

The accessibility of workplaces: new challenges for equal opportunities in the AI era

Massimiliano De Falco*

1. Breaking barriers: Artificial Intelligence (AI) and equal opportunities in working contexts. 2. The International principle of accessibility for persons with disabilities. 3. The European actions on accessibility. 4. The Italian case as a benchmark for effective accessibility implementation. 5. From *work-place* to *work-organization*: the necessary path of accessibility in the AI era. 6. Closing remarks.

Abstract

The paper aims to examine the international principle of accessibility for persons with disabilities, emphasizing its significance in the current economic and social context. Drawing from the International and European legal provisions, the discussion focuses on the Italian case, both as a virtuous benchmark and as an effective representation of a standing framework. Set in the field of Labour Law, the issue is addressed by exacerbating the need to ensure accessibility not only in the workplaces *stricto sensu*, but also in the work organization as a whole, arguing that this challenge has become even more pressing in the AI era.

Keywords: Artificial Intelligence; Persons with disabilities; Accessibility; Workplaces; Work organization

1. Breaking barriers: Artificial Intelligence (AI) and equal opportunities in working contexts.

The advent of Artificial Intelligence (AI) in our society is a relatively recent phenomenon, marking the latest stage in an evolutionary trajectory, driven by technological progress and digitization. The exponential growth in its use has been essentially driven by three unprecedented factors: *i*) the introduction of increasingly powerful hardware systems, with enhanced computational capabilities; *ii*) the availability of an immense volumes of data (commonly known as “big data”), enabled by internet and global network connectivity; *iii*) the development of software systems based on algorithms capable of generating knowledge (so-called “machine learning”), rather than merely executing pre-defined operations.¹

In common parlance, AI is understood as a technological tool that processes data through learning mechanisms – following a deductive, or inductive, model – capable of “replicating”

* Research fellow in Labour Law at the University of Udine (Prin Prot. 2020CJL288 INSPIRE – Inclusion Strategies through Participation in Workplace for Organizational Well-Being), massimiliano.defalco@uniud.it.

¹ See: Boscato A., *Artificial Intelligence and fulfilment of working tasks: rules and responsibilities*, currently in the process of being published in the *Book* dedicated to VI Colóquio Italo-brasileiro de Direitos Sociais: diálogos transdisciplinares, University of Milan “La Statale”, January 21-23, 2025 (also for further references).

human reasoning. However, from the legal perspective, it was recently defined by Regulation 2024/1689/EU (“European AI Act”),² which provided that «AI means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments» (Art. 3, par. 1).³

In addition to providing a “universal” definition,⁴ the European legislator provided a set of rules aimed to «promote the uptake of human-centric and trustworthy artificial intelligence (AI), while ensuring a high level of protection of health, safety, fundamental rights enshrined in the Charter, including democracy, the rule of law and environmental protection, against the harmful effects of AI systems in the Union and supporting innovation» (Art. 1). As expressly established in Whereas no. 9 of the AI Act, «in the context of employment and protection of workers, this Regulation should [...] not affect Union law on social policy and National Labour Law, in compliance with Union law, concerning employment and working conditions, including health and safety at work and the relationship between employers and workers».⁵ Indeed, the purpose of the Regulation is not to establish an *ad hoc* discipline for any application of AI, but to add a further framework of protections, to fill the gap between the existing legal system and the emerging challenges (and risks) posed by the implementation of AI systems in contemporary society.⁶

² See at least: Cantero Gamito M., Marsden C. T., *Artificial intelligence co-regulation? The role of standards in the EU AI Act*, in *International Journal of Law and Information Technology*, 2024, 32, 1, 1. Within the Italian literature, for a comment on the version of the AI Act approved by the European Parliament, see at least: Alaimo A., *Il Regolamento sull'Intelligenza Artificiale: dalla proposta della Commissione al testo approvato dal Parlamento. Ha ancora senso il pensiero pessimistico?*, in *Federalismi.it*, 2023, 25, 133, available at <https://www.federalismi.it/nv14/articolo-documento.cfm?Artid=49476>, and, extensively, Peruzzi M., *Intelligenza artificiale e lavoro. Uno studio su poteri datoriali e tecniche di tutela*, Giappichelli, Turin, 2023; and, after its final publication, see at least: Ciucciiovino S., *Risorse umane e intelligenza artificiale alla luce del regolamento (UE) 2024/1689, tra norme legali, etica e codici di condotta*, in *Diritto delle Relazioni Industriali*, 2024, 3, 573, and Sartori A., *Intelligenza artificiale e gestione del rapporto di lavoro. Appunti da un cantiere ancora aperto*, in *Variazioni su Temi di Diritto del Lavoro*, 2024, 3, 806.

