More precisely, the European Parliament calls on:

[2] Albin E., *Universalising the Right to Work of Persons with Disability: an Equality and Dignity Based Approach*, in Mantouvalou V. (ed.), *The Right to Work*, Hart Publishing, Oxford, 2014, 61 ff.
[3] European Commission, *Union of Equality: Strategy for the Rights of Persons with Disabilities 2021-2030*, Brussels, 3 March 2021, COM (2021) 101 final, point 4.2.

- the Commission to ensure – in line with the UNCRPD – full and effective accessibility of information and communication technologies and systems on an equal basis and to apply, in this context, guidelines supporting AI developers to take into account the needs of persons with disability through the development processes, avoiding the creation of new discriminatory biases;
- the Commission and the Member States to support research programmes focused on the development of assistive technologies including robotics, digital technologies and artificial intelligence with the aim of enabling the full integration of persons with disabilities in all aspects of life;
- the Member States to ensure that persons with disabilities have access to affordable digital tools and software which are tailor-made to their needs and to build on the expertise of organisations representing persons with disabilities in defining the most suitable digital tools or software for the individual needs of disabled people (p. 34).

Last but not least, the *Proposal for the Regulation of the EU Parliament and the EU Council on Artificial Intelligence*[4] takes into account the integration of persons with disabilities, in order to ensure a high level of protection for their fundamental rights. In this respect, for example, while establishing a list of prohibited AI practices, those affecting vulnerable groups such as disabled people shall be considered, because of their manipulative or exploitative or discriminatory effects (Title II). Moreover, the draft Regulation creates a framework for the adoption of codes of conduct which shall include voluntary commitments concerning, among others, accessibility for persons with a disability (Title IX). However, leaving aside the formal statements of the Proposal, some concerns have been raised about its critical aspects and points of weakness from the labour law perspective,[5] in order to ensure adequate protections to the workers – and even more so to disabled workers.[6]

2. Digital reasonable accommodation.

Companies that claim to have diversity and inclusion strategies, whether private or public, must ensure that their workplaces are accessible and free from any physical, digital or social barriers towards persons with disabilities. Principle 17 of the European Pillar of Social Rights concerning the inclusion of people with disabilities foresees the right to a work environment adapted to their needs.

[4] European Commission, 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.
[5] De Stefano V., *The EU draft Regulation on AI: a threat to labour protection?,* in *Regulating for Globalization,* 16 April 2021, available at http://global-workplace-law-and-policy.kluwerlawonline.com/2021/04/16/the-eu-proposed-regulation-on-ai-a-threat-to-labour-protection/.
[6] European Disability Forum, *Position Paper on the European Commission Proposal for Regulating Artificial Intelligence (AI)*, 17 November 2021, available at https://www.edf-feph.org/eu-law-must-ensure-trustworthy-and-accessible-artificial-intelligence-ai-for-persons-with-disabilities.

The core protection against disability discrimination from a human rights perspective is based on the obligation imposed on the employers to provide for *reasonable accommodation.*[7] This legal concept can be found in both the Employment Equality Directive, No. 2000/78/EC (Art. 5) and in the UN CRPD (Art. 2 and Art. 27, sec. 1, i). In accordance with the second paragraph of Article 2 of the UN Convention, "reasonable accommodation" is described as "necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms". The Preamble to the Employment Equality Directive states that appropriate measures should be provided to adapt the workplace to the disability, "for example by adapting premises and equipment, patterns of working time, the distribution of tasks or the provision of training or integration resources" (Recital 20).

With reference to these international and supranational rules, reasonable accommodation can be defined as modification or adaptation of a job, employment practice, or work environment, that makes it possible for a qualified person with a disability to apply for a job, perform an essential function of the job, or access a benefit of employment. This may include, but is not limited to: making existing facilities used by employees readily accessible to and usable by persons with a disability; job restructuring; modifying work schedules or reassignment to a vacant position; acquiring or modifying equipment or assistive devices, adjusting or modifying tests, training materials or policies; providing sign language interpreters or readers for individuals who are blind or have poor vision. Reasonable accommodation could be provided for an individual for the whole duration of the employment contract or it may need adjustments and implementation time by time.

The provision of a reasonable accommodation is usually conceived of as an individualized measure required to meet the needs of a particular worker that should be distinguished from an affirmative action measure, such as quotas, aimed at the favourable treatment of specific groups. Indeed, rather than focusing only on impairments or health conditions, an open and supportive workplace that accommodates a wide range of needs – not just those of disabled people – would help individuals perform better. Most disabled people do not want to be singled out and treated differently; they want to be part of the mainstream and given a fair chance. An open and supportive workplace requires an understanding by managers and co-workers about their responsibility to subscribe to these values and behave accordingly.[8]

Assistive technologies are creating new opportunities in society and in the labour market. It is important that these technologies are widely available and form part of the catalogue of reasonable accommodations to be provided by employers and training institutions.

[7] *Ex multis,* Waddington L., Lawson A., *Disability and non-discrimination law in the European Union*, Publications Office of the European Union, Luxembourg, 2009; Ferri D., Lawson A., *Reasonable accommodation for disabled people in employment contexts. A legal analysis of EU Member States, Iceland, Liechtenstein and Norway*, Publications Office of the European Union, Luxembourg, 2016; Blanpain R., Hendrickx F. (eds.), *Reasonable accommodation in the modern workplace. Potential and limits of the* integrative *logics of labour law*, Kluwer Law International B.V, Alphen aan den Rijn, 2016; Ferri D., *Reasonable Accommodation as a Gateway to the Equal Enjoyment of Human Rights: From New York to Strasbourg*, in *Social Inclusion*, 6, 1, 2018, 40 ff.

[8] These are some of the conclusions reached by Equality and Human Rights Commission, *Working Better. The perfect partnership-workplace solution for disabled people and business*, May 2012.

An ILO-ONCE joint study has identified five key objectives for the inclusion of persons with disabilities in the future of work together with the main actions that stakeholders should implement to achieve them. As far as assistive technologies both existing and newly developed are concerned, in order to make them affordable and available: public authorities should provide funds and subsides; companies should supply them in the workplace as a form of reasonable accommodation; disability NGOs should participate in innovative and new developments; trade unions should support provisions in this regard; and academia should foster R&D on this topic.[9]

Developing assistive technologies requires such a comprehensive approach, since they are not sufficient on their own to foster a more inclusive society. They need to be accompanied by social and political action towards inclusion through various means, including healthcare, education, and employment regulations.

The demographic trend of an ageing population in Europe is increasing the need for a more disability-friendly workplace that focuses more on supporting technologies. However, according to recent developing trends, these technologies are more and more designed not only to compensate for impairment conditions but also for augmentation purposes of human labour, regardless of disability. In this respect, the blurring boundaries between health and safety protections and human dignity violations represent the crucial point of any new ethical and legal concerns.[10]

3. Remote work as reasonable accommodation.

To allow employers to comply with their obligation to provide for reasonable accommodation in favour of disabled workers, a relevant role can be played by remote working practices. An organisation concerned about the well-being of its employees will set in place teleworking and flexitime initiatives and policies. Such new ways of working can also be supportive for persons with disabilities and might help them to overcome various barriers. Remote work can be conceived as an instrument to enhance workers' health and safety protection as well as guarantee work-life balance. In this perspective technology truly becomes a 'socially responsible' device.

In Italy, telework is expressly qualified as reasonable accommodation by law. More precisely, Art. 4, Sec. 3 of Law No. 68/1999, while foreseeing that the employers can calculate as part of their mandatory quota the disabled workers they have employed full-time at home or in telework, also specifies that home-based work and teleworking shall be arranged through reasonable accommodation to allow the disabled to work full-time.

[9] ILO-ONCE, *Making the future of work inclusive of people with disability*, 21 November 2019, available at https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_729457.pdf.

[10] European Parliamentary Research Service (STOA), *Assistive technologies for people with disabilities*, PE 603.218, January 2018, available at: https://www.europarl.europa.eu/RegData/etudes/IDAN/2018/603218/EPRS_IDA(2018)603218(ANN4)_EN.pdf.

Moreover, Art. 14, Law No. 68/1999, modified by Art. 11, Legislative Decree No. 151/2015, requires that the Regional Funds – financed by the administrative sanctions paid by employers who do not comply with the quota system – shall provide for a lump sum refund of the costs sustained by the employers who adopt reasonable accommodations concerning workers with a capacity reduction of over 50%, including the setting up of teleworking technologies.

The Covid-19 pandemic has proven the benefits of reasonable accommodation in the form of telework. However, for the latter to be sustainable, the main related challenges in terms of job quality as well as risks of isolation and exclusion – which might be especially concerning for persons with disabilities – must be addressed.

4. The Italian experience during the pandemic: lessons for the future?

During the pandemic there was an upsurge in teleworking across all EU countries. In Italy, working outside the employer's premises has been intensified since it has proven to be a suitable tool for protecting health and safety in the workplace without (seriously) compromising business continuity and public service efficacy.[11] Besides the already in force regulations of teleworking, a statutory regulation for agile work has been introduced in Italy through the enactment of Law No. 81/2017,[12] to increase competitiveness and promote work-life balance, following successful experiences of collective bargaining at company level.

According to the definition adopted by the law, the essential requirement of agile work consists in carrying out the work performance with no predefined timeframe and in the absence of a fixed workplace, using – possibly, but not necessarily – technological devices. More precisely, agile work is carried out partly within and partly outside the employer's premises without a fixed location, respecting the maximum limits for daily and weekly working time foreseen by the law and collective agreements (Art. 18, Sec. 1). According to this definition, work performance is characterized mainly by a significant space and time dis-embedding with respect to the formal organization to which it pertains.

Because of these characteristics, agile work should be considered a win-win solution in terms of providing for reasonable accommodation to employees with disabilities. In fact, agile work entails the involvement of the worker in the productive process and overcomes the risk of isolation, being more inclusive than traditional home-based telework. Moreover, this innovative approach to work organisation is performance-oriented, which means promoting a higher degree of workers' autonomy and responsibility, which can be consistent with the enhancement of the disabled workers' capabilities.

However, during the pandemic a kind of 'simplified version' of agile work was allowed to increase its adoption by employers. Moreover, a specific regulation was reserved to particular categories of workers who, as a consequence of the pandemic, found themselves particularly exposed to risks for their health or to increased caring responsibilities. Among them, disabled

[11] Biasi M., *Covid-19 and Labour Law in Italy*, in European Labour Law Journal, 11, 3, 2020, 306 ff.; Gaglione C., Purificato I., Rymkevich O. P., *Covid-19 and Labour Law: Italy*, in *Italian Labour Law e-Journal*, 13, 1S, 2020.
[12] Spinelli C., *Tecnologie digitali e lavoro agile*, Cacucci, Bari, 2018.

workers and their caregivers were granted the "right to perform agile work", in so far as their tasks were consistent with remote working, under Art. 39, par. 1, Law Decree No. 18/2020.[13] According to this provision, the employer was obliged to accept the request from an eligible worker only on the condition that the remote working was compatible with the inherent characteristics of the job.[14] Several rulings have confirmed such an interpretation of the regulations.[15]

It is clear that the provision was not dealing with reasonable accommodation, because when remote work is requested by an employee with a disability as a kind of reasonable accommodation, the unfair refusal of the employer to satisfy such a request would be considered an indirect discrimination. In fact, they are obliged to provide for reasonable accommodation unless it results in a disproportionate burden.

In other words, taking into due account the obligation to provide for reasonable accommodation, the employer must verify the possibility of adopting all the personalized measures that could allow the employee to carry out duties that are suitable for the company.[16] The employer can even be required to substantially modify the work organization, if it is necessary, with the only limit that this does not impose a disproportionate burden.[17]

To determine whether the measures to adapt the workplace to the disability give rise to a disproportionate burden the preamble of the Employment Equality Directive states that "account should be taken in particular of the financial and other costs entailed, the scale and financial resources of the organisation or undertaking and the possibility of obtaining public funding or any other assistance" (Recital 21). In other words, a disproportionate burden could be considered an action involving significant difficulty or expense when viewed in the light of factors such as the size of the company, its financial resources and the nature and structure of the operation.

In light of the above, it cannot be doubted that the ratio of the examined pandemic provision was not combating discriminations providing for reasonable accommodations, but better guaranteeing workers' health and safety protection through social distancing. In this respect, however, it is worth considering that 'fragile workers' – those who suffer other conditions of health vulnerability that may increase the risk of being affected by Covid-19 – were allowed to benefit from the "right to agile work" as persons with disabilities did.[18]

[13] This provision was in force until 31st December 2020.
[14] Senatori I, Spinelli C., *(Re-)Regulating Remote Work in the Post-pandemic scenario: Lessons from the Italian experience,* in *Italian Labour Law e-Journal,* 14, 1, 2021, 209 ff.
[15] Trib. Grosseto 23.4.2020; Trib. Bologna 23.4.2020; Trib. Roma 20.6.2020, in *Rivista Giuridica del lavoro e della previdenza sociale*, 2021, (1), II, 91 ff.
[16] CJEU, 15 July 2021, C-795/19, *Tartu Vangla.*
[17] CJEU, 11 April 2013, C-335/11 e C-337/11, *HK Danmark*; CJEU, 10 February 2022, C-485/20, *HR Rail.*
[18] According to the subsequently amended regulations, disabled workers and fragile workers "usually" perform agile work, being assigned to different tasks included in the same category or area of job classification, as defined by the collective agreements in force, or to professional training also remotely, if required (Art. 26, par. 2-bis, Decree Law No. 18/2020 converted by Law No. 27/2020). They are no longer entitled, then, to a "right to agile work", but subject to the employer's unilateral power to organise their job according to his organisational interests. *See* Brollo M., *Fragilità e lavoro agile*, in *Lavoro Diritti Europa*, 1, 2022.

Therefore, considered in a broader perspective, the legal protections adopted in Italy during the pandemic confirm that remote/agile working represents an organisational solution that could also be offered to workers affected by certain illnesses, such as worsening chronic diseases. As is well known, according to the UN CRPD definition of disability, adopted by the CJEU rulings,[19] anti-discrimination protection on the grounds of disability should be provided for even in the case of illness, when it may hinder full and effective participation in professional life by the workers affected.[20]

5. The way forward.

After the emergency period, no longer determined by public health reasons but extended in relation to the 'serious international crisis in progress' as a consequence of the war in Ukraine, the agile way of working in the event of fragility will no longer apply. Indeed, the pandemic measures in favour of fragile workers have not yet been transformed by the legislator into 'ordinary' provisions.[21] Recent amendments to the statutory law on agile work have only foreseen a priority in accessing this kind of remote working for the disabled and their caregivers.[22]

Collective bargaining – mainly at corporate level – has also had slight success, showing little interest in integration with the new vulnerability discipline. In pre- and post-pandemic collective agreements there are few references (even implicit) to fragile employees, and when there are any – mostly in reference to agile workers – they confirm the heterogeneity of the category and the preference for assigning a mere access priority. Greater expectations can be placed on other soft law regulatory sources.