³ Conversely, this definition «should not cover systems that are based on the rules defined solely by natural persons to automatically execute operations» (Whereas no. 12). Therefore, AI only includes non-deterministic algorithmic systems, characterized by their ability to learn autonomously, while excludes software that merely executes predefined algorithms. The key distinction between AI and automated decision-making systems lies in the degree of autonomy in generation output, especially in relation to human involvement.

⁴ The AI definition provided by the Regulation 2024/1689/EU aligns with the one adopted by the OECD Recommendation on AI of May 3, 2024, and by the Council of Europe Framework Convention on Artificial Intelligence, Human Rights, Democracy, and the Rule of Law of May 17, 2024. According to Ciucciiovino S., *nt.* (2), 574, this overlap is intended «to ensure certainty in the application of the law, and to facilitate the widest international convergence and acceptance of regulatory frameworks governing AI systems» (*translated by myself*).

⁵ This approach was already envisaged in the Proposal for the introduction of AI Act [COM(2021)206 final, April 21, 2021], which was criticized for not providing workers' protection, *inter alia*, by: Adams-Prassl J., *Regulating Algorithms at Work: Lessons for a 'European Approach to Artificial Intelligence'*, in *European Labour Law Journal*, 2022, 12, 1, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4024374.

⁶ See: Slattery P., Saeri A. K., Grundy E. A. C., Graham J., Noetel M., Uuk R., Dao J., Pour S., Casper S., Thompson N., *The AI risk repository. A comprehensive meta-review, database, and taxonomy of risks from Artificial Intelligence*, 2024, available at <https://arxiv.org/abs/2408.12622>.

This “risk-based” approach is supported by three different types of assessments [*i*) the technology impact assessment;⁷ *ii*) the conformity impact assessment;⁸ *iii*) the fundamental rights impact assessment⁹], which are also applied in working contexts.

In this regard, it is worth emphasizing that the use of AI systems in the workplaces and in human resources management is not prohibited. With the only two exceptions of the social and emotional scoring of workers [Art. 5, par. 1, lett. c), and lett. f), AI Act],¹⁰ AI may be deployed at all stages of the employment relationship, from the pre-recruitment phase to the workforce management one, and up to termination.¹¹ However, these AI applications are «considered to be high risk» (Annex III, p. 4, AI Act),¹² since they «may have an appreciable impact on future career prospects, livelihoods of those persons and workers’ rights [and] may perpetuate historical patterns of discrimination, for example against women, certain age groups, persons with disabilities discrimination [...]» (Whereas no. 57).

⁷ This type of assessment pertains to the acceptability of a general category of AI systems, based on their impact on the fundamental principles of European law. It led to the definition of both prohibited AI practices (Art. 5, AI Act), and «high-risk» AI systems (Annex III, AI Act).

⁸ This type of assessment pertains to the quality management system (Art. 17, AI Act), designed to ensure the compliance with established requirements of a specific AI system, characterized by distinctive functionalities, even though it may be deployed across different fields.

⁹ This type of assessment – which will be the focus of this paper (see below) – pertains to the concrete impact of AI systems on fundamental rights of people, including «workers’ rights» (Whereas no. 48, AI Act).