First, the National Protocol on Agile Work of 7th December 2021 for the private sector, signed by the Social Partners and the Minister of Labour, in its Art. 10 ("Fragile and disabled workers") provides that, "without prejudice to the provisions of the law, the social partners undertake to facilitate access to agile work for workers in conditions of fragility and disability". The norm, formulated in deliberately broad and flexible terms, enhances the potential of agile work "as an inclusive tool for people disadvantaged by (and in) work traditionally intended"; not surprisingly, the same Art. 10 also refers to agile work from the perspective of reasonable accommodation, as a measure or device to allow workers to be able to carry out the work.[23] Even the Guidelines on targeted placement of March 2022 foresee that agile work can be considered as a reasonable accommodation, as well as soliciting a role of promotion, monitoring and checking for public employment services.[24]

[19] CJEU, 11 April 2013, C-335/11 e C-337/11, *HK Danmark* (par. 32).
[20] CJEU, 11 September 2019, C-397/18, *Nobel Plastiques Ibérica SA*.
[21] *See* art. 1, par. 306, Law 197/2022.
[22] Art. 18, par. 3 bis, Law No. 81/2017.
[23] Ministero del lavoro e delle politiche sociali, National Protocol on work in agile mode, 7 December 2021, available at https://www.lavoro.gov.it/notizie/Documents/PROTOCOLLO-NAZIONALE-LAVORO-AGILE-07122021-RV.pdf.
[24] Ministerial Decree 11 March 2022, No. 43, available at:

More trustworthy can be considered the forthcoming implementation of the Delegation Law on disability, No. 227/2021, adopted in the context of Mission No. 5 - Inclusion and cohesion - of the Italian National Plan for Recovery and Resilience[25]. More precisely, the delegated legislator has the task of updating the definition of disability – taking into account the "bio-psycho-social" approach that informs the United Nations Convention of 2006 and the European Strategy on the Rights of Persons with Disability 2021-2030 – and clarifying its scope, also regarding the entitlement to agile work. Moreover, the Delegation Law provides for innovations on the key point of reasonable accommodation being fully consistent with the recent ruling of the Supreme Court, according to which the disabled person's right to demand organizational adjustments – as long as they do not involve a "financial burden excessive or disproportionate" – has to be considered as prevailing when balanced with the freedom to conduct business.[26]

Despite the light and shade of the guiding principles and criteria of Delegation Law no. 227/2021, there could be some confidence that the delegated legislator, in the overall reorganization and simplification of the legal framework, will be able to resolve some ambiguities and pursue with stronger commitment the priority of the reasonable accommodation technique within sustainable organizational changes.

https://olympus.uniurb.it/index.php?option=com_content&view=article&id=27692:mlps43_22&catid=5&Itemid=137.

[25] *See* Bonardi O., *Luci e ombre della nuova legge delega sulla disabilità*, in *Italian Equality Network,* 8 February 2022, available at https://www.italianequalitynetwork.it/luci-e-ombre-della-nuova-legge-delega-sulla-disabilita.

[26] Cass. 9 March 2021, No. 6497, available at https://www.wikilabour.it/segnalazioni/rapporto-di-lavoro/corte-di-cassazione-sentenza-9-marzo-2021-n-6497/.

18

Working in the e-sports: a juridical analysis.

Alberto Tampieri* – Gianluigi Fioriglio+

1. Sports and e-sports: an overview. 2. E-sports: a mapping of main legal profiles 3. E-sports: a mapping of key issues 4. E-sports and Labour Law 5. The (scarce) existing legislative framework 6. The employment status of e-sports professional players 7. E-sports and sports work legislation: the Italian case 8. E-sports discipline and EU directive proposal on platform workers 9. Looking for the best framework.

1. Sports and e-sports: an overview.

E-sports are constantly growing and they constitute a major industry with a great potential: it is, now, well known. Obviously, their diffusion has several legal implications that will be briefly presented in the first part of this essay (in the perspective of legal informatics), while the second part is aimed at discussing specific labour law issues.

As a starting point it is necessary to investigate, firstly, if "e-sports" could be considered "sports" or if they are something new; secondly, what they (possibly) are. The answer to this question is crucial in understanding how they *are* regulated, on the one hand, and how they *should be* regulated, on the other hand – in fact, which rules should be applied when specific ones are not in force, as it happens in most states?

This question will be further discussed in paragraph 4 in the perspective of labour law, but in a more general one it may be useful to introduce it starting with the simple and straightforward definitions of "sport" and "e-sport" of the "Cambridge Dictionary".

Thus, "sport" is "a game, competition, or activity needing physical effort and skill that is played or done according to rules, for enjoyment and/or as a job"; "sports" are "all types of physical activity that people do to keep healthy or for enjoyment",[1] while "E-sports are the

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[1] Cambridge Dictionary, Definition of "Sport", available at:

activity of playing computer games against other people on the internet, often for money, and often watched by other people using the internet, sometimes at special organized events".[2]

It can be useful to look at them making a comparison as follows:

		E-sport	**Sport**
(i)	Does it develop mental and physical skills? Does it require training?	✓	✓
(ii)	Is it played or done according to rules?[3]	✓	✓
(iii)	Can it be played or done for enjoyment?	✓	✓
(iv)	Can it be played or done as a job?	✓	✓
(v)	Can they be watched by other people for their entertainment?	✓	✓

The above table is useful to introduce some key points that characterize both sports and e-sports. Thus, each game, competition, or activity:

(i) requires training (and, therefore, development of mental and physical skills)(*competition*);
(ii) is carried out in compliance with pre-determined rules (*regulation*);
(iii) can be played for personal enjoyment *(amateurism)* or as a job (*professionalism)*;
(iv) entertains people who watch it (*entertainment*).

These first considerations help in understanding how many profiles overlap between sports and e-sports. However, as we will see, something will diverge, and it is now useful to look at several definitions and concepts theorized by several scholars. Among them, Hamari and Sjöblom state the eSports commonly refer to competitive (pro and amateur) video gaming that is often coordinated by different leagues, ladders and tournaments, and where players customarily belong to teams or other "sporting" organizations which are sponsored by various business organizations";[4] Schubert, Drachen and Mahlmann argue that "Esports is computer games played in a competitive environment"[5] and Hemphill that "... contrary to the claim about them being virtual or merely games, sport-themed computer games that involve human immersion and skillful, physical interactivity can be considered sport, at least

https://dictionary.cambridge.org/dictionary/english/sport.
[2] Cambridge Dictionary, Definition of "*e*-Sports", available at: https://dictionary.cambridge.org/dictionary/english/e-sports.
[3] In the e-sport fields a first set of rules is developed, or controlled, by the publisher, while in competitions further rules may be set, still within the technical framework provided by the publisher.
[4] Hamari J., and Sjöblom M., *What is eSports and why do people watch it?*, in *Internet research*, 27, 2017, 211– 232. Moreover: "*a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces*".
[5] Schubert M., Drachen A.,Mahlmann T., *Esports analytics through encounter detection*, in *MIT Sloan Sports Analytics Conference,* MIT Sloan, 2016, 1–18. A similar view was presented by: van Ditmarsch, J. L., *Video Games as a Spectator Sport: How Electronic Sports Transforms Spectatorship,* 2013; Wagner M. G., *On the Scientific Relevance of eSports*, in *International conference on internet computing*. 2006, 437–442.

in the classic formulation of sport as the demonstration of physical prowess in a game".[6] Furthermore, "with nuance, they all perceive esport through two criteria: technological specificity (computers, cyberspace, electronics) and advanced competition (athleticism, professionalism, sport). These criteria are directly connected to the videogame culture so that esport is recognized as an "extension of gaming".[7]

However, many people may have a bias against e-sports and e-sports players. Some of them are based on the consideration of which skills are required and developed while practicing sport, with particular regard to the physical ones, and, as a consequence, the view of such players not as professional athlete (and, as another consequence, with the "traditional" view of unhealthy and sedentary persons).[8]

The growing popularity of e-sports should help in reducing the occurrences of such bias, on the one hand, and the fact that most professional e-sport players follow "traditional" training programs (running, cycling, etc.), on the other hand. In fact, most e-sports require also physical skills: it is much more than playing using a joypad or a combination of keyboard and a mouse. While some games must be played using specific devices in order to be competitive (such as wheels and pedals – and possibly a racing seat – with regard to sim-racing, where the physical effort can be quite big), usually the above-mentioned devices are needing a small amount of "power" and a really high amount of mental and physical coordination to be quick. Still, the physical effort can be considered quite limited in such cases, especially if we compare it to most "traditional" sports.

Moreover, it has been discussed if e-sport could be considered more as "economic sport" than as "electronic sport", due to the "Executive Ownership" of the intellectual property rights: each publisher has an absolute dominion on how a single game may be played, and under which rules;[9] and other scholars "argue that the definition of sport must change to accommodate the rapid growth of eSports. Ultimately however, it is open for debate whether eSports are indeed sports, or some other category of sports-like or sportive competitive behaviour".[10]

Although these reflections are not intended to be comprehensive, they helped in draw boundaries between sports and e-sports, but a key argument must now be introduced: the position of the International Olympic Committee.[11] Since several years, the IOC is looking at "e-sport" with a growing interest (please note, among other facts, that a first Olympic

[6] Hemphill D., *Cybersport,* in Torres C.R. (ed.) *The Bloomsbury Companion to the Philosophy of Sport*, Bloomsbury Publishing, London, 2015, 346–348. In 2005, Hemphill wrote that "*electronically extended athletes in digitally represented sporting worlds*" (Hemphill D., *Cybersport*, in *Journal of the Philosophy of Sport*, 32, 2005, 195).

[7] Karhulahti V.M., *Reconsidering esport: Economics and executive ownership*, in *Physical Culture and Sport. Studies and Research*, 74, 1, 2017, 43-53.

[8] Kane D., and Spradley B.D., *Recognizing ESports as a sport*, in *The Sport Journal*, 19 May 2017, available at https://thesportjournal.org/article/recognizing-esports-as-a-sport/.

[9] Karhulahti V.M., nt. (7).

[10] McCutcheon C., Hitchens M., Drachen A., *eSport vs irlSport*, in Cheok A., Inami M., Romão T. (eds), *Advances in Computer Entertainment Technology. ACE 2017. Lecture Notes in Computer Science,* 10714, 2018, 531–542. https://doi.org/10.1007/978-3-319-76270-8_36

[11] *See*, among others, Parry J., *E-sports are not sports*, in *Sport, ethics and philosophy*, 13, 1, 2019, 3-18, where the author argues that e-sports are not sports, starting from a theorization of sport as 'Olympic' sport and defining Olympic Sport as an institutionalised, rule-governed contest of human physical skill.

Virtual Series event has been done in 2021, following the IOC "Olympic Agenda 2020+5: 15 Recommendations").[12] The IOC distinguishes between sports, e-sports and virtual sports; its position can be really understood only if we take a look at the Olympic Charter: "The goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sport practised in accordance with Olympism and its values (1.1). The IOC's role is … "to dedicate its efforts to ensuring that, in sport, the spirit of fair play prevails and violence is banned" (2.1).

It means that all violent games could not be considered sports in the perspective of the IOC. Given that most videogames that are considered e-sports are also characterized by violent virtual actions (from Dota 2 to Fortnite, from CS:GO to League of Legends, etc.), they would violate the Olympic Charter. Thus, they cannot be considered "sports" under this regard.

While very important, this argument may be considered not crucial in the long run – in fact, a potential solution could be found in the amendment of the Olympic Charter with reference to e-sports, obviously, but it does not appear a viable one, right now.

From a theoretical perspective, however, it seems useful distinguishing between sports and e-sports. They have a lot in common, as we have seen; but, if we look at technical profiles – even not deeply –, we know and see that each "sport" is a "computer software", and thus intellectual property rights (as already noted) may be crucial. As already noted by Jin, e-sports constitutes the result of the combination, in one, of multiple profiles: computing, gaming, media, and a sports event.[13]

This means that simply extending sport rules to e-sport ones could not be a good solution, because it would imply to adapt "old" categories to a "new" field while it would much better to start from scratch, and, in particular, from the technical profiles: how e-sports are created and maintained, on the one hand, and how they are practiced on the other hand, taking also into account "techno-legal" issues related to the regulation of computer software. Eventually, it could be useful to look at sports and e-sports synergistically (for example, mixing e-sports and sports training).

2. E-sports: a mapping of main legal profiles.

E-sports imply several legal issues: this paragraph will present a mapping of the key ones, at least in our perspective. It does not aim at being a comprehensive mapping: its scope is to present and discuss the elements that could be crucial not only *de jure condendo*, but also *de jure condito* – even if there is a wide gap in the legislation of almost each state (it may dramatically vary, though: most lawmakers do not explicitly regulate this field despite its growing importance – see *infra*, par. 5): this means that in many cases it can be difficult to understand which rules should apply in the e-sport sector.

12 *See* https://stillmedab.olympic.org/media/Document%20Library/OlympicOrg/IOC/What-We-Do/Olympic-agenda/Olympic-Agenda-2020-5-15-recommendations.pdf.

13 Jin D., *ESports and television business in the digital economy*, in Jin D. (ed.), *Korea's online gaming empire*, MA: MIT Press, Cambridge, 2010, 59–79.

With the above in mind, it is useful to start discussing the role of publishers, teams, and players.

In brief, the publisher is the entity that (as the name suggests) publishes a videogame and that owns intellectual property rights on it. Videogames can be developed internally or by a third party (*developers*); in many cases, they can also be developed without the support of publishers (*indie* or *independent developers*). Please note that: (i) who owns the IPR has full control on each videogame (controls its code, its development, its rules, *etc.*); (ii) each videogame is a computer software whose use is regulated by an EULA – End User License Agreement; (iii) private and commercial uses may be differently regulated (each publisher may decide); (iv) copyright and consumer laws are crucial in the regulatory framework for videogames. This means that even if a videogame becomes a "sport", a single publisher may decide to stop its development, maintenance, supply, etc.: without specific regulations, it is like a divinity in the virtual "world" owned by the publisher itself. It can even decide for the termination of an "e-sport" and usually EULAs are not permissive also under this regard: its decision may be final (without considering the cases of bankrupt, among others).

E-sports teams are similar to sports teams and usually involves many people (obviously it may vary depending on several factors, such as its importance): internally, they range from players to coach, from president to analysts, from physiotherapist to nutritionist, etc; obviously, technicians may be quite relevant in ensuring that the "field" (i.e. the videogame) is always in a good shape. Externally, they range from fans to sponsors, from organizers to "federations", etc. Key legal issues involve the management of their intellectual property rights, the branding and the reputation of the team, the relationship with its staff, the management of social media and of players' image rights, etc. However, its administration can be very difficult in a legal perspective when no specific rules have been enacted: should a team be considered a regular business (it can be quite expensive and unfairly limiting the e-sport growth)? Or can it be considered like a cultural association (or a similar entity)?

E-sports players are key subjects within each team, but – as it already happens in sports – usually they are not only players, but also influencers with a strong presence in the social networks. In most cases they also manage their own accounts (at the time of writing, YouTube, Twitch, TikTok, Instagram, etc.) and derive income from them and from their sponsors. Without a specific regulatory framework, several questions may be raised: are they employed or self-employed? Which taxation regime should be applied (authors' rights, employment, etc.)?

This short list suggests other issues in a wider perspective, related to: (i) contract law; (ii) e-sports justice; (iii) privacy and data protection; (iv) protection of minors.

The first is related to the binding agreement between two or more subjects, such as: player/team; publisher/player and/or team; sponsor/team; sponsor/player; social network/player and/or sponsor and/or team; staff/team; organizer/. This short list makes clear how difficult it can be (and normally is) to fairly regulate these relationships, taking into account that while in some cases the agreement can be negotiated (e.g., player/team), in others will be much more difficult (e.g., social network/player and/or team).

The second pertains to the rules that govern each videogame and, consequently, of each e-sport (when a videogame constitutes an e-sport).[14] The publisher sets the "regulatory framework" of each game, including making all or a part of them as mandatory, or leaving this choice to end users (including event organizers); the enforcement is usually automatic and, in some cases (i.e. in some events), a human referee may also be added. However, given that each e-sport is a software, its code may be (and normally is) confidential; thus, sometimes it can be difficult to understand if a certain decision taken by the automatic referee was correct (for example, a neutral application of the objective rules). There is a need for players, teams, and fans' protection under this regard, considering that in our "black box society"[15] software are also "black boxes" and the result of an event could be altered in several cases that range from software bugs to fraud. Moreover, another delicate issue is related to bans (permanent or temporary) and to the possibility of obtaining a fast (and not expensive) legal protection (the timing of courts is much slower than the one of the industries and of the publishers).

The third issue is obviously related to any field of contemporary society and it is quite delicate because has an impact on all the natural persons involved, with particular regard to players and fans. In fact, e-sport events are held both online and offline, but they are usually streamed on the Internet: as a result, advertising can be exactly targeted; moreover, players are often influencers and become "public persons". While the current data protection framework aims at protecting a general right of controlling personal information, it is clear that fans (and viewers) are precious because they can be easily profiled online (and, thus, advertising can be really tailored on their preferences).

The fourth topic is a general one: while videogames and e-sports are now suitable for all ages, many players and viewers are young – and many of them are minors. It has an impact on several aspects, from their possible employment to gambling, etc.

This short mapping show how many legal issues arise from e-sports; nevertheless, at the time of writing most states did not create a regulatory framework.[16]

3. E-sports: a mapping of key issues.

E-sports have a great potential and a lot of work has still to be done by lawmakers. However, many issues arise, and many challenges should be faced: it is now useful to briefly present them. As in the previous paragraph, this mapping does not aim at being a comprehensive one: its scope is to present and discuss the elements that could be crucial not only *de jure condendo*, but also *de jure condito.*

[14] Please note that in a videogame there is a strict relationship between rules, gameplay and narratives: the abstract layer of the videogame is linked to the narrative layer by game rules (Ang C.S., *Rules, gameplay, and narratives in video games*, in *Simulation & Gaming,* 37, 3, 2006, 306-325).

[15] As well argued by Frank Pasquale, we live in "The Black Box Society" (Pasquale F., *The Black Box Society. The Secret Algorithms That Control Money and Information*, Harvard University Press, Cambridge, 2015).

[16] This is one of the reasons that led the Republic of San Marino, on proposal of the Secretary of the State Teodoro Lonfernini, to commission the drafting of an "E-sport Code" to Giuseppe Croari and Gianluigi Fioriglio. As stated in par. 5, it should be formally enacted in the following months.

With the above in mind, our attention will be focused on gambling, loot boxes, cheating and doping, (a sort of) permadeath, and "toxic behaviours".

Gambling is not something new, nor it is only related to e-sports. However, it is well known that it may become a severe problem and lead to gambling disorder: given that that an important target of e-sport is made of young people, attention must be paid. Obviously, a regulation would be of great benefit.

Loot boxes are virtual items that can be bought (using real money) by players and then redeemed to receive other virtual items within each game: as in a lottery or in a slot machine, attribution is (or should be) random. It is clear that their mechanics are similar to those of "traditional" gambling machines, such as the mentioned slot machines. This led some states (like Belgium in 2018) to consider them as a form a gambling, ordering their removal from videogames.

Cheating can also be a problem; it consists of a violation of the e-sport rules using software programs, match-fixing, and bug exploitations. Furthermore, doping may happen, as in sports, but it may be very difficult to test players, because many events are held online. Even when they are held in public, testing should always be clearly stated, and it seems that this problem is far from being solved (but, as suggested by a scholar, the e-sport industry could turn to WADA – World Anti-Doping Agency – to handle its doping concerns).[17]

Another issue can be theorized as a sort of permadeath, that is the death of a character within a videogame. But what about the death of an e-sport? It happens when a videogame – used as an e-sport platform – is made unavailable and all players and teams, including professionals, are not entitled to play it anymore (or they just cannot play anymore because events and series were managed only by the publisher, including in some cases the servers required to play). Only the law could help in finding and imposing a solution (for example, publishers could be forced to deposit the source code – in a safe place – of its software if marketed, formally or substantially, as "e-sport", and all its legitimate users could be legitimated to access it in specific case, such as bankrupt or if maintenance is not provided anymore).

Eventually, "toxic" behaviours are crucial in videogames. As in "traditional" communities, people may behave violating other people's rights and creating a "toxic" environment; this can be done both by players and viewers who comment on social networks and/or using chat or other interactive means provided by an organizer. This may include doxing, spamming, hate speech, sexual harassment, threats of violence, trolling, insulting, etc. Some of such behaviours are strictly regulated by several laws (e.g., hate speech), but it can be really difficult to enforce the rules, especially when players and viewers operate from different nations.

[17] Fashina O., *Doping in Esports: How and to What Extent can we Look to WADA for Guidance*, in *Sports Lawyers Journal*, 28, 2021, 19-48.

4. E-sports and Labour Law.

According to a common and (maybe too much) simple description, e-sports are "multi-played competitive videogames" with a great diffusion worldwide and a huge number of fans and teams.[18] This practice, expression of "our digitized society",[19] has been deeply analyzed from many and very different perspectives, psychological, sociological, and even medical. But the juridical point of view is not less relevant: in fact, e-sports rise many legal questions and involve several branches of law, among which intellectual property law and labour law. In these pages we will briefly deal with e-sports and labour law, but not before having considered as solved (in a positive sense) the preliminary problem *whether e-sports*, according to the european and international definitions, *are true sports*.[20]

Among the several labour law issues connected to e-sports, probably the most important one, not only from a theoretical but also practical point of view, is the qualification of employment *status* of professional e-sports players. We will focus on this question and on professional gamers, even if the e-sports environment includes several other characters such as editors, game developers (or content creators), tournament organizers, casters, influencers, often of different nationalities;[21] and the same legal status might be not suitable for all of them.

Furthermore, this preliminary question requests first the identification of the counterparts of e-sports players, within their juridical relationship: and for the players, this counterpart may be found in the *teams* or the *companies* which hire gamers for a single competition or a whole tournament.

In case of qualification of the agreement between e-sports players and teams in terms of *employment relationship* – which is surely the most protective solution, not only in the national but even in the EU labour law context –[22] many other consequences must be dealt with, such as the remuneration of the professional players, the protection of minors, the working time, the safety-at-work. Of course, the professional e-sports players considered *as employees* must be also granted a wage adequate to the quality and the quantity of their work[23] (see for example art. 13[24] of the "San Marino Code": *infra*). But, even if this protection is undeniable,

[18] *See* Scholz T., Völkel L., and Uebach C., *Sportification of esports-a systematization of sport-teams entering the esports ecosystem*, in *International Journal of Esports,* 2, 2, 2021; Hamari, J., & Sjöblom, M., *What is eSports and why do people watch it?,* in *Internet research,* 27, 2, 2017.

[19] *See* Jenny S. E., Gawrysiak J., Besombes N., *Esports.edu: An Inventory and Analysis of Global Higher Education Esports Academic Programming and Curricula*, in *International Journal of Esports*, 1, 2021.

[20] *See* Hallmann K., Giel T., *E-Sports: Competitive Sports or Recreational Activity*? in *Sports Management Review*, 21, 1, 2018, 17, who recalls the Council of Europe's European Sport Charter (1992) and the European Commission White Paper on Sport (2007); *see* also on this topic Hamari J., and Sjöblom M., nt. (4); Jenny S. E., Manning R. D., Keiper M. C., and Olrich T. W., *Virtual(ly) athletes: where eSports fit within the definition of "Sport*", in *Quest*, 69, 1, 2017, 1-18; Rosell Llorens M., *eSport gaming: the rise of a new sports practice*, in *Sport, Ethics and Philosophy*, 11, 4, 2017, 464-476; *contra,* Parry J., nt. (11).

[21] *See* Kołodziej T., *The influence of players' nationality on the effectiveness of eSports teams based on the example of The International DOTA 2 tournaments*, in *Review of Nationalities*, 9, 1, 2019, 87.

[22] As clearly demonstrates - for example - the presumption of subordination which is going to be posed for platform workers in the forthcoming EU Directive: *see* below, par. 5.

[23] Art. 28 of the UDHR.

[24] According to which «the remuneration must be fair and adequate to the full-time commitment of the professional e-sports contract».

it's not clear what could happen where (as in Italy) the national labour law doesn't include a statutory minimum wage, but only a minimum fixed by the national collective agreements:[25] would it be possible (or necessary) in this case to extend to the e-sports players a collective agreement of a similar sector (if existing)?

Moreover, a special attention must be paid to the protection of the professional players who are *minors*: this could be a common situation, considering that the career of an e-sports professional gamer starts very early and ends around the mid-twenties (i.e., sometime earlier than in the traditional sports).[26]

In all these aspects of the e-sports work relationship, the levels of protection depend of course on the configuration of the employment status of the players, becoming stronger and deeper in case of recognition of a true employment relationship.

Finally, about safety at the workplace, it must be considered that e-sports professionals aren't free from health problems, not only strictly musculoskeletal but also – for example – in form of eye illness, stress, burn-out and other psychological diseases.[27] This means that e-sports gamers, just as the traditional sports' professional players, need medical assistance, which could be (once more) stronger if provided within an employment relationship.

We will see, however, how many of these protections must necessarily pass through the recognition of the role and the representativeness of the e-sports Federations, not only at an international but at a national level. This question is crucial in the e-sports environment.

5. The (scarce) existing legislative framework.

Before proceedings with a deeper analysis of some of the above-mentioned questions, it's useful to remember *which countries* already have a specific legislation about e-sports.

In Europe, this is the case of France: the «Loi n. 2016/1321 - pour une République numérique», also called "Loi Lemaire", which in the art. no. 102 defines the professional e-sports player as «toute personne ayant pour activité rémunérée la participation à des compétitions de jeu vidéo dans un lien de subordination juridique avec une association ou une société bénéficiant d'un agrément du ministre chargé du numérique, précisé par voie réglementaire». Therefore, as we will see better in the next paragraph, art. no. 102 essentially deals with the individual labour contract of these workers, which must be a short-term contract ("CDD-Esportif") signed by a professional player and a company or an association

[25] About the Italian situation, *see* Menegatti E., *Il salario minimo legale. Aspettative e prospettive,* G. Giappichelli Editore, Turin, 2017.

[26] Hallmann K., Giel T., nt. (20), 17. Moreover, considering "the relatively short history of eSports development", it happens that "most coaches are former or current players whose age is close to the age of the players" (Kołodziej T., nt. (21), 89).

[27] *See* Leis O., Lautenbach F., Birch P. D., and Elbe A. M., *Stressors, associated responses, and coping strategies in professional esports players: A qualitative study*, in *International Journal of Esports*, 2022, available at https://www.ijesports.org/article/76/html; Smith M. J., Birch P. D., and Bright D., *Identifying stressors and Coping Strategies of Elite Sports Competitors*, in *International Journal of Gaming and Computer-Mediated Simulations*, 11, 2019, 22.

approved by the specific administrative authority ("ministre chargé du numérique"). Few juridical entities, at least in France, may satisfy this requirement.[28]

In Germany, even in lack of a specific regulation about e-sports, professional players could benefit from the so-called "Skilled Immigration Act" (Fachkräfteeinwanderungsgesetz) of 2020, according to which employers can apply for an accelerated procedure when hiring skilled workers coming from third countries.[29]

Proceeding within the European context, a huge (more than 80 articles) e-sports Code is going to be approved by the State of San Marino: it aims to provide for a complete regulation of the e-sports sector, including the discipline of the employment status of the professional players, considered by the Code itself as self-employed workers (see also below). Finally, a bill concerning «Discipline of electronic and virtual sports (*e-sport*) and connected professional and economic activities» has been recently (24 May 2022) submitted to the Italian Parliament. Due to the political situation and the anticipated end of the legislature, this document hasn't had any chance to be approved in a short time. Anyway, it may be considered as an important sign of interest towards a new and still unregulated (at least in Italy) discipline of sports work.

Outside the European boundaries, a specific legislation about e-sports exists in the Republic of Korea, where this kind of competition is particularly popular; maybe it's just for this reason that the Korean legislation - denominated «Act on promotion of e-sports» (2012: last amended 2020) – shows some peculiarities if compared to the others above mentioned. We could define its perspective as "statable", because it doesn't deal at all with labour law issues but aims to offer, from a *state* point of view, a «contribute to increasing people's opportunities to enjoy leisure time with e-sports».[30] In other words, this discipline is straight oriented towards what, in computer games studies, has been called "the Spectator Ecosystem".[31]

6. The employment status of e-sports professional players.

As said before, in the legal analysis of e-sports one of the most important issues involving labor law concerns the qualification of the employment relationship between professional players, their respective teams and/or competition organizers. The teams, clubs and e-sport associations could be identified, in conformity with the few existing legal provisions, as the negotiating counterparts in an employment relationship, and/or in a self-employment negotiating structure.

[28] Only five entities in France, according to Lombard J., *Faut-il reformer le contrat de travail esportif ?*, in *Victorie Avocats*, 10 May 2022, available at https://www.victoire-avocats.eu/faut-il-reformer-le-contrat-de-travail-esportif/ (accessed 30 September 2022).
[29] https://fachkraefteeinwanderungsgesetz.de/ (accessed 27 September 2022)
[30] *See* https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=55508&type=part&key=17 (accessed 27 September 2022).
[31] *See* Cheung G., and Huang J., *Starcraft from the stands: understanding the game spectator*, in *Proceedings of the SIGCHI conference on human factors in computing systems*, 2011, 768.

A very interesting and quite detailed model for the gamers' legal status is, once more, the French legislation. According to the above-mentioned law n. 2016/1321, art. 102, the professional player («joueur professionel salarié») has the *right* to have an employment relationship in the form of short-term contract («travail à durée déterminée») at least of 12 months (being the duration of a game season)[32] and up to a (renewable) term of five years: few exceptions concern the case of a shorter duration of the challenge or the need to supply another player, absent from work but having the right to maintain his job position (illness, pregnancy etc.).

Maybe the most interesting part of the French law is, however, the one providing an exemption, for this specific type of agreement, from a large part of the legal discipline of the short-term contract (CDD) provided by the *Code du travail*. In details, the principal non-applicable provisions of the Code regard the ordinary limitations to the duration of the labour contract; the necessity of a written agreement, with the indication of a specific reason for the temporariness of the contract; and the right to have an allowance for the termination of the contract. In case of violation of the essential rules of art. 102 and/or of the contract form, the relationship will be considered as a «permanent labour contract» and criminal sanctions could be applied.

In this specific orientation, the French legislation on e-sports follows a traditional pattern of the sport work legislation, as for example happens in Italy. A huge number of exemptions from the ordinary framework of the short-term contract is a well-known scheme in the traditional sports work and could be considered as appropriate even for e-sports, of course if the e-sports professional players are engaged in an employment relationship.

In the San Marino «E-sports Code» draft (art. 12), the individual employment contract has the shape of a short-term agreement, but "assimilated to a self-employment contract", and has a specific regulation within the Code itself. In case of violation of the Code provisions, the relationship will be transformed into a permanent employment relationship with application of the labour law «ordinary discipline». The same provision can be found in the Italian bill about e-sports, even if the alternative framework of the (subordinate) «agile work» (Law no. 81/2017)[33] is also eligible by the parties (art. 14 of the bill).

This legislative preference for a self-employment status cannot be considered as casual and without reason. There is an undoubted difficulty of qualifying the status of professional players in terms of employment relationship, that concerns, first of all, the identification of the employer, but even more the existence of a proper subordination, in terms – for example – of exercise of managerial power and etero-direction of the work performance. In this perspective, the choice of the "San Marino Code" and of the Italian bill – i.e., «assimilating» the e-sport individual labour contract to the self-employed work – is surely appropriate. However, the «assimilation» should be properly read as true and complete *qualification* of the player as self-employed worker; and this because it's common, either in the national and European labour law contexts, the opinion that a "third type" of work, as an intermediate

[32] Lombard J., nt. (28).

[33] About "remote work" regulation in the post-pandemic context, with a particular overview on the Italian legislation, *see* Senatori I., Spinelli C., *(Re-)Regulating Remote Work in the post-pandemic scenario: lessons from the Italian Experience*, in *Italian Labour Law E-Journal*, 14, 1, 2021, 213 ff.

juridical category between employment relationship ad self-employment, cannot be accepted.[34]

7. E-sports and sports work legislation: the Italian case.

An alternative way for regulating e-sports could be the introduction of specific provisions within a still existing legislation about working in the sports sector. This could have been the case for Italy, where a quite recent law has been approved in this sector (legislative decree no. 36/2021). However, this discipline doesn't consider e-sports at all, having clearly been thought (and written) only for «physical activities» or traditional sports.