¹⁰ Among prohibited AI practices (Art. 5, par. 1, AI Act), those that are particularly relevant in the context of employment relations include: *i*) the use of AI systems for the evaluation or classification of natural persons or groups of persons over a certain period of time based on their social behaviour or known, inferred or predicted personal or personality characteristics [from which could result] detrimental or unfavourable treatment of certain natural persons or groups of persons in social contexts that are unrelated to the contexts in which the data was originally generated or collected [or] that is unjustified or disproportionate to their social behaviour or its gravity [lett. c)]; *ii*) the use of AI systems to infer emotions [defined by Whereas no. 18 of the AI Act] of a natural person in the areas of workplace and education institutions [lett. f)]. From this perspective, see: Khare S. K., Blanes V., Nadimi Vidal E. S., Rajendra Acharya U., *Emotion recognition and artificial intelligence: A systemic review (2014-2023) and research recommendations*, in *Information Fusion*, 2024, 102, 1, and Ciucciovino S., *nt.* (2), 576-578.

¹¹ Within Annex III, AI Act (p. 4, «Employment, workers’ management and access to self-employment»), it is provided that AI systems can be used «a) [...] for the recruitment or selection of natural persons, in particular to place targeted job advertisements, to analyse and filter job applications, and to evaluate candidates, [and] b) [...] to make decisions affecting terms of work-related relationships, the promotion or termination of work-related contractual relationships, to allocate tasks based on individual behaviour or personal traits or characteristics or to monitor and evaluate the performance and behaviour of persons in such relationships».

¹² The concept of “risk” identified by Art. 3, par. 1, p. 2, AI Act «means the combination of the probability of an occurrence of harm and the severity of that harm». According to Art. 6, par. 2, AI Act, «AI systems referred to in Annex III shall be considered to be high-risk», but this does not apply «where [they do] not pose a significant risk of harm to the health, safety or fundamental rights of natural persons, including by not materially influencing the outcome of decision making» (Art. 6, par. 3, AI Act). Therefore, the classification of AI systems used in working contexts as high-risk is not automatic, but depends on their specific configuration, and on their integration within the decision-making process, in terms of actual riskiness, and capacity to cause significant harm to workers’ fundamental rights. Indeed, the AI Act does not consider to be high-risk those AI systems that perform only marginal tasks, as they merely: «a) perform a narrow procedural task; b) improve the result of a previously completed human activity; c) detect decision-making patterns or deviations from prior decision-making patterns [without] replac[ing] or influenc[ing] the previously completed human assessment, without proper human review; d) perform a preparatory task to an assessment relevant (Art. 6, par. 3).

Indeed, the adoption of AI in working contexts involves several (new and pre-existing) risks for workers,¹³ ranging from algorithmic discriminations to personal data privacy violations, from invasive monitoring to health and safety detriments, from a lack of transparency to the attribution of responsibility in the event of AI failures, and, finally, to the erosion of collective rights,¹⁴ and to the devaluation of human activities, with the predicted “end of work”.¹⁵ Moreover, AI systems necessitate adequate knowledge for their proper and conscious use,¹⁶ otherwise, they may build barriers that exacerbate inequalities.

In general, the classification of a specific risk is subject to the self-assessment of the AI system provider, who is responsible for supplying the user (“deployer”) – and, in this case, the employer – with the necessary information to ensure that its «operation is sufficiently transparent to enable [her or him] to interpret a system’s output and use it appropriately» (Art. 13, AI Act). Subsequently, the deployer – the employer – becomes aware of the technical and functional characteristics of the AI system, and is obliged to adhere to them, to monitor the AI system’s operation in accordance with the instructions received by the provider, and, if necessary, to notify the provider of any identified risks, malfunctions or other relevant elements for the monitoring of compliance (Art. 26, 72, and 79, AI Act).¹⁷

Nevertheless, with regard to the fundamental rights impact assessment – unlike the other assessment mentioned above – there are no standardized procedures, and the responsibility for addressing the potential negative consequences of IA in relation to its specific operating context lies not only with providers, but also with deployers, including employers.¹⁸ In this perspective, this paper aims to share the idea of the need to breaking barriers to ensure equal opportunities in employment and occupation, in the awareness that employers seeking to benefit from innovation must prioritize the fundamental rights of their workers.

¹³ See: Faioli M., *Prospects on Risks, Liabilities and Artificial Intelligence, empowering Robots at Workplace Level. The EU Regulation 2024/1689, with the related EU and Domestic Legal Frames, compared to the U.S. Legal System*, in *Working Paper della Fondazione Giacomo Brodolini*, 2024, n. 24, available at https://www.fondazionebrodolini.it/sites/default/files/pubblicazioni/file/WP24_1.pdf.