For what concerns the athletes' employment status, current Italian legislation guarantees professional sports players a *legal presumption* of an employment relationship. Art. no. 27, co. 2, of the decree n. 36/2021 in fact provides that the sports professionals workers are presumed to be engaged in an employment relationship when practicing their job «as a principal or predominant activity and continuative». Anyway, a player can be also considered as self-employed, when the required performance is temporarily limited, that is: 1) he/she participates to a single competition or more competitions, but in a «short time»; or 2) he/she isn't bound to training sessions; 3) his/her commitment is limited to less than 8 hrs./week, 5 days/month, 30 days/year.

The greatest obstacle to the extension to e-sports of this very detailed and up-to-date Italian regulation comes from the necessity, for the individual labour contract of the player, to comply with a standard form approved jointly by the sport Federations affiliated to the CONI (Italian Olympic Committee) and by the players' Trade Unions. However, none of the international e-sports Federations has still got – in Italy and in the international panorama - the legitimacy to represent e-sports within the Olympic institutions; and the same lack of representativeness can be found on the side of Trade Unions, whose difficulties to represent the complex and articulate world of self-employed and informal workers is very well-known.[35] It's true that, in the international context, the dialogue between e-sports Federations or Leagues and the Olympic Committee is open, but only for what concerns non-violent games, that means for games simulating "real-life" sports, like car racing or soccer.[36]

In any case, the inclusion of e-sports in the framework of a still existing legislation would be a useful choice to guarantee the players a good level of protection at work. For instance, art. 32 of the Italian decree 36/2021 gives the (subordinate) professional player a medical assistance; but - once more - the medical supervision for sport professionals workers is

[34] In Italy see, for example, in this sense, Cass., sez. lav., 24 January 2020, n. 1663, in *Guida al diritto,* 2020, 9, 40, concerning the "Foodora" case about the employment status of the "riders" in the delivery sector; *see* also Countouris N., De Stefano V., *The Labour Law Framework: Self-Employed and Their Right to Bargain Collectively*, in Wass B., Heissl C. (eds.), *Collective Bargaining for Self-Employed Workers in Europe*, Wolter Kluwers, Alphen aan den Rijn,2021, 3 ff.

[35] For this kind of considerations about the controversial Trade Unions' role in representing platform workers, *see* Talarico M., *Platform: How to Protect and Ensure Working Conditions in These Hybrids of Markets and Firms? Example of New Mutualism*, in Perulli A., Bellomo S. (eds.), *Platform Work and Work 4.0: New Challenges for Labour Law*, Wolters Kluwer – CEDAM, Roma-Padova, 2021, 27. *See* also Forsyth, A., T*he Future of Unions and Worker Representation. The Digital Picket Line*, Bloomsbury, London, 2022.

[36] See Bates P., *Olympics will only incorporate esports simulation titles*, in *SP*, 13 December 2019, retrieved from www.sportspromedia.com/news/olympics-esports-simulation-ioc/

granted only according to the rules adopted by the sports Federations. This confirms that one of the major obstacles to the extension of the existing Italian legislation to e-sports is the above-mentioned lack of representativeness of the e-sport Federations.

Maybe the most important part of the Italian sports work discipline, in the perspective of e-sports, would be – as we noticed dealing with the French legislation – the great flexibility in the application of the ordinary labour law rules. For the traditional sports players covered by the presumption of subordination, large sectors and provisions of labour law are totally excluded by the decree no. 36/2021:[37] for example, the limitation to the employer's right to control on the worker's activity and illness; the conditions for changing the worker's activity; the protection against unfair dismissals. This list of exemptions, just like happens in the French legislation, would be very important for e-sports players, when (and if) considered as employees.

8. E-sports discipline and EU directive proposal on platform workers.

A different question concerns the possibility (or not) to include the e-sport workers in the boundaries of the EU proposal directive on platform workers. As it's well known, this proposal aims to «improve the working conditions of persons performing platform work by ensuring correct determination of their employment status» (art. no. 1) and provides a presumption of employment relationship for this kind of workers.[38]

The definition of "digital labour platform", according to the proposal, includes «any natural or legal person providing a commercial service» which must be provided «through electronic means», at the request «of the recipient of a service», involving the organization of work «performed by individuals», online or in a certain location. The increasing power of the digital platform is also put in evidence by the national legislation: a very recent Italian law (no. 118/2022) takes into consideration the possibility of recognizing an "economic subordination" of an enterprise to a digital platform who is playing a "determinant role" in reaching clients of the company or managing their data.

However, even if it's undoubtable that, for what concerns e-sport players, the work is performed through electronic means, and (perhaps) that e-sports themselves could be considered as a "commercial service", the counterpart of the players in the e-sports work relationships cannot be the "digital platform" in the sense made by the proposal, but the teams, clubs, or companies. The digital platform, on the contrary, could (at most) be seen as the «recipient of the service» offered by the company itself or, maybe better, the channel *through which* the service is offered, but not an "employer" in a proper sense.

[37] *See* Zoli C., *La riforma dei rapporti di lavoro sportivo tra continuità e discontinuità*, in *Rivista giuridica del lavoro e della previdenza sociale*, I, 2022, 57; Rocchini E., *Dal dilettante al lavoratore sportivo. Prime osservazioni sulla riforma dello sport*, in *Massimario di giurisprudenza del lavoro*, 2021, 407.

[38] Senatori I., *EU law and digitalization of employment relations*, in Gyulavari T., Menegatti E. (eds.), *Decent work in the Digital Age: European and Comparative Perspectives*, Hart-Bloomsbury, 2022, 57; Perulli A., Bellomo S. (eds.), *Platform Work and Work 4.0: New Challenges for Labour Law*, Wolters Kluwer – CEDAM, 2021.

Consequently, the above-mentioned proposal directive couldn't be applied to the e-sport players, especially for all the provisions connected to the «algorithmic management» (Chapter III of the proposal), and for the legal presumption of employment relationship (art. no. 4): presumption that – as seen before for the Italian sports work regulation - is not suitable for working in the e-sports environment.

9. Looking for the best framework.

Considering the exponential growth of the e-sports sector, a regulation of the matter is not only useful, but necessary, even in a direction of large flexibility, which is connatural to this kind of competitions and work.

E-sports workers' status could undoubtedly benefit from a specific discipline, which could be adopted, as alternative, according to one of the following frames: 1) a dedicated legislation within the boundaries of labour law (as happens in France); 2) a separate legislation, but in some way coordinated with ordinary labour law regulation (as seems to be happening in the San Marino E-Sports Code and in the Italian bill); 3) a niche discipline, with few norms in a broader existing sport work legislation. This last opportunity could have been possible in Italy, but the Italian legislator seems more oriented to the option 2), having recently submitted, as seen, to the Parliament a specific bill on this topic.

In conclusion, from a labour law perspective the employment relationship scheme doesn't appear to be actually suitable for e-sports workers, particularly for professional players. It's undoubtedly difficult to find in the e-sports work relationships the exercise of the employer's "managerial power" as traditionally conceived: and that's true even considering the broad evolution of the concept of "worker" in the EU law, according to which «the essential feature of an employment relationship is that for a certain period of time a person performs services for and under the direction of another person in return for which he or she receives remuneration»[39]. Even in this wide concept of subordination, self-employment negotiating structure must be considered as more adherent to the reality and to the needs of e-sports environment. But in case of a legislator's choice for an employment relationship framework, a short-term contract (as provided in the French legal discipline) is surely the best and the most fitting solution.

[39] *See* Menegatti E., *The evolving concept of "worker" in EU law*, in *Italian Labour Law e-Journal*, 12, 1, 2019, 71; CJEU, Case C-658/18, ECLI:EU:C:2020:572, UX v Governo della Repubblica Italiana.

19

Digital nomads' health and safety: the European perspective.

Davide Tardivo*

1. From the "factory paradigm" to the "diffused workplace". 2. The advent of "digital nomadism" as a radical form of remote working. 3. The short-circuit in the protections system: environmental risks and "non-predeterminable" places. 4. Is the employer responsible for OHS of employees working in a "non-predeterminable" place? 5. How to balance worker's OHS and freedom to choose the workplace?

1. From the "factory paradigm" to the "diffused workplace".

In the fight against Covid-19, Governments forced businesses to modify their organization to pursue at the same time a twofold objective: to preserve workers' health and safety and to avoid the collapse of the economy resulting from the complete paralysis of productive activities.[1]

Among the several measures listed by national[2] and supranational authorities[3] to prevent the spread of the infection within the workplace, the implementation of different forms of

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[1] During the period of the strictest confinement the Euro-area economy operated at between 25% to 30% below its capacity and in 2020 registered a contraction by about 8,3%; *see* European Commission, *Summer 2020 Economic Forecast: An even deeper recession with wider divergences*, 7 July 2020; more recently European Commission, *The EU economy after COVID-19: implications for economic governance,* 19 October 2021, COM(2021)662.

[2] For a global overview over different national approaches *see* ILLEJ, *Special Issue: Covid-19 and Labour Law. A Global Review,* in *Italian Labour Law e-Journal*, 13, I, 2020; on the Italian context *see* Pessi R., Sigillò Massara G., Topo A. (eds.), *Ammortizzatori sociali, welfare e diritto del lavoro dell'emergenza,* Giappichelli, Turin, 2022.

[3] *See* ILO, *COVID-19 and the world of work: Impact and policy responses,* 18 March 2020; ILO, *A policy framework for tackling the economic and social impact of the COVID-19 crisis*, May 2020.

remote working[4] played a crucial role as an alternative to the conventional "working in-person" model.[5]

At the beginning of the pandemic, these two ways of fulfilling the employee's performance (working in-presence and remote working) were traditionally considered antithetical to each other. The main reason lies in the current notion of "workplace", forged during the industrial revolutions and inspired by the *factory paradigm* emerging in the organizational theories developed in that period.[6] According to it, the core of the entire business organization is represented by the place (considered in its tangible dimension) where the firm is located: here the employer is used to organize the means of production, including the workforce.[7] In other words, according to the *factory paradigm* the physical place works as an employer's tool to coordinate the means of production and exercise its powers over them.

This led to an overlapping between the empirical place where the factory is based and the legal notion of the workplace.

At the supranational level, for instance, article 3, lett. c) of the ILO Convention no. 155/1981 on "*Occupational Safety and Health Convention*" states that the notion of "*workplace*" covers "*all places where workers need to be or to go by reason of their work"* but only if they are *"under the direct or indirect control of the employer*".

Similarly, Recommendation no. 164/1981, pt. 10, lett. a) provides that employers shall "*to provide and maintain workplaces, machinery and equipment, and use work methods, which are as safe and without risk to health as is reasonably practicable*". This means that the workplace "provided" by the employer is that place he can directly organize in compliance with "technical" obligations concerning the workplace design listed in pt. 3 of the Recommendation (structural features, lighting, ventilation, etc.).

[4] In this paper the concept of "remote work" includes slightly different and sometimes overlapping definitions used by different countries like "*telework*", "*work at home*" ("*home-based work*"), "*virtual work", "hybrid work,* but also "*telecommuting*" and "*smart-working*", as listed by Eurofound, *Telework in the EU: Regulatory frameworks and recent updates*, 2022. All these definitions share a common characteristic: the use of ICT and devices like smartphones, tablets, laptops to work outside the employer's premises. On the topic *see* also Eurofound, ILO, *Working anytime, anywhere: The effects on the world of work,* 2017.

[5] ILO, *Teleworking arrangements during the COVID 19 crisis and beyond,* April 2021.

[6] Described by Taylor F. W., *The principles of scientific management,* Harper & Brothers, 1911; *see* also Landes D. S., *The Unbound Prometeus*, Cambridge University Press, Cambridge, 1969; for an historical perspective *see* Finkin M. W., *Beclouded Work, Beclouded Workers in Historical Perspective*, in *Comparative Labor Law & Policy Journal*, 37, III, 2016, 603.

[7] Apart from few exceptions like home workers or traveling workers. In the former case the performance is carried out in a place (usually worker's home) which is in the exclusive worker's disposability; in the latter in a place which is not disposable for either the employer or worker. These cases present an "organizational link" to the physical location where the enterprise is based: the traveling workers, for example, leave from there to deliver goods or there receive the material to sell or distribute. *See* Mazzotta O., *Diritto del lavoro,* Giuffré, Milan, 2002, 386; Ichino P., *Il contratto di lavoro,* I, in A. Cicu, F. Messineo, P. Schlesinger (eds.), *Trattato di diritto civile e commerciale*, Giuffré, Milan, 2000, 286.

This notion of workplace, which influenced the concept of subordination itself[8], has been challenged by the advent of digitalization,[9] which questioned the assumption that in order to use machinery or carry out administrative tasks, workers had necessarily to be present within the enterprise's premises. Digital devices, in fact, allow to fulfill many of these performances in places different than the factory.

In this context, characterized by the increasingly development of ICTs applied in the workplace, public policies against Covid acted as a multiplier, starting an unprecedented large-scale experiment in mass remote working implementation.

Prior to the pandemic only a small part of European workers was teleworking (on either regular or occasional basis), ranged from 30% or more in certain Countries (Denmark, the Netherlands, Sweden) to 10% or less in others (Italy, Czech Republic, Poland and Greece).[10]

By contrast, in 2020, as a consequence of the *lock-downs* imposed by Governments, around 34% of all employees in the EU started teleworking.[11] The most remarkable growth in teleworking occurred in those countries most affected by the infection and where teleworking was developed even before the pandemic: in Finland, close to 60% of employees switched to remote working; in Luxembourg, the Netherlands, Belgium, and Denmark over 50%, in Ireland, Austria, Italy, and Sweden around 40%. A marked increase was experienced also in countries that had a lower pre-pandemic practice with teleworking (like Bulgaria and Romania), even though with lower percentages.[12]

The indirect and unintended effect resulting from the restrictions and in particular from the forced implementation of several forms of remote working has been an organizational and cultural change in enterprises' functioning. It became clear, in fact, how both the stage of technological development and the evolution of workers' tasks (more focused on "knowledge" activities) make it possible to overcome the "factory paradigm" and embrace a different organizational paradigm based on the idea of the so-called "diffused workplace".

The main feature of this new model - intimately related to digitization and whose advent was predicted many years ago[13] - is that it is no longer necessary to concentrate all the means of production at the same time in the same place to effectively coordinate them and achieve the productive aim. Thanks to the use of the Internet and digital devices, workers can carry

[8] The notion of subordination commonly refers to a person who provides part of his time to the employer for fulfilling his performance in someone else's place (the factory), *see* De Luca Tamajo R., *Il tempo nel rapporto di lavoro,* in *Giornale di Diritto delle Relazioni Industriali,* 1986, 433; Magnani M., *I tempi e i luoghi del lavoro. L'uniformità non si addice al post-fordismo,* in *WP CSDLE "Massimo D'Antona".IT,* 404, 2019, 2.

[9] On the evolution of remote working Nilles, J. M., *Telecommunications and organisational decentralization,* in *Transactions on Communications*, 23, 10, 1975, 1142–1147; Toffler A., *The Third Wave*, Bantam Books, New York, 1980; Messenger J. C. (ed.), *Telework in the 21st Century, An Evolutionary Perspective, ILO Future of Work series*, Edward Elgar-ILO, Cheltenham-Geneva; on Italian context among the others *see* Tiraboschi M., *Il lavoro agile tra legge e contrattazione collettiva: la tortuosa via italiana verso la modernizzazione del diritto del lavoro,* in *WP-CSDLE "Massimo D'Antona".IT*, 335, 2017; in general *see* Schwab K., *La quarta rivoluzione industriale*, Franco Angeli, Milan, 2016.

[10] ILO, Eurofound, *Joint ILO-Eurofound report, Working anytime, anywhere: the effects on the world of work,* 2019.

[11] Eurofound, *Telework and ICT-based mobile work: Flexible working in the digital age,* 2020. Further data are provided by European Commission, *Teleworkability and the COVID-19 crisis: A new digital divide?*, 2020.

[12] *Ibidem.*

[13] Simitis S., *The Juridification of Labor Relations*, in *Comparative Labor Law*, 1986, VII, 141: "*telework signals, despite its actual singularity, the transition to a new normality. The employment structures are ultimately no less radically modified than by industrialization*".

out "remotely" many of the same tasks that previously they could carry out exclusively within the enterprise's premises, without sacrificing productivity, which, on the contrary, in many cases came out increased.[14]

Therefore, in this perspective the organization is disarticulated into its most basic and not further divisible units, a sort of "organizational atoms" (represented by the employees and their devices), which are linked not by the physical place anymore, but by the ICTs.

2. The advent of "digital nomadism" as a radical form of remote working.

Remote work has not declined in the post pandemic. On the contrary, the interest in it considerably grew[15]. National legislations are encouraging its further development in order to increase flexibility in work arrangements.[16] Trade unions and employer associations started the negotiations to review the European Framework Agreement of 2002.[17] Companies are now used to include it among the "benefits" offered to employees in recruitment and retention campaigns.

This trend allowed particularly "radical" versions of remote working to consolidate and further develop if compared to the past. One of them is the so-called "digital nomadism", whose origin dates back to a time well before the pandemic.

The definition of "digital nomad" appeared in 1997 as the title of Makimoto and Manners' book.[18] The authors argued that the inborn human need to move and travel,[19] along with technological development (through the Internet and the progressive miniaturization of mobile devices) would lead to the creation of new communities of traveling workers, who are capable of bringing "*the facilities of home and offices in their pockets*".

So, digital nomads act within the employer's organization as 'organizational atoms' located in different places worldwide but connected to it through digital devices and company's rules (on-call hours, obligation to return to company premises if called back, etc.).[20] In fact, according to one of the most recent definitions, they are knowledge workers from different countries (not only Western countries) and different ages[21] "*who embrace a location-independent,*

[14] European Commission, nt. (11); *see* also Choudhury P., *Our Work-from-Anywhere Future*, *Best practices for all-remote organizations*, in *Harvard Business Review,* November-December 2020.
[15] About the 'legacy' of the pandemic on remote working regulation and functions *see* Brollo, *Lavoro agile per i lavoratori fragili: lezioni dalla pandemia,* in *Argomenti di Diritto del Lavoro,* 2022, III, 405; Caruso B., *Tra lasciti e rovine della pandemia: più o meno smart working?,* in *Rivista Italiana di Diritto del Lavoro,* 2020, II, 215.
[16] Eurofound, nt. (4), 10.
[17] On 28 June 2022, the European social partners signed a joint *2022-2024 Work Programme of European Social Dialogue,* that includes negotiations on legally binding measures to regulate telework.
[18] Makimoto T., Manners D., *Digital nomad,* Wiley, New York, 1997.
[19] From a different perspective *see* also Bauman Z., *La società dell'incertezza,* Il Mulino, Bologna, 1999.
[20] Richards G., *The new global nomads: youth travel in a globalizing world*, in *Tourism Recreation Research*, 40, III, 2015, 340-352.
[21] According to Macinelli F., *Digital nomads: freedom, responsibility and the neoliberal order,* in *Information Technology & Tourism*, 22, 2020, 425: "*Research participants came from advanced capitalist countries (the United States, the UK and Europe), with the exception of a Chinese participant who had studied in the US. Although online observations suggest that digital nomadism is not bound to "Western countries" per se, all the interviewees held "strong" passports and explicitly described their passports as*

technology-enabled lifestyle that allows them to travel and work anywhere in the internet-connected world". [22] In other words, "*a new lifestyle of leisure travel enabled by digital work, allowing them to earn a living while traveling as a way of life*". [23]

They differ from "*regular remote workers*", who usually stay in one place or shuttle back and forth between their home or their second house, because they travel different countries around the World, and within the same country different places, while working.[24]

This leads to place digital nomads in a peculiar position within the categorization of remote workers provided by the ILO and Eurofound, which is based on two factors: their place of work (home, office or another location) and the frequency of their working activity outside the employer's premises. Looking at these two factors, the following groups were identified: *i)* regular home-based teleworkers; *ii)* occasional teleworkers (with mid-to-low mobility); and *iii)* high mobile teleworkers (with high frequency of working in various places, including working from home).

Digital nomads could be included among the "high mobile teleworkers", even though they are characterized as having a much more tenuous connection to "home" compared to traditional teleworkers, since they often do not have a fixed domicile in the country/region where the firm is based.

Just as happened with the remote working in general, the advent of the paradigm of "diffused workplace" greatly supported also the development of the digital nomadism, attracting the interest of both public Authorities and collective actors.

National governments and local authorities, for example, have realized that attracting these workers, who are also "consumers" (often with a middle-upper income), could support the development of those local economies based on tourism. For those places this could represent an answer not only to the considerable damages suffered because of the pandemic, but also to those negative phenomena like depopulation related to their peculiar position (e.g., mountain territories), or to the absence of main services (e.g., rural villages) or again to the peculiar lifestyle they ask to adopt (one of the most famous cases is Venice, where mobility and the access to public services are peculiar).

In other words, digital nomads are seen by public authorities as workers who invest their time and money in local economies, without taking local jobs, but on the contrary building bridges with local communities and their knowledge workers. In other words, a win-win

facilitating their mobility strategies. Although, their income varied because of age and status differences, they could all be considered middle-class individuals, meaning that in their country of origin they lived a comfortable life, with stable housing, educational opportunities and disposable income for travel and leisure. All participants except one held a university degree. At the time of the interviews, they had traveled between 5 months and 8 years (with an average duration of 2 years for the whole group). Many of them had no permanent residence in their home country, where their only roots were the presence of relatives and a storage space where they kept some of their belongings. Most of them envisioned their mobility choice as permanent, although, during the course of my study, a few participants settled down, either returning to their country of origin or opting for an expatriate life in Europe or South-East Asia. This finding suggests that this form of mobility might evolve into migration, likely toward lower-cost destinations. My participants described themselves as "slow travelers" and moved seasonally between 3–5 destinations a year, the length of their stay largely determined by visa regimes (…) Those with advanced computing skills, such as programmers or web designers, had an easy transition to remote work".

[22] Everson M., King S., Ockels C., *Your Company Needs a Digital Nomad Policy*, in *Harvard Business Review,* 12 July 2021.

[23] Schlagwein D., *The history of digital nomadism,* in *International Workshop on the Changing Nature of Work,* 2018*,* 1-5.

[24] According to Macinelli F., nt. (19), 418.

situation, which is the opposite of the so-called "telemigration" of companies, where corporations remotely hire employees from cheaper-salaries countries taking jobs away from local workforce.[25]

So, during the Covid-19 pandemic many countries began offering specific visas for digital nomads (tropical destinations like Costa Rica, Mexico, Ecuador; beautiful islands as St. Lucia, Barbados, the Seychelles; but also, northern countries like Estonia, Iceland, Norway).[26] Other countries, including several European Union members (like Czech Republic, Germany and Spain) and many Southeast Asian countries (as Thailand, Indonesia), expanded their existing short-term work visas. Portugal, for example, offers a two-year renewable residence visa for workers who can prove they work remotely for the length of their stay. On March 2022, Italy as well introduced a special visa for "digital nomads", easier to obtain than traditional visas and residence permits for work purposes,[27] introducing also a legal definition of "digital nomads": "*third-country citizens who carry out highly skilled jobs through the use of technological devices that enable them to work remotely, either independently or for an enterprise, including one that is not resident in the territory of the Italian Republic*".[28]

As mentioned, the interest in this phenomenon is also growing between private actors. A growing number of companies are offering "remote job" positions, coupled with the option to "work from anywhere": no matter where, whether at home or abroad. Companies like Zapier, GitLab, and Doist, have embraced a total remote working model, abandoning entirely the traditional offices. Others, like Shopify, decided to maintain physical office locations, while ensuring, however, the primacy of remote work. Still others are testing remote hybrid models, allowing remote work only for certain roles or (as Google announced in 2021) allowing annual periods of work from anywhere.

Without doubt, the combined effect of both public and private policies will support the growth expected for digital nomadism. Although there are no certain data, someone argues that there are currently about 35 million digital nomads worldwide (including self-employed and employees) and that by 2035 this number could rise to over a billion.[29]

The progressive spread of such policies makes it possible to distinguish within the category of "remote work" two typologies additional to those listed by the ILO-Eurofound report, especially having regard to the place of performance.

First, *"remote work from a predetermined or predeterminable place"*. This hypothesis occurs when the employer knows the exact place where the worker will perform his tasks (in this case we have a "predetermined" place), or at least its characteristics of risks for his occupational health and safety (OHS) (in this case we have a "predeterminable" place).

Second, "*remote work in a non-predeterminable place*". This case happens when the employer does not previously know the place where the employee will fulfill his performance, because

[25] Baldwin R., *The Globotics Upheaval: Globalization, Robotics and the Future of Work,* Oxford University Press, Oxford, 2019.
[26] For a detailed list *see* Choudhury P., *How "Digital Nomad" Visas Can Boost Local Economies,* in *Harvard Business Review,* 27 May 2022.
[27] *See* article 6-*quinques*, par. 1, lett. a), Law Decree no. 4/2022 that modifies article 27 Legislative Decree no. 286/1998.
[28] Article 27, par 1-*sexies* Legislative Decree no. 286/1998.
[29] *See* data at *www.levels.io/future-of-digital-nomads*.

the choice is completely left to the workers' discretion, who is not obliged to inform the employer in accordance to the company's policies.

3. The short-circuit in the protections system: environmental risks and "non-predeterminable" places.

As a special kind of remote work, digital nomadism shares with the other typologies of work outside the employer's premises many positive aspects for individuals and organizations, but also several risks, especially for workers' health and safety.

Among the strengths, leaving aside the positive result achieved against Covid-19, remote work, as well as digital nomadism, are proven to be organizational models which increase the productivity of individuals and organizations as a whole, providing more flexibility and opportunities to enhance work-life balance, and in general ensuring an improvement of the well-being at work.[30]

With regard to the risks to which digital nomads are exposed, they essentially overlap with those affecting the other categories of remote workers. Namely, studies and the literature[31] define among the others: *i)* ergonomic issues (e.g., musculoskeletal issues, eye fatigue, etc.) in the absence of proper office equipment and furniture; *ii)* pervasiveness of information and communications technologies in employee's privacy; *iii)* blurring boundaries between work and private life, at the risk of developing workaholism and work-life conflicts; *iv)* isolation, detachment from colleagues and the organization itself; *v)* the proper functioning of digital devices assigned by the employer.

In general, the duty to protect the occupational health and safety of the employees (including remote workers) requires the employer to evaluate "*all these risks*" and adopt every proper measure to eliminate them or reduce their impact.[32]

Specific provisions were introduced to face some of the aforementioned risks. For instance, to prevent isolation, the worker is required at least periodically to go to the company's premises.[33] Work-life conflicts can be managed looking at the existing working

[30] Eurofound, ILO, nt. (10), 33.

[31] Eurofound, *Telework and ICT-based mobile work: Flexible working in the digital age*, 2020; EU-OSHA, *Telework and health risks in the context of the COVID-19 pandemic: Evidence from the field and policy implications*, 2021; Oakman, J., Kinsman, N., Stuckey, R., Graham, M., Weale, V., *A rapid review of mental and physical health effects of working at home: How do we optimise health?,* in *BMC Public Health*, 20, 1, 2020, 1825; *see* also Pelusi, L. M., *La disciplina di salute e sicurezza applicabile al lavoro agile,* in *Diritto delle Relazioni Industriali,* 2017, IV, 1041; Peruzzi, M., *Sicurezza e agilità: quale tutela per lo* smart worker*?,* in *Diritto della Sicurezza sul Lavoro,* 2017, I, 8; Maio, V., *La tutela della sicurezza, salute e socialità nel telelavoro,* in Persiani, M., Lepore, M., (eds.), *Il nuovo diritto della sicurezza sul lavoro,* Utet, Torino, 98; Pascucci, P., *Note sul futuro del lavoro salubre e sicuro... e sulle norme sulla sicurezza di rider & co.,* in *Diritto della Sicurezza sul Lavoro,* 2019, I, 37; Pessi, R., Fabozzi, R., *Gli obblighi del datore di lavoro in materia di salute e sicurezza,* in Fiorillo, L., Perulli, A., (eds.), *Il jobs act del lavoro autonomo e del lavoro agile,* Giappichelli, Torino, 2018, 227.

[32] Article 6, par 2, lett. b) of Framework Directive states that "*the employer shall implement the measures (…) on the basis of the following general principles of prevention: (a) avoiding risks; (b) evaluating the risks which cannot be avoided*".

[33] In Italy, *see* Article 18, par 1, Law no. 81/2017.

time legislation, the right to disconnect, as well as limitations on employer controls over employee's activity and privacy can be derived by the GDPR and national existing rules.[34]

On the other hand, the risks related to the good functioning of digital devices or to ergonomic issues seem to be easy to solve even for remote workers, including digital nomads, through proper equipment provided by the employer.

Nevertheless, there is a kind of risks particularly challenging to address and solve in the case of digital nomads: the so-called "environmental risks". They are those risks related to and arising from the characteristics of the physical place in which the employee decides to work and that must be evaluated by the employer in the risk assessment process.

We refer, for example, to the high probability of contracting diseases (e.g., malaria, or tropical diseases) or of being kidnapped or yet to become a victim of terrorist attacks, endemic crime, wildlife, natural events in specific areas (tornadoes, volcanoes, earthquakes, etc.). They should also be considered risks deriving from the high exposure to sunlight or from the stay in an unhealthy place, because of the heavy pollution or spillage of toxic material, or again risks arising from the lack of adequate medical assistance or infrastructures, transportation, and so on.

The question arises because, considering the case of a 'regular' worker (not a remote worker) sent on an overseas assignment, the case law of both common law[35] and civil law[36] countries confirm, also in the light of the provisions of the Framework Directive 89/389/EEC, that the employer must assess these risks when sending workers abroad, and must observe all further obligations, such as the provision of individual and collective protective equipment, education, training and information, etc.

If compared to remote workers, however, these cases are slightly different: these are workers still working abroad (like digital nomads) but sent in that specific place at the direct order of the employer himself. In these cases, therefore, although the physical place is not in the disposal of the employer, he knows the exact place/region where the employee will perform his service or at least he knows the hazard characteristics of the place where the

[34] *See* Pisani C., Proia G., Topo A., *Privacy e lavoro. La circolazione dei dati personali e i controlli nel rapporto di lavoro*, Giuffrè, Milan, 2022.

[35] In the case *Palfrey v Ark Offshore Ltd.,* England and Wales High Court, 2001 an employee, Mr. Palfrey, travelling to West Africa to work on an oil rig contracted a fatal malarial infection. He was informed by his employer that he did not need to be concerned about the risk of malaria considering the workplace was an oil rig. So, Mr. Palfrey took no anti- malarial medication before or during the trip but during the travel to the oil rig he slept on an island where he was bitten by a mosquito and contracted malaria, which became fatal. The High Court found a failure on the employer to take reasonable care to ensure the safety of the employee, because it was supposed to cover also the travel to and from the oil rig.
In another case *Durnford v Western Atlas International Inc.,* England and Wales High Court, 2003, an employee suffered a disc slip due to an improper minibus provided by his employer to transport him to the third-party site where he was working while abroad. The court found that the employer was liable because it had made the employee travel in unsafe conditions, exposing him to a foreseeable risk of suffering an injury.

[36] The Italian Cassazione civile, lav., May 29, 1990, n. 5002 found the employer responsible for the malaria contracted by an employee in Cameroon because he did not prove to have adopted every possible measure to prevent the employee from the infection, even though he knew that such humid region was the natural "habitat" of the anopheles; *see* also Cassazione civile, lav., March 22, 2002, n. 4129 found the employer (a firm specialized in geological research) was liable for damages suffered by an industrial expert sent in Ethiopia to carry out geological surveys who had fallen victim to kidnapping by a group of guerrillas. The employer, although aware of the dangerous situation in the area, had not provide the necessary preventive measures.

employee has been sent. For this reason, he can usefully assess the risks and, consequently, manage it, by informing and training the employee, as well as he can (and indeed he must) take all appropriate preventive measures.