¹⁴ See at least: Boscati A., *nt.* (1), and his extensive bibliographical references.

¹⁵ Rifkin J., *The End of Work? The Decline of the Global Labor Force and the Dawn of the Post-Market Era*, G.P. Putnam’s Sons, New York, 1995.

¹⁶ On this point, please refer again to: Faioli M., *nt.* (13), 13. More widely, on the principle of transparency in both the European and Italian legal systems, see: Zilli A., *La trasparenza nel lavoro subordinato. Principi e tecniche di tutela*, Pacini, Pisa, 2022.

¹⁷ Please refer again to Cantero Gamito M., Marsden C. T., *nt.* (1), 8, and to Ciucciovino S., *nt.* (2), 581.

¹⁸ For some insights into this type of assessment, see: Mantelero A., Esposito M. S., *An evidence-based methodology for human rights impact assessment (Hria) in the development of AI data-intensive systems*, in *Computer Law & Security Review*, 2021, 41, 1, available at <https://www.sciencedirect.com/science/article/pii/S0267364921000340>, Janssen H., Seng Ah Lee M., Singh J., *Practical fundamental rights impact assessments*, in *International Journal of Law and Information Technology*, 2022, 30, 200, available at <https://academic.oup.com/ijlit/article/30/2/200/6835507>, and, extensively, Mantelero A., *Beyond data. Human rights, ethical and social impact assessment in AI*, Springer-Asser, The Hague, Berlin, 2022, available at <https://link.springer.com/book/10.1007/978-94-6265-531-7>. More recently, see: Mantelero A., *The Fundamental rights impact assessment (Fria) in the AI Act: Roots, legal obligations and key elements for a model template*, in *Computer Law and Security Review*, 2024, 54, 1, available at <https://www.sciencedirect.com/science/article/pii/S0267364924000864>, and Montelero A., Peruzzi M., *L’AI Act e la gestione del rischio nel sistema integrato delle fonti*, in *Rivista Giuridica del Lavoro*, 2024, 4, 517.

2. The International principle of accessibility for persons with disabilities.

The imperative to “break barriers”, to achieve equal opportunities, and to ensure accessible workplaces in the AI era, is particularly evident from the perspective of persons with disabilities.¹⁹ This consideration – which must be updated in the light of the impact of AI systems on work organization²⁰ – arise directly from the definition of disability.

According to the original classification model of the World Health Organization (1980),²¹ disability was conceptualized through the “medical approach”, as an individual’s inability to perform activities of daily living in a manner deemed normal for a person. However, due to the rise of social movements claiming the rights of persons with disabilities²² and to the gradual affirmation of the *Disability Studies*,²³ this interpretation was revised, shifting away from a diagnostic-therapeutic perspective, to adopt the “biopsychosocial approach” (2001).²⁴

By enhancing the connection among personal characteristics of a person and of the context in which she or he is embedded, and by moving from a passive approach to an active one, disability has come to be understood as the consequence of a complex relationship between individuals’ health conditions and the social and environmental factors that shape their lived circumstances.²⁵ This has led to a collective and universal interpretation of the phenomenon, wherein intervention – is no longer medical rehabilitation therapy, but – is centred on action and social inclusion.

¹⁹ Moreover, the intention to examine this issue from this perspective arises from the findings of many institutional reports on the employment levels of persons with disabilities, which testify that they are fringed at the margins of the Labour market, due to the inaccessibility of workplaces. For an international comparison, see both: Organization for Economic Cooperation and Development, *Disability, Work and Inclusion, Mainstreaming in All Policies and Practices*, 2022, available at <https://www.oecd.org/employment/disability-work-and-inclusion-1eaa5e9c-en.htm>, and International Labour Organization, *Advancing social justice. Promoting decent work. Disability and work*, 2023, available at <https://www.ilo.org/ja/media/254991/download>. For a recent comparative study, see: Redek T., Pahor M., Bošković P., Mileva Boshkoska B., Kostevc Č., Franca V., *A Comparative Analysis of the Labour Market Position of Disabled Workers*, in *Revija za Socijalnu Politiku*, 2024, 2, 203, available at <https://hrcak.srce.hr/en/file/471504>.