This is why the assessment of "environmental risks" in the case of digital nomads becomes particularly challenging. Especially when they have policies that leave to their total discretion to choose the place where to work, without informing in advance the employer, it is impossible to fulfill the duty to evaluate all the risks, especially those arising from the environment chosen by the employee to work in. In addition, there would also be no possibility of ensuring that the risk assessment is always kept updated, since the worker could change the place of performance without prior notice to the employer.

In other words, in this case it is impossible for the employer to assess the environmental risks, and to properly manage them, also by training and informing in advance the employee who plans to travel to a particular place abroad to work. The employer, indeed, does not know the precise city or region, nor even the general risk characteristics of the chosen place.

This leads to the question of whether in the case of digital nomads (especially those who work in "non-predeterminable" places) the employer's duty to protect employees' OHS has the same content if compared to the one concerning workers sent abroad by the employer himself (who work in "predetermined" places) or whether it suffers mitigations in favor of the employer, as argued by someone[37] and decided by certain Countries,[38] even charging on remote workers part of the risk assessment activity.[39]

4. Is the employer responsible for OHS of employees working in a "non-predeterminable" place?

At international level, there is no legal provision that explicitly answers this question and in general that addresses the rights and duties of employers and remote workers (nor even digital nomads) concerning OHS.

Nevertheless, it seems important to focus the attention on supranational legal sources, in order to determine whether a general principle, that should inspire and constrain national legislations, can be derived.

[37] According to the International Employers Organization (IEO) "*the limited control by the employers over the preventive and security measures taken in a working environment different from the workplace, represents some challenges to OSH compliance. Certain exclusions may be needed given employers limited control over the remote working environment (…) Responsibilities on the employers may need to be adjusted depending on whether the work is performed at the employee's home, or if it is performed elsewhere, including multiple locations (e.g. cafes, hotels)*", *see* IOE Position Paper on Remote Work beyond Covid-19 September 2021, 14.

[38] Polish Labour Code 29, article 67/17 provides that the employer is specifically released from the duty to ensure and care for the condition of the building/rooms in which work is performed or the duty to ensure appropriate hygiene and sanitary facilities.

[39] In some countries official guidance provides clarifications on the division of responsibilities between employers and employees. For example, the Irish Health and Safety Authority, *Guidance on Working from Home for Employers and Employees*, October 2020 states that fire detection and firefighting equipment are the responsibility of the homeowner. Also, household electrical supply and equipment provided by the employee for example sockets, lighting, or heaters should also be checked by the employee.

If we look at the ILO sources, the most relevant is certainly the Convention no. 155/1981 on "*Occupational Safety and Health*".

A literal interpretation of its provisions would argue in favor of the mitigation of the employer's duty of safety toward remote workers. In fact, if the main aim of the Convention is to inspire national policies "*to prevent accidents and injury to health arising out of (…) hazards inherent in the working environment*" (article 4, par. 2), this "working environment" is restricted to the places "*where workers need to be or to go by reason of their work and which are under the direct or indirect control of the employer*" (article 3, par. 1, lett. c). So, it could be said that the places chosen by digital nomads do not fit into the concept of "working environment"/"workplace" under the Convention. This at least for three reasons. First, because they are not under "*the direct or indirect control of the employer*". Second, because digital nomads do not "*need to be or to go* [there] *by reason of their work"*: the workers themselves have chosen that place without any employer's order. Third, the possibility of limiting "*in part or in whole*" the application of the principles of the Convention is expressly provided by the Convention itself for "*limited categories of workers in respect of which there are particular difficulties*" (article 2, par. 2). These could certainly include digital nomads, with respect to whom there are the aforementioned "*particular difficulties*" in implementing OHS measures.

This interpretation, however, is not persuasive.

The possibility of limiting the application of the Convention established in article 2, par. 2 must be considered an exception of strict interpretation. The same Convention, in fact, proposes to be applied "*to all workers in the branches of economic activity covered"* (article 2, par. 1). For this purpose, it adopts wider definitions of "workers"[40] and "branches of economic activity".[41] So, considering that the Convention has been approved in 1981, when remote work was in its early stages, the lack of an explicit provision cannot support the exclusion of such phenomenon, which, on the contrary, can be encompassed within the broad definitions adopted by the Convention. Furthermore, in the case of digital nomads the "*particular difficulties"* are not objective, but derives by the choice of the parties to not predetermine the places where the employee will work.

More insights come from the analysis of the regulatory sources of the European Union, and in particular from the Framework Directive 89/391/EEC on "*Safety and Health at Work"* and the EU Framework Agreement on Telework of 2002.

Even though the Framework Directive does not explicitly consider remote work, an analysis of some of its provisions leads to the conclusion that it is fully applicable to remote workers, and thus to digital nomads as well. It follows that the employer must fulfill also in respect of the latter all the obligations introduced by the EU Framework Directive, first and foremost the obligation to carry out a comprehensive risk assessment. There is, therefore, no mitigation of the employer's duty of safety toward digital nomadism, nor a limitation of liability.

The arguments in favor of this thesis are multiple.

[40] Article 3, par. 1, lett. b).

[41] Article 3, par. 1, lett. a): "*the term branches of economic activity covers all branches in which workers are employed, including the public service*".

First, the broad definition of "worker" in Article 3, which could certainly include digital nomads: in fact, it "*covers all employed persons, including public employees*", without any limitation.[42] Beneficiaries of protection are, therefore, all those who are parties to the employment relationship, regardless of the type of contract (e.g., full-time, part-time, permanent or fixed-term, apprenticeship, etc.). A fortiori, the simple manner in which the work activity is carried out (whether "in the presence" or "remotely") cannot be a factor for exclusion.

Second, the broad scope that inspires the Directive, which in accordance to Article 1, par. 1 is "*to introduce measures to encourage improvements in the safety and health of workers at work*". In this perspective, what is relevant to determine whether or not the OHS discipline is applicable is the execution of the performance, not the place or the way in which is carried out.

This definition should be read in light of the Directive's exclusion clause in Article 2 par. 2, which limits the possibility for states to disapply the principles of the Directive only to "*certain specific public service activities*". It is, therefore, a far stricter exclusion clause than that contained in the ILO Convention, since it makes no reference to "*particular difficulties*", but only to certain public services with particular duties (such as the army or the police).[43] Beyond these cases, all the activities should be entirely covered without any exceptions.

This expansive trend in the Directive field of application is also confirmed with regard to the employer's obligations in Section II. In particular, Article 5 identifies as the employer's first and crucial obligation "*to ensure the safety and health of workers in every aspect related to the work*" (article 5, par. 1). Undoubtedly among the "*aspects related to the work*" could fall a different way of carrying out the performance, like remote work or digital nomadism, which, moreover, is negotiated and authorized (through an individual agreement) by the employer himself.

Given the Directive also applies in full to digital nomads, in their regard the employer shall "*to take account of changing circumstances and aim to improve existing situations*" (Article 6, par. 1). In doing so he must conduct a new risk assessment (article 6, par. 2, lett. b) and adopt any consequent measures for this peculiar "group of workers".[44]

The fact that the employer must always evaluate in the risk assessment the physical place where the employee decides to carry out his work, and cannot instead disregard it, is confirmed by the same Article 6, par. 2, which includes among the "*general obligations on employers*" the duty to develop "*a coherent overall prevention policy"*. It shall cover - among the others - *"the influence of factors related to the working environment*". In addition, Article 6, par. 3, lett. a) requires the employer to "*take into account the nature of the activities of the enterprise and/or establishment*" to the end of "*evaluate the risks to the safety and health of workers, inter alia in (…) the fitting-out of work place*".

Such interpretation is confirmed by the provisions of the main EU regulation explicitly addressing telework: the EU Framework Agreement on Telework of 2002.

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[42] Article 3, par. 1, lett. a) "*any person employed by an employer, including trainees and apprentices but excluding domestic servants*".

[43] Article 2, par. 2: "*This Directive shall not be applicable where characteristics peculiar to certain specific public service activities, such as the armed forces or the police, or to certain specific activities in the civil protection services inevitably conflict with it. In that event, the safety and health of workers must be ensured as far as possible in the light of the objectives of this Directive*".

[44] Article 9, par. 1, lett. a) states: "*the employer shall: (a) be in possession of an assessment of the risks to safety and health at work, including those facing groups of workers exposed to particular risks*"; Article 15 prescribes: "*particularly sensitive risk groups must be protected against the dangers which specifically affect them"*.

In order to "*modernize work organization"* and provide "*a way for workers to reconcile work and social life and giving them greater autonomy in the accomplishment of their tasks*",[45] the social partners (ETUC, UNICE, UEAPME and CEEP) established "*a general framework at the European level to be implemented by the members of the signatory parties in accordance with the national procedures and practices specific to management and labour*".

For our purposes, this agreement seems to be applicable to digital nomads too. In fact, digital nomadism is covered by the definition of "telework" set in Article 2: "*a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis*". Contrary to what is usually assumed, this definition excludes "telework" can be carried out only in the worker's home or in any case in a single fixed location outside the company's premises. In such definition of telework, in fact, there is no mention of location (it merely indicates "*away from those premises"*) and thus, telework may include several workplaces alternative to the employers' premises, just as it happens in the case of digital nomadism.

This same definition, on the other hand, is very clear in establishing that the performance is carried out outside the company premises "*on a regular basis*". Since there is no further specification and, therefore, the evaluation of what is "regular" becomes highly discretionary (one day a week? six months per year? etc.). A useful element to be interpreted could be the adoption of policies at company level or the conclusion of individual agreements. In fact, if the parties intended to introduce contractual regulation (bearing the related costs), it seems that they consider this kind of performance as a stable characteristic of the employer's organization. In any event, this problem does not arise with regard to digital nomads, considering that in this case the regularity of the performance outside the company premises is self-evident.

Within the Agreement, the most relevant provision for our purposes is article 8 on "*health and safety*", that must be read in the light of the principle of equal treatment enshrined in article 4.[46]

Article 8 states that: "*the employer is responsible for the protection of the occupational health and safety of the teleworker in accordance with Directive 89/391 and relevant daughter directives, national legislation and collective agreements*". The employer "*informs the teleworker of the company's policy on occupational health and safety, in particular requirements on visual display units*".

After this provision, in article 8, par. 3 it follows the more controversial rule which states: "*in order to verify that the applicable health and safety provisions are correctly applied, the employer, workers' representatives and/or relevant authorities have access to the telework place, within the limits of national legislation and collective agreements. If the teleworker is working at home, such access is subject to prior notification and his/her agreement*".

Advocates of the argument that the employer's duty of safety with regard to remote workers (and even more so with respect to digital nomads) is mitigated and exempts him from conducting an assessment of "environmental risks", base their reasoning on the fact

[45] Article 1.

[46] Article 4: "*regarding employment conditions, teleworkers benefit from the same rights, guaranteed by applicable legislation and collective agreements, as comparable workers at the employers' premises*".

that in many cases it is impossible for the employer to "*verify that the applicable health and safety provisions are correctly applied*". In fact, neither the employer nor the workers' representatives and/or competent authorities have access to the place chosen by the remote worker to work.[47]

However, as is known, the second part of Article 8, par. 3 contradicts this assumption. It states that: "*if the teleworker is working at home, such access is subject to prior notification and his agreement*". The fact that the employee works at home, therefore, is only one of the possible options considered by the rule ("*if the teleworker is working at home*"), and only in this case the access by the employer/employee's representatives or other authorities would require his consent, given the constitutional protection of the domicile.

It follows that in other cases different than the worker's home, such consent would not be needed and access would always be permitted (as in the case where the remote worker decides to work in public places), as long as within the limits of what national laws on private property provide (as in the case where the remote worker decides to work in a private place, the owner well could oppose his refusal of access). It is therefore corroborated by the same agreement that there are cases where access cannot take place, but nonetheless the directive is fully applied. to them.

Moreover, especially with regard to digital nomads the employer "access" could also take place "remotely", (e.g., via video), allowing the employer to make the risk assessment, as it is suggested in some jurisdictions, like Ireland.[48]

In sum, there is no evidence from the analysis of the ILO and above all EU legal framework to argue that the duty of safety is only partially applicable or the related employer's liability is limited toward remote workers and digital nomads. The Framework Directive and every obligation therein finds full application to them.

5. How to balance worker's OHS and freedom to choose the workplace?

The analysis on supranational and EU legal framework leads to reject the idea that the content of the employer's duty on OHS is even reduced with respect to digital nomads, exempting him, for instance, from carrying out the risk assessment and from taking all the consequent measures (including worker information and training activities).

From this perspective, therefore, the position taken by some legal systems does not appear convincing when they mitigate the employer's safety obligation or transferred part of the risk assessment activity on remote workers themselves. Even though these rules aim to fill the gap of regulation created by the impossibility for the employer to access to the place of performance, these same rules seem to violate the basic principle introduced by the

[47] In this direction also the recent French "*Accord national interprofessionnel du 26 novembre 2020 pour une mise en œuvre réussie du télétravail*", point 3.4: "*Si les dispositions légales et conventionnelles relatives à la santé et à la sécurité au travail sont applicables aux salariés en télétravail, il doit être tenu compte du fait que l'employeur ne peut avoir une complète maîtrise du lieu dans lequel s'exerce le télétravail et de l'environnement qui relève de la sphère privée*".
[48] Irish Health and Safety Authority, *Guidance on Working from Home for Employers and Employees*, October 2020.

Framework Directive, burdening workers with part of the employer's obligations, first of all the risk assessment.

So, the employer's choice to avoid knowing where the digital nomad will perform his job is a decision that the employer can certainly make to increase the flexibility of the employee, but it exposes both the employer to liability for the violation of safety obligations and the employee to risks not evaluated and with respect to which he has not been trained and informed.

In this regard, for example, the choice to carry out the risk assessment via video can be useful even though does not appear completely satisfactory, since it does not prevent all "environmental risks". On the one hand, when this activity is carried out the worker is already in the place to be assessed, and, therefore, is already exposed to those risks.

On the other hand, it also does not seem acceptable for the worker to be required to communicate the specific place to which he intends to travel from time to time: this, in fact, would end up frustrating the spirit of digital nomadism and reducing the overall level of protections by encouraging elusive reactions like the use of false autonomous work.

Then, the most reasonable solution could be the following: the parties in the individual agreement must necessarily identify the places in which the worker believes he might perform his work (based in a specific region or country in the world) and the categories of places in which he reserves the right to work, rather than the kind of environment (e.g., home, a second house or an apartment, public places, libraries, coworking spaces, etc.).

Such list cannot be considered exhaustive if the parties simply exclude certain categories of places (e.g., places open to the public) or limit the employee's choice to others (e.g., quiet places with an Internet connection), as some argue.[49] This should be considered a general list that would not allow the employer to carry out an effective assessment of "environmental risks": how to do if the place not open to the public, for example, was in an area with a high risk of contraction of tropical diseases? In such case, defining a generic list would not allow an effective risk assessment to be carried out.

This appears to be the solution that at the same time allows the employer to fulfill his duty of safety (while also keeping preventive measures up-to-date with respect to changing events in a certain area of the world listed by the employee as potential places where to work: e.g., outbreak of infection, armed conflict, etc.) and the worker to be able to take full advantage of the benefits of digital nomadism, without which, of course, this phenomenon would disappear.

In this perspective, in accordance with the employee's general obligation to cooperate under Article 13 Framework Directive and under article 8, par. 2 of the European Agreement,[50] the worker should be obliged to notify the employer in advance not any changes within the places already listed and known by the employer, but the modification with respect to the places listed in the contract.

Again, the content of the individual agreement becomes crucial in order not to expose the company to frequent and costly updates of the risk assessment and measures of

[49] Assolombarda, *Il lavoro agile (Smart Working) Aspetti giuslavoristici, assicurativi e di salute e sicurezza*, 14, 2019.
[50] "*The teleworker applies these safety policies correctly*".

prevention. In this view, for example, the parties could limit in a certain number per year the possibility for the worker to add new regions/places listed in the agreement.

If the worker breaches the agreement, or otherwise violates the company safety policies, it is reasonable to argue that the employer should withdraw from the agreement, ordering the employee to immediately return within the company's premises.[51]

In addition, the clause in Article 5, par 4 of the Framework Directive should be strengthen: "*this Directive shall not restrict the option of Member States to provide for the exclusion or the limitation of employers' responsibility where occurrences are due to unusual and unforeseeable circumstances, beyond the employers' control, or to exceptional events, the consequences of which could not have been avoided despite the exercise of all due care*". Given the particular manner in which the digital nomad's performance is carried out, and the reduced opportunity for the employer to control and intervene in it, the worker's violation can certainly constitute a "*unforeseeable circumstance, beyond the employer's control",* suitable to exclude the "*employer's responsibility"*. In this regard, of course, national systems shall play a crucial role to introduce detailed rules that must to be inspired by these general principles.

On his side, the employer will only be able to enforce this clause, if he demonstrates that he has fulfilled all further obligations, and in particular those concerning training and information. Only a trained and informed worker, in fact, can effectively fulfill his obligations to cooperate in safety protection under Article 13 Framework Directive and Article 8 EU Agreement. The same Article 13, par. 1 states that the worker's obligations can only be fulfilled "*in accordance with his training and the instructions given by his employer*".

Once again, the individual contract becomes the primary tool for regulating different interests and balancing the worker's personal needs (the real basis for the development of digital nomadism) and the company's (which uses it as a tool for attracting talent and increasing productivity).

This makes it possible to prevent the worker's cooperation from turning into an unacceptable and unlawful transfer of part of the employer's obligations, first of all the risk assessment, to the worker.

[51] Article 6, par. 3, lett. b) states that when the employer entrusts tasks to a worker, he must "*take into consideration the worker's capabilities as regards health and safety*": this means the employer is obliged to not grant the opportunity to perform as a digital nomad (and in case to withdraw from the agreement) to those workers who have shown their inclination to violate safety rules.

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Agency of artificial intelligence tools in defining working conditions: towards a research agenda on the individual employment contract.

Zahra Yusifli*

1. Introduction. 2. AI for workplace management: Task allocation and evaluation. 3. AI's agency in shaping the working conditions. 3.1 Working time. 3.2 Remuneration. 4. Revising the role of the individual employment contract. 5. Discussion.

1. Introduction.

Regulation of algorithms and artificial intelligence (AI) for managerial purposes has been a challenging endeavour. A plethora of complex questions hinder the creation of comprehensive policies and legal frameworks: is AI akin to other emerging technologies at work? Is contemporary AI fair enough to manage workers, and what additional safeguards are necessary to prevent the risks of AI?

AI deployment is mainly at the employer's discretion; however, emerging literature points to legal friction between AI and labour rights. AI-powered tools are reported to discriminate against protected groups,[1] limit access to labour markets,[2] and weaken employment protections.[3] To mitigate risks and respond to potential AI harms, current regulatory proposals suggest the implementation of new digital rights for workers, enactment of policies promoting ethical AI, imposing legal obligations for vendors to create fair AI, and issuing

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[1] *See* Kim P., Bodie MT., *Artificial intelligence and the challenges of workplace discrimination and privacy,* in *ABA Journal of Labor and Employment Law*, 35, 2021, 289; Xenidis R., Senden L., *EU non-discrimination law in the era of artificial intelligence: Mapping the challenges of algorithmic discrimination*, in Bernitz U., Groussot X., Paju J., de Vries S.A. (eds.), *General Principles of EU Law and the EU Digital Order*, Kluwer Law International, 2020.

[2] Nugent S.E., Scott-Parker S., *Recruitment AI has a disability problem: Anticipating and mitigating unfair automated hiring decisions* in Aldinhas Ferreira M.I., Tokhi M.O. (eds.), *Towards Trustworthy Artificial Intelligent Systems,* Springer International Publishing, 2022.

[3] Soper S., *Fired by bot at Amazon: "It's you against the machine*" in *Bloomberg,* 2021, available at: https://www.bloomberg.com/news/features/2021-06-28/fired-by-bot-amazon-turns-to-machine-managers-and-workers-are-losing-out, 2021 (accessed 16 January 2023).

policy guidelines on AI-associated risks.[4] AI technology must be grounded in ethical standards such as transparency, explicability, and controllability. The premise of those proposals is that AI is a significant thread in the fabric of society. By promoting good policies, the outcomes of AI implementation would serve the greater good of workers.

In contrast to this notion, workplaces managed with the help of technology present an alternative landscape. Digital presence can be implemented at all stages of workplace organisation, such as recruitment, performance management, staff appraisal, task distribution, management, and evaluation of work. Even if inherent to digital labour platforms (DLP),[5] AI managerial practices are spreading to typical workplaces.[6] Technology enables an ongoing surveillance and is reported to track workers without their knowledge or consent. Instead of visualising AI tools as fully vested within the employer's prerogative, this article explores ways to find space for disclosing AI-managerial standards in individual employment contracts in typical workplaces. It focuses on the question of whether individual employment contracts can protect working conditions in workplaces managed by AI tools.

Existing labour law literature uses terms such as algorithmic management, automated decision-making systems, automation and machine learning interchangeably. From socio-legal perspectives, those terms often speak of the same risks associated with new technologies. Methodologically, this article refers to AI and relies on the following definition. AI is an area of computer science whose primary aim is to create digital systems that mimic the cognitive functions of the human brain, such as learning, reasoning, and planning. It makes decisions by combining data, algorithms, and computing power, typically without human interference.[7] While not all automated processes incorporate AI, employers use AI-powered tools to enhance automation. Depending on the resources and managerial approaches, employers either build AI infrastructure in-house or purchase it from external AI vendors.

[4] *See*, *inter alia*, the *Americans with Disabilities Act* and the use of software, algorithms, and artificial intelligence to assess job applicants and employees, 2022; White House Office of Science and Technology Polic, *Blueprint for an AI Bill of Rights: Making automated systems work for the American people*, 2022; European Parliament and European Council proposal laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain union legislative Acts, 2021.

[5] Platform work typically refers to work performed through, or facilitated by, web-based online platforms. The Directive of the European Parliament and of the Council on improving working conditions in platform work defines a 'digital labour platform' in Article 2(1) as any natural or legal person providing a commercial service which (a) is provided at a distance through electronic means, such as a website or a mobile application; (b) is provided at the request of a recipient of the service; and (c) involves, as a necessary and essential component, the organisation of work performed by individuals, irrespective of whether that work is performed online or in a certain location.

[6] This research uses the term 'typical' workplaces to refer to 'traditional', 'standard' or 'regular' and those that are in contrast to new forms of digital labour platforms. *See* how AI is integrated in typical workplaces in Baiocco S., Fernández-Macías E., Rani U., Pesole A., *The algorithmic management of work and its implications in different contexts*, European Commission, 2022; Clarke L., *Algorithmic bosses are moving beyond the gig economy,* in *Tech Monitor*, 2021, available at https://techmonitor.ai/leadership/workforce/algorithmic-bosses-changing-work (accessed 16 January 2023).

[7] European Commission, *White Paper on artificial intelligence - A European approach to excellence and trust*, 2020, available at https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf (accessed 16 January 2023).

Structurally, this article first focuses on how a task is assigned from employer to workers and how the integration of AI changes the agencies of parties to the employment relationship. It then outlines the parameters that constitute a working condition and considers the effect of AI on working time and remuneration. The following section discusses the merits of considering AI within the parameters of the terms and conditions of individual employment contracts. Finally, this article concludes that employment contracts could disclose more information on working conditions to create more stable workplaces.

2. AI for workplace management: task allocation and evaluation.

Employers and workers use AI-powered tools to advance their interests. In strict terms, it is either utilised by workers for occupational development or by employers to advance the interests of their enterprises. For workers, the array of thrilling AI possibilities is arguably endless - AI can assist in bypassing routine tasks, improving performance and accelerating work processes.[8] The employer's impetus for deploying AI is similar – optimising and maximising efficiency through automation that would otherwise require human resources. For AI to deliver, employers need data on workers which is usually facilitated by digital monitoring. Personal data variables can range from age, height, and heartbeat parameters to location indicators, the number of strokes made on the keyboard, and the amount of screen time.

Employers monitoring workers is not a new phenomenon. Within reasonable bounds, this ensures the completion of work following the needs of the enterprise. The development of technology diversified and enhanced methods of work monitoring. Data gathered from monitoring is used to measure productivity, make decisions about workplace management, and implement disciplinary measures. The granularity of collected indicators afforded by the advancement of technology allows for further optimisation of the workplace. AI analyses workers' information harvested from hardware and software gadgets such as installed sensors, wearable gadgets, or computer software. AI-powered tools assist employers in managing workers in warehouses, transportation, logistics, restaurant, and hotel sectors of economic activity.[9] One of the main ways AI changes the nature of work is through task management. To explore how AI-powered tools affect decision-making, this section focuses on an assignment of a task by an employer to a worker, completion, and evaluation of a task.

Work distribution and evaluation cycles are at the core of the employer's functions. Whether it is a long- or short-term assignment, a standalone or an auxiliary task, whether it demands teamwork or is foreseen to be completed independently, this cycle can be visualised by zooming in on the process of a single task allocation. On a rudimentary level, the employer assigns a worker a task within the rights and responsibilities granted by labour and employment law. Determining the parameters of the task is left at the employer's discretion, and the worker then must perform the task, often within a specific timeframe. The results

[8] Callaway E., *"It will change everything": DeepMind's AI makes gigantic leap in solving protein structures*, in *Nature,* 588, 7837, 2020, 203.
[9] Baiocco S., Fernández-Macías E., Rani U., Pesole A., nt. (6).

can be subject to the employer's performance assessment and affect future work distribution. Without digital interference, the roles and responsibilities of the parties engaged in a working relationship are definite. The nature of the task can vary across sectors and types of employment. It can range from answering incoming emails to independently writing code for a software program, from attending unclean workplaces spaces to writing an article on a developing story, and from giving a PowerPoint presentation to packaging a certain number of products per hour. This task allocation is present throughout the workplace hierarchy.

Upon the employer's discretion, AI features can be implemented for work distribution and evaluation. Employers can delegate decision-making functions at several stages of task assignments. Namely, the algorithm can generate the type of task the worker performs, keep workers under continuous monitoring while executing the task, and, once the task is concluded, algorithms can evaluate the worker's performance. Based on task completion metrics – parameters such as speed, location, accomplishment, and customer satisfaction rate – AI predicts a worker's success in the future and adjusts the worker's performance evaluation and score.

There are two points to note concerning the scale and degree of AI's use for work distribution and evaluation. First, the scale of AI deployment varies significantly on the workplace and AI products the employer uses. AI-powered tools gather information by scanning the workplace with digital devices, studying workers' and customers' behaviour, computing workers' movements, trying to foresee issues with customers and dispatching workers to attend to matters that might arise. While the technology can be implemented across all stages of task assignment, there is no empirical evidence of fully automated workplaces. Some employers only resort to automating task allocation, some monitor workers, and others generate feedback based on work performed.

Secondly, the degree to which AI is truly autonomous is also highly dependent on a case-by-case basis. Wood discusses the degree of automation and proposes six levels of automation varying from non- to fully- automated algorithmic workplace management.[10] He argues that the degree of automation can be evaluated by whether the AI and/or human can (1) control evaluation and discipline, (2) review the decision and (3) overrule the decision. Baiocco and others added that, in practice, most workplaces are only partially or conditionally automated.[11] Even in DLP, where the AI saturation is high, not all stages of workplace management are consistently automated.

3. AI's agency in shaping the working conditions.

A comparison between two settings – human and AI-generated work distribution and evaluation – gives a general representation of how AI influences employment relationships. These processes would trigger AI-generated task assignments, continuous monitoring, and evaluation of workers. Employers can assign tasks and manage the workplace as they deem

[10] Wood A., *Algorithmic management consequences for work organisation and working conditions*, in *JRC Working Papers Series*, 7, 2021.
[11] Baiocco S., Fernández-Macías E., Rani U., Pesole A., nt. (6).

necessary. This falls within the employer's prerogative - "management's authority to make unilateral decisions in the workplace".[12] The degree to which this discretion is regulated depends on a country's jurisdiction and labour laws. Regardless of the boundaries of employers' prerogative, the employer is the actor who chooses how and when to deploy AI. It is therefore that when coding AI software tools, the main objective is to create an optimized piece of technology for the employer to advance their interests.[13]

AI also augments automation and, to an extent, replaces managerial roles.[14] Extensive delegation of executive responsibilities to AI-supported systems weakens the position of managers. AI, however, only partially substitutes the managerial class. The employer remains an entity even if the decision-making of the task allocation in part or whole is delegated to the AI. Instead, AI challenges the employer's agency – the employer's control over actions and outcomes. This section examines how AI-facilitated task allocation and evaluation can affect working time and remuneration standards.

3.1. Working time.

The regulation of working time is one of the cornerstones of working conditions. Limitations imposed on working hours were one of the first hard-won battles gained by organised labour movements.[15] As it is often mandated by individual or collective contracts, workers can anticipate a set work schedule. Sequential working days or weeks provide an overview of when "the worker is working, at the employer's disposal and carrying out his activity or duties".[16] The use of AI in work distribution can fragment, intensify, and prolong working time.

Work shift scheduling is one of the main managerial tasks that is automatised and often outsourced to external private AI vendors. Private companies such as Shiftboards, Percolata, Rotageek offer services in the warehouse, manufacturing, and energy sectors.[17] With the help of software, they automate and generate scheduling for workers. Applying the task's lifespan described in the previous section, employers outsource the allocation of work shifts, measurement of workers' engagement and attendance during the working time, and

[12] Racabi G., A*bolish the employer prerogative, unleash work law*, in *Berkeley Journal of Employment & Labor Law,* 43, 1, 2021, 79.
[13] Kellogg K.C., Valentine M.A., Christin A., *Algorithms at work: The new contested terrain of control*, in *Academy of Management Annals*, 14, 1, 2020, 366.
[14] Tschang F.T., Almirall E., *Artificial intelligence as augmenting automation: Implications for employment*, in *Academy of Management Perspectives*, 35, 4, 2021, 642.
[15] Reick P., *Why did organized labor struggle for shorter hours? A diachronic comparison of trade union discourse in Germany*, in *Labor History*, 60, 3, 2019, 250.
[16] European Union Directive 2003/88/EC of the European Parliament and of the Council concerning certain aspects of the organisation of working time, Article 2(1).
[17] For example, Percolata is a private company that is used to scheduled work judging on the compatibility of workers who conduct a shift together or the productivity of workers depending on the time of day. *See* Tanaka G., Liu Z., Wong G., Gao Z., Liu M., Cho PCT., Benjamin SK., *Method for Determining Staffing Needs Based in Part on Sensor Inputs,* 2016, available at https://www.freepatentsonline.com/y2016/0342929.html (accessed 16 January 2023).

processing evaluation of workers' performance. AI vendors stand out with claims to offer comprehensive solutions that would intelligently manage the workforce.

One of the ways AI optimises the use of the workforce is by breaking and shortening shifts as well as scheduling them more sporadically over the span of a week or month. Whether workers get a shift might depend on various factors, such as customer evaluation or monitoring of previously conducted work. This method can create on-call workforces where automated scheduling gives inconsistent work to employees and can cause precarity through irregular working hours. This puts work-life balance issues on the table and stability to plan working people's lives.

Technology changes not only the scheduling but also how workers manage their working time. Instead of entirely replacing workers, AI used in task allocation can impact workers' autonomy. When workers receive a task, they have a certain level of discretion of their own to consider the circumstances in the workplace and to make the decision on the execution of the task. Technology changes the nature of work and strips workers of their choices. Moreover, automation accompanied by AI alters working conditions by intensifying and speeding up the pace of work.[18] Optimisation of the workflow might increase the volume of work and define task execution methods more rigidly. Those systems are often inconsiderate of in-work breaks, resting time, and delays in completing tasks. Suppose the software directs a worker to attend to customers at the counter, and the worker does not reach the destination on time or does not resolve the matter efficiently. In that case, this can lead to evaluation and scoring matters. It is then that this score affects the decision-making that shapes the working conditions.