²⁰ From this perspective, the AI Act repeatedly emphasizes the importance of monitoring and preventing the high-risk application of AI systems, which could «lead biased results and entail discriminatory effects» against persons with disabilities, including in working contexts (for example, see: Whereas no. 32, 54, and spec. 57). Moreover, looking at the «fundamental rights impact assessment», it requires an evaluation of the impact of AI, *inter alia*, both on «workers’ rights» and on «the rights of persons with disabilities» (Whereas no. 48, AI Act).

²¹ World Health Organization, *International Classification of Impairments, Disabilities and Handicap*, 1980, available at https://iris.who.int/bitstream/handle/10665/41003/9241541261_eng.pdf.

²² The goal of greater participation and realization of self-determination of persons with disabilities was summarized in the motto “Nothing about us without us”, on which see: Charlton J. I., *Nothing About Us Without Us: Disability Oppression And Empowerment*, University of California Press, Berkeley, 1998.

²³ See at least: Barton L., Oliver M. (eds.), *Disability Studies: Past, Present and Future*, The Disability Press, Leeds, 1997, Davis L. J., *The Disability Studies Reader*, Second Edition, Routledge, London, 2006 (available at https://disability-studies.nl/sites/default/files/beeld/onderwijs/lennard_davis_the_disability_studies_reader_secbookzz-org-0.pdf), and Goodley D., *Disability Studies: an interdisciplinary introduction*, Sage Publications, New York, 2010. Among Italian scholars, see at least: Marra A. D., *Disabilità e diritto: qual è l'utilità dei disability studies per la ricerca giuridica*, in *Italian Journal of Disability Studies*, 2011, 1, 23.

²⁴ World Health Organization, *International Classification of Functioning, Disability and Health*, 2001, available at <https://iris.who.int/bitstream/handle/10665/42407/9241545429.pdf?sequence=1>.

²⁵ Barnes C., Mercer G., *Implementing the Social Model of Disability: Theory and Research*, The Disability Press, Leeds, 2004 (see spec. Chapter 1: *Theorizing and Researching Disability from a Social Model Perspective*).

Nevertheless, from the legal point of view, this reading has struggled to gain traction. Indeed, neither the Charter of Fundamental Rights of the European Union (Art. 21 and 26)²⁶ nor the Directive 2000/78/EC on «equal treatment in employment and occupation»²⁷ had explicitly to define the scope of disability, instead leaving it to the Member States to identify it on a case-by-case basis. For this reason, the Court of Justice of the European Union – called upon to rule for the first time on the issue of qualification in the field of Labour Law – interpreted the notion of «disability» (as set out in Art. 1, Directive 2000/78/EC) «referring to a limitation which results in particular from physical, mental or psychological impairments and which hinders the participation of the person concerned in professional life».²⁸ Moreover, the judgement specified that disability includes «situations in which participation in professional life [of a person] is hindered over a long period of time».²⁹ This interpretation reinforced the focus on the individuals' characteristics and the obstacles they entail, while overlooking the importance of adopting measures tailored to their specific needs.³⁰

The paradigm shift toward the acceptance of the biopsychosocial approach, including in legal terms, was achieved through the United Nations Convention «on the Rights of Persons with Disabilities» (UNCRPD),³¹ which was adopted on December 13, 2006, and entered into force on May 3, 2008.³² Overcoming the “static” medical approach, the U.N. advanced a “dynamic” definition of disability [Preamble, lett. e)],³³ identifying it as the «interaction» between «long-term physical, mental, intellectual or sensory impairments» of a person and

²⁶ The Chapter II of the Charter of Fundamental Rights of the European Union (on «Equality» issue) prohibits «any discrimination based on [...] disability» (Art. 21, par. 1), and recognizes «the right of persons with disability to benefit from measures designed to ensure their independence, social and occupational integration and participation in the life of the community» (Art. 26), but does not provide a definition of disability.

²⁷ The Directive 2000/78/EC has likewise been limited to providing protective measures for persons with disabilities in the workplaces [such as, for example, the «reasonable accommodations» provided for in Art. 5 (see below)], without, however, defining their scope.

²⁸ ECJ, July 11, 2006, C-13/05, *Chacón Navas* (p. 43), on which see at least: Miller J. A., *The European disability right revolution*, in *European Law Review*, 2019, 1, 67. Among Italian scholars, see at least: Chiaromonte W., *L'inclusione sociale dei lavoratori disabili fra diritto dell'Unione europea e orientamenti della Corte di giustizia*, in *Variazioni su Temi di Diritto del Lavoro*, 2020, 4, 897.

²⁹ ECJ, July 11, 2006, C-13/05, *Chacón Navas* (p. 45). In similar terms, see also: ECJ, December 1, 2016, C-395/15, *Daouidi* (p. 42 and 45).

³⁰ In this direction, the anti-discrimination protection was initially denied to caregivers. However, the Court of Justice of the European Union – on the second time it was faced with the qualification of disability [ECJ, 17 July, 2008, C-303/06, *Coleman* (p. 50 and 51)] – extending protection to individuals providing care and assistance to persons with disabilities.

³¹ United Nations Organization, *Convention on the Rights of Persons with Disability*, 2006, available at <https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>.

³² For a detailed analysis of the Convention, see: Kayess R., French P., *Out of Darkness into Light? Introducing the Convention on the Rights of Persons with Disabilities*, in *Human Rights Law Review*, 2008, 1, 1, and more recently, from a comparative perspective, Wansing G., Welti F., Schäfers M. (eds.), *The Right to Work for Persons with Disabilities. International Perspectives*, Nomos, Glashütte, 2018, spec. 17-84.

³³ Indeed, the UNCRPD recognizes disability as an «evolving concept». In this regard, drawing on the Italian legal literature, it is crucial to emphasize how this new perspective has elevated the protection of persons with disabilities «from a formal to a substantive level» (Garofalo D., *La tutela del lavoratore disabile nel prisma degli accomodamenti ragionevoli*, in *Argomenti di Diritto del Lavoro*, 2019, 6, 35, translated by myself), requiring that disability «must no longer be interpreted from the medical perspective, but from the relational one» (Malzani F., *Inidoneità alla mansione e soluzioni ragionevoli, oltre il repechage*, in *Argomenti di Diritto del Lavoro*, 2020, 4, 966, translated by myself).

the «barriers of various kinds» that may hinder his or her «full and effective participation in society on an equal basis with others» (Art. 1, par. 2, UNCRPD).

Therefore, the focus is not solely on the personal characteristics of the individual with a disability, but also on the extent to which the surrounding environment amplifies or mitigates its negative effects. This new perspective has also influenced the orientations of European jurisprudence on the matter. Indeed, after actively participating in the negotiation phase, the European Union joined the UNCRPD,³⁴ which – as a «mixed agreement»³⁵ – represents «an integral part [...] of the Union Law».³⁶ Since then, even the European Court of Justice has embraced the biopsychosocial model of disability,³⁷ leaving behind a welfare-based (*passive*) approach in favor of an interventionist (*active*) one, which emphasizes the principles of dignity and social recognition of persons with disabilities.

Among the most significant implications, it is worth stressing the imperative to remove barriers that hinder equal opportunities and do not allow persons with disabilities to live independently and to participate fully in all aspects of life. In this regard, (first)³⁸ the U.N. and (then) the E.U. have recognized «accessibility» as a «general principle» [Art. 3, lett. f), UNCRPD], mandating the adoption of «appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas» (Art. 9, par. 1, UNCRPD).³⁹

Therefore, the right to accessibility constitutes the precondition for the enjoyment of all human rights and fundamental freedoms,⁴⁰ as it ensures the mitigation of “bio-psico-social” disadvantages faced by persons with disabilities, which could otherwise undermine their independent and inclusive participation in all spheres of life (including work), on an equal basis with others. The need to plan and realize accessible goods, services, and, more generally,

³⁴ The ratification of the UNCRPD – which represents the first international treaty to which the Union has been a contracting party – was formalized through European Council Decision no. 2020/48/EC adopted on November 26, 2009.