3.2. Remuneration.

Shorter and unpredictable shifts, intense working hours, and overtime leads to the discussion of the following working condition of remuneration. The remuneration includes "any additional emoluments whatsoever payable directly or indirectly, whether in cash or kind, by the employer to the worker and arising out of the worker's employment".[19] The base salary is determined by collective bargaining, individual labour contract or other relevant domestic labour laws. This can include overtime pay, commissions, vacation pay, any payments towards housing costs, employer contribution to pension funds, disability plans and other social security contributions. How and whether the domestic laws define the term remuneration depends on the respective countries.[20] AI's agency can change how employers calculate and allocate those indemnities.

[18] Wood A., nt. (10); Ball K., *Electronic monitoring and surveillance in the workplace,* Publications Office of the European Union, 2021.
[19] International Labour Organization, Convention on Equal Remuneration Convention, 1951 (No. 100), Article 1(a).
[20] *See* EPIC, *Equal pay around the world: Legal database,* available at https://www.equalpayinternationalcoalition.org/equal-pay-legal-database/ (accessed 16 January 2023).

Technology already plays a significant role in salary allocation. Employers have long been resorting to automation to optimise operations related to remuneration. Naturally, automation payment includes digitalised paychecks. The determination of base salary typically depends on the terms and conditions of the employment contract. Salary uncertainties are typical for DLP as workers are reported to experience irregular earnings, and delayed, or unpaid orders.[21] The standby time is not counted towards working time and workers are not being compensated for shifts or orders cancelled last minute.[22] The DLP workers, however, present a rather extreme example where the law does not protect workers as they are often classified as self-employed.

The scenario that is more likely to unveil in typical workplaces is the determination of bonuses and other remuneration factors. Customer feedback and scoring of workers in the service economy, for example, is already determining some or all elements of remuneration.[23] Such practices are at the core of the DLP business model and might become an essential feature of typical workplaces.[24] The company Workforce, similar to other vendors providing software products, offers to integrate payroll in relation to shifts covered, attendance and overtime. It promises to simplify everyday operations, integrate work-related business in one spot, and allocate rewards and bonuses. Frequency and the amount of remuneration, typically terms and conditions discussed in the contract, can be outsourced to an application. In that scenario, workers might experience missing paychecks if work is not completed to the standards of the application.[25] Tying elements of remuneration to the task completion measured by AI-set productivity standards tighten the employer's control.

4. Revising the role of the individual employment contract.

The previous section discussed how task distribution facilitated by AI can be consequential in shaping working conditions. As it gains more potency in the decision-making process, the application of AI tools for managerial purposes reveals the fundamental issue of undisclosed technology and productivity thresholds. Private AI vendors process the data and measure workers' performance against often automatically generated productivity standards. Not only are these standards obscure, but they can also change over the period of employment and are implemented by the employer. If the employer cannot communicate – or even worse – understand the changing parameters against which workers are performing,

[21] *See* Schor J.B., Attwood-Charles W., Cansoy M., Ladegaard I., Wengronowitz R., *Dependence and precarity in the platform economy* in *Theory and Society*, 49, 5, 2020, 833.
[22] Safak C., Farrar J., *Managed by bots: Data-driven exploitation in the gig economy*, in *Worker Info Exchange,* 2021, available at https://www.workerinfoexchange.org/wie-report-managed-by-bots (accessed 16 January 2023).
[23] Darrah D., *How customer service surveys are eroding workers' rights,* in *Jacobin*, 2021, available at: https://jacobin.com/2021/04/customer-service-surveys-reviews-workers-rights (accessed 16 January 2023).
[24] Schweyer A., *The impact and potential of artificial intelligence in incentives, rewards, and recognition*, in *Incentive Research Foundation*, 2018, available at https://theirf.org/research_post/the-impact-and-potential-of-artificial-intelligence-in-incentives-rewards-and-recognition/ (accessed 16 January 2023).
[25] Gent C., *The politics of algorithmic management*, *Doctor of Philosophy Thesis*, University of Warwick, 2018.

it creates unclear working objectives. For workers, the overall problem comes from the lack of understanding of what is assessed and how work is evaluated.

To respond to the negative effect of AI presence on labour rights, the regulatory tide is heading toward creating an additional layer of regulation. Many of those initiatives are proposed with the intent to perfect the design of AI systems, create new digital rights, and restrict potential harm. They assume that translating ethical principles such as transparency, explainability, and traceability into the design of AI tools is advantageous for all parties to the employment relationship.[26] AI matters can also be addressed through the collective bargaining process,[27] laws mandating employers to disclose productivity thresholds,[28] and co-determination laws.[29]

The individual employment contract, however, remains unattended in this discourse. If AI management tightens workers' schedules, fragments their responsibilities, and narrowly dictates how to perform work, there might be an argument to present regarding changing terms and conditions of the individual employment contract. The changing of working conditions is not inherently in violation of employment law or labour rights. AI accumulating greater agency in the determination of working conditions, however, raises some salient questions. To consider these matters further, it is necessary to lay out the parameters of working conditions and how they are positioned within the employment relationship.

Labour laws define the standards of some working conditions. They are reaffirmed in employment relationships in terms and conditions of the individual labour contract or collective agreements. Working conditions arise from the rights of workers and are contract specific. According to canons of employment law, workers must familiarise themselves and understand and accept the terms of employment before starting a position. More so, the employer should provide workers with reasonable time to familiarise themselves and, in some instances, reasonable accommodations regarding upcoming changes in working conditions.

EU Council Directive 91/522/EEC of 14 October 1991 on an employer's responsibility to inform employees of the conditions applicable to the contract or employment relationship in Article 2 provides for "the essential aspects of the contract or employment relationship".[30] Those include parties to the contract, place of work, the title, grade, nature or category of

[26] Merits of those regulations are discussed at length elsewhere. *See,* for example, Kelly-Lyth A., *Dispatch no. 39 - the AI Act and algorithmic management*, in *Comparative Labor Law and Policy Journal*, 9, 2021.
[27] AI is emerging on trade unions' agendas and becoming a matter of collective bargaining. For example, the UK's Communication Workers Union includes algorithmic management in its collective agreement. The agreement emphasises that any decision concerning technology deployment must be negotiated with trade union representatives. *See* Communication Workers Union, *Collective Agreement*, 2022.
[28] *See* California Assembly, Bill 701 on *Warehouse distribution quota law*, 2022. It requires employers to disclose quotas in certain enterprises.
[29] *See* the German Works Constitution Act (Betriebsverfassungsgesetz) in Article 87(6) provides that in the absence of collective agreements, devices monitoring the behaviour or performance of workers are subject to the discretion of the works council. Sweden Employment Co-Determination in the Workplace Act (Lag om medbestämmande i arbetslivet) Article 11(2) mandates require employers consult with workers' organizations before implementing changes affecting working conditions. These provisions can keep workers informed and determine the technology that is implemented in the workplace.
[30] European Union Directive no. 91/533 on an employer's obligation to inform employees of the conditions applicable to the contract or employment relationship.

the work, a brief specification or description of the work, starting date, amount and frequency of remuneration, and length of the typical working day.

Directive 91/533/EEC is superseded in favour of EU Directive 2019/1152 of 20 June 2019 on transparent and predictable working conditions,[31] which should be implemented by the EU Member States per respective national labour laws in 2022. Until then, Directive 91/533/EEC remains in force. Directive 2019/1152 was introduced to tackle precarity related to job insecurity and the emerging atypical forms of employment in the world of work. In comparison to Directive 91/533/EEC, Directive 2019/1152 expanded the scope of application and ensured higher guarantees for workers to receive information on unpredictable factors defining working conditions.[32]

Directive 2019/1152 is a noteworthy instrument to consider in light of challenges posed by AI tools in typical workplaces. Article 4(1)(k) retains the provision from Directive 91/533/EEC which requires the employer to indicate the remuneration. In relations to working time, Article 4(2)(l) and (m) introduces the regulation of predictable and unpredictable working schedules. The first instance concerns a rather straightforward provision. If the work pattern is predictable, the employer should disclose the length of a working day or week, any arrangements for overtime and its remuneration, and any arrangements for shift changes. In the second instance, the employer should inform the worker with entirely or mostly unpredictable work patterns of the fact that the schedule is variable, of the guaranteed paid hours and of the remuneration for work performed in addition to those guaranteed hours. In addition, the employer should reference hours and days within which the worker may be required to work, and the minimum notice period to which the worker is entitled before the start of a work assignment.

This provision of Directive 2019/1152 narrows down the window of working hours when a worker can expect a shift and prescribes not only guaranteed working hours but also any remuneration entitlements. If called outside of the defined timeframe, the worker can "refuse a work assignment without adverse consequences" as per Article 10(2). Furthermore, Article 11 aims to prevent abusive practices by imposing limitations to the use and duration of on-demand contracts and a rebuttable presumption of the existence of an employment contract with a minimum amount of paid hours. These provisions reshape the employers' prerogative by restricting the flexibility with which the workforce can be scheduled. If scheduling is delegated to AI software, it should be able to intergrade the minimum protections afforded above. These measures preventatively eliminate the likelihood of sporadic working hours and guarantee wages for the worker – the conditions that could be altered by AI.

One of the missed opportunities of Directive 2019/1152 was omitting the expanded definitions of a 'worker', which was on the table at the initial stages of the negotiation.[33] This

[31] European Union Directive 2019/1152 on transparent and predictable working conditions in the European Union.
[32] Miranda Boto JM., *Much ado about anything? The new Directive (EU) 2019/1152 on ransparent and predictable working conditions in the European Union,* in Marhold F., Becker U., Eichenhofer E., Igl G., Prosperetti G., Miranda Boto, JM., (eds.), *Arbeits- und Sozialrecht für Europa*, Nomos Verlagsgesellschaft mbH & Co. KG, 2020, 157.
[33] Bednarowicz B., *Delivering on the European Pillar of Social Rights: The new Directive on transparent and predictable working conditions in the European Union*, in *Industrial Law Journal*, 48, 4, 2019, 604.

definition would have extended the right to information of the working conditions to all workers, notably to the atypical workers. Directive 2019/1152 ultimately applies to "every worker in the Union who has an employment contract or employment relationship as defined by the law, collective agreements or practice in force in each Member State with consideration to the case-law of the Court of Justice".[34]

On the EU level, Directive on improving working conditions in platform work (the Draft) picks up on this gap with the aim to regulate algorithmic management for people performing platform work, whether it is a self-employed or an employee.[35] One of its propositions concerns clarifying the algorithm which ultimately affects working conditions.[36] As it stands today, Article 9 of the Draft presents some people performing platform work with the right to information and consultation which obliges the employer to notify of significant changes in the algorithmic systems. Advising workers' representatives of any changes in advance of algorithmic deployment is a significant suggestion. AI systems are distinct due to algorithmic adaptability and automatic alteration in the decision-making process.[37] The Draft supplies a way for workers to understand changing AI management systems.

Both instruments, in essence, carve avenues for access to information regarding the working conditions. It is done by imposing obligations on the employer to communicate the potential time and effort required by the worker. Directive 2019/1152 aims to protect the immutable working conditions such as working time and remuneration that, as was argued in this article, can be compromised by the interference of AI agents. At the same time, Directive 2019/1152 has its limitations with regard to AI implementation. As it is not tailored within the context of evolving technologies, Directive 2019/1152 evidently does not tackle the matter of algorithms and AI in the workplace. It does not regulate the disclosure of the productivity thresholds workers are evaluated against. Even if it does not address all the issues that arise, Directive 2019/1152 offers a possible roadmap for a supranational legal instrument to regulate the composition of the employment contract to ensure the minimum level of protection. These obligations not only elevate the ethical AI systems but also translate those principles into the terms and conditions of the individual employment contract.

5. Discussion.

Employers are enjoying discretion on ways to manage a workforce. Assigning tasks is a quintessential feature of the employers' powers which affects workplace management and

[34] Directive 2019/1152, Article 1(2). Apart from Article 9 on information and consultation and Article 7(2) on some provisions on human monitoring of automated systems, algorithmic management provisions also apply to self-employed platform workers.
[35] Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, COM/2021/762 final, Chapter III.
[36] Aloisi A., Potocka-Sionek N., *De-gigging the labour market? An analysis of the "algorithmic management" provisions in the proposed Platform Work Directive,* in *Italian Labour Law e-Journal,* 15, 1, 2022, 29.
[37] De Stefano V., *The EU Commission's Proposal for a Directive on platform work: An overview*, in *Italian Labour Law e-Journal,* 15, 1, 2022, 1.

working environments. The ability of employers to delegate their managerial functions to AI and to continuously track and monitor workers expands and amplifies employer powers. This can result in consolidation of information causing asymmetries that affect jobs with poor protections,[38] worker displacement to more precarious forms of work,[39] and the exacerbation of societal inequalities.[40]

For too long, the employment contract has been the symbol of the employer's entitlements and control while it left workers with undefined working terms and conditions.[41] There are specific ways these principles should be revisited to avoid risks associated with AI involvement. Reliance on AI can be definitive and formative of working conditions such as working hours and remuneration. It is therefore that even the fairest of AI can modify contractual terms. This article explored how employers can disclose the use of AI in decision-making through the employment contract.

Especially in non-unionised settings, the law could mandate that employers foresee AI-related matters in the terms and conditions. As AI management advances to typical forms of employment, Directive 2019/1152 can be a blueprint for making working conditions more predictable. This approach does not contradict other suggestions to limit AI's adverse effects. For that, the regulatory bodies need to push to unleash the potential of individual employment contracts to empower workers. In one way or another, the employer who exercises the prerogative to deploy AI should also bear the responsibility for its consequences. AI is not sophisticated enough to be completely autonomous, and it is questionable whether it will ever be. Therefore, AI is auxiliary to managerial tools and instrumental to expanding employers' powers. Regardless of the sophistication and innovation of AI-powered systems, they remain to be nothing more than tools that can be communicated, disclosed, and used for the amelioration of workers' rights.

When Directive 2019/1152 was adopted, it did not expand its scope to protect the most vulnerable of DLP workers. This was considered a failure.[42] Directive 2019/1152, however, can emerge as an unexpected and timely ally against AI-related risks for typical workers. This brief contribution considered working time and remuneration, but the literature examines the interplay between AI and other working conditions, such as occupational safety and health.[43] The road ahead lies with the need for more empirical studies of AI's potential to change working conditions at sectoral levels, deeper analyses of the terms and conditions vis-à-vis AI, the study of Directive 2019/1152 implementation by Member States, and the landscape for the necessary domestic labour law reforms to solidify the right to information.

[38] Racabi G., nt. (12).
[39] Berg J., *Protecting workers in the digital age: Technology, outsourcing, and the growing precariousness of work,* in *Comparative Labor Law & Policy Journal*, 41, 1, 2019, 69.
[40] International Labour Organization, *Inequalities and the world of work*, ILC.109/IV(Rev.), 2021, available at http://www.ilo.org/ilc/ILCSessions/109/reports/reports-to-the-conference/WCMS_792123/lang--en/index.htm (accessed 16 January 2023).
[41] Deakin S., *Formation of the Contract of Employment,* in Freedland M., Bogg A., Cabrelli D., Collins H., Countouris N., Davies A.C.L., Deakin S., Adams-Prassl J. (eds.), *The Contract of Employment*, Oxford University Press, 2016, 386.
[42] Bednarowicz B.., nt. (33).
[43] Todolí-Signes A., *Making algorithms safe for workers: Occupational risks associated with work managed by artificial intelligence*, in *Transfer: European Review of Labour and Research*, 27, 4, 2021, 433.

Regardless of future development, there is a need for an academic agenda to revisit the role of the individual employment contract when AI sets and changes terms and conditions. This approach is worth exploring as it can curtail the powers of the employer and inform workers of emerging technologies that affect their working environment. This partial solution will only remedy some problems with AI; nevertheless, it will build a foundation to increase employer accountability.

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