³⁵ The reference is to those agreements negotiated by the European Union with third parties, where the subject matter does not fall within its exclusive competence, but rather within the competence shared with the Member States (Art. 4, TFEU), thereby requiring their joint ratification. See: Cremona M., *External Relations of the EU and the Member States: Competence, Mixed Agreements, International Responsibility, and Effects of International Law*, in *EUI Working Paper Law*, 2006, 22.

³⁶ Lastly, see: ECJ, September 11, 2019, C-379/18, *DW* (39).

³⁷ See: ECJ, April 11, 2013, C-335/11 and C-337/11, *HK Danmark* (page 38), and, lastly, ECJ, February 10, 2022, C-485/20, *HR Rail*. For a detailed investigation of the evolution of the ECJ's orientation and for a review of each judgment, please refer again to the literature previously mentioned [*nt.* (28)].

³⁸ Before the adoption of the UNCRPD, the U.N. had already taken a stance, stating that «Member States should: a) introduce action programs to make physical environments accessible; b) develop mechanisms to ensure accessibility to information and communication; c) facilitate access to physical environments» (Rule no. 5, United Nations Organization, *Rules for the Equalization of Opportunities for Persons with Disabilities*, 1993, available at <https://social.desa.un.org/issues/disability/resources/disability-resources/rules/standard-rules-on-the-equalization-of>).

³⁹ See: Broderick A., *Of rights and obligations: the birth of accessibility*, in *The International Journal of Human Rights*, 2020, 4, 393.

⁴⁰ Indeed, the UNCRPD recognizes «the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedoms» [Preamble, lett. v)].

places highlight the impact of the «universal design», which is recognized by the Art. 2, UNCRPD as a systematic and proactive effort, to prevent (and eliminate) all forms of discrimination against persons with disabilities.⁴¹

The crucial aspect of this enabling approach lies in the effectiveness of these principles: accessibility and, consequently, universal design aim to ensure that the surrounding environment is usable by all (including persons with disabilities),⁴² «without the need for adaptation or specialized design» (Art. 2, UNCRPD).⁴³ In this perspective, true inclusion is not achieved through afterthoughts or exceptions but through a systemic commitment to designing a world where accessibility is not a concession, but an unquestionable right.

3. The European actions on accessibility.

Since the ratification of the UNCRPD, the European Union has devoted increasing attention to disability issues, with a particular focus on accessibility.⁴⁴

In this direction, it is firstly worth mentioning the «European Disability Strategy 2010-2020»,⁴⁵ which – in adherence to the biopsychosocial approach – is committed to achieving a «Barrier-Free Europe», to «empower people with disabilities so that they can fully enjoy their rights and participate in society and the economy on an equal basis with others». The Strategy outlines eight key areas, the first of which is «accessibility», aimed to ensure that «people with disabilities have access to goods, services and assistive devices». As far as employment is concerned, the objective is to realise «an increase in the number of disabled workers in the labour market, and [...] better accessibility to workplaces».

Subsequently, among the implementing measures of the Strategy, it is important to underline the approval of the Directive 2016/2102/EU, on «the accessibility of the websites and mobile applications of public sector bodies», as well as of the Directive 2019/882/EU, on «the accessibility requirements for products and services» («European Accessibility Act»).

⁴¹ See at least: Malloy R. P., *Inclusion by design: accessible housing and mobility impairment*, in *Hastings Law Journal*, 2009, 1, 699 (available at: <https://repository.uclawsf.edu/hastings-law-journal/vol60/iss4/1>). Among Italian scholars, see extensively: Arengi A., *Design for All. Progettare senza barriere architettoniche*, Utet, Milan, 2007.

⁴² According to Marra A. D., *I diritti dell'accessibilità e della mobilità della persona con disabilità*, in *Forum di Quaderni costituzionali*, 2021, 1, spec. 545, «the philosophy behind universal design separates accessibility from disability, as it seeks to create environments that are not “disability-oriented”, but rather designed for usability by all persons, including those with disabilities» (translated by myself).

⁴³ Giacomello E., Alberti F., Trabucco D., *Architectural Barriers vs Universal Design*, in Villa F. (ed.), *The Accessible World*, 2018, Volpe, Milan, 24-41.

⁴⁴ As anticipated, the competence of the European Union to fight, *inter alia*, discrimination on the basis of disability had been concretely with the Directive 2000/78/EC and with the Charter of Fundamental Rights of the European Union; moreover, the European legislator had envisaged an Action Plan [*Equal opportunities for people with disabilities: a European action plan (2004-2010)*, COM(2003)650 final, October 30, 2003], whose primary objective was to enhance accessibility and to integrate disability issues in all EU policies (later, formally accepted with the Lisbon Treaty of 2009, through the Art. 10, TFEU). See: Waldschmidt A., *Disability policy of the European Union: The supranational level*, in ALTER. *European Journal of Disability Research*, 2009, 3, 8, and, extensively, Broderick A., Ferri D., *International and European Disability Law and Policy*, Cambridge University Press, Cambridge, 2019. Among Italian scholars, see at least: Buoso S., *L'inclusione sociale dei disabili alla luce del diritto dell'Unione europea*, in *Diritti Lavori Mercati*, 2019, 1, 85, and Pupo V., *La progressiva attuazione del principio di accessibilità delle persone con disabilità*, in *Rivista AIC*, 2023, 4, 93.

⁴⁵ COM(2010) 636 final, November 15, 2010.

In particular, the Directive 2016/2102/EU «aims to approximate the laws, regulations and administrative provisions of the Member States relating to the accessibility requirements of the websites and mobile applications of public sector bodies, thereby enabling those websites and mobile applications to be more accessible to users, in particular to persons with disabilities» (Art. 1).⁴⁶ This objective is pursued through specific requirements, providing that «Member States shall ensure that public sector bodies take the necessary measures to make their websites and mobile applications more accessible by making them perceivable, operable, understandable and robust» (Art. 4).

Instead, the Directive 2019/882/EU is oriented toward «the proper functioning of the internal market by approximating the laws, regulations and administrative provisions of the Member States as regards accessibility requirements for certain products and services by, in particular, eliminating and preventing barriers to the free movement of products and services covered by this Directive arising from divergent accessibility requirements in the Member States» (Art. 1). Its scope concerns products and services placed on the market after June 28, 2025, such as, *inter alia*, «computer hardware systems and operating systems», «self-service terminals», «terminal equipment with interactive computing capability, used for electronic communications services, [and] for accessing audiovisual media services» (Art. 2, par. 1), as well as «electronic communications services», «services providing access to audiovisual media services», «air, bus, rail and waterborne passenger transport services» (i.e. websites, electronic tickets, and mobile device-based services including mobile applications) and «consumer banking services» (Art. 2, par. 2). The «accessibility requirements for products and services» are specified in Annex I, where it is stipulated that they «must be designed and produced in such a way as to maximise their foreseeable use by persons with disabilities and shall be accompanied where possible in or on the product by accessible information on their functioning and on their accessibility features».⁴⁷

In this way, the European legislator has elevated accessibility as a fundamental pillar for a more equal society, recognizing that this principle, while necessary for some, benefits everyone. Indeed, it should be emphasized that the United Nations “2030 Agenda”⁴⁸ – to which the European Union has contributed, committing to leading its implementation – places accessibility at the heart of the transition, cutting across all Goals for the (social, environmental, and economic) sustainable development.⁴⁹ The promotion of concretely inclusive growth, aimed at ensuring equal opportunities and reducing inequalities, relies on

⁴⁶ In this direction, «accessibility should be understood as principles and techniques to be observed when designing, constructing, maintaining, and updating websites and mobile applications in order to make them more accessible to users, in particular persons with disabilities» (Whereas 2, Directive 2016/2102/EU).

⁴⁷ For a more detailed analysis of the EU Directives, please refer again to: Broderick A., Ferri D., *nt.* (44), 12, and Pupo V., *nt.* (44), 101.

⁴⁸ United Nations Organization, *Transforming our world: the 2030 Agenda for Sustainable Development*, 2015, available at <https://sdgs.un.org/2030agenda>.

⁴⁹ It should be noted that the word «access» appears 58 times in the text of the U. N. 2030 Agenda, and 36 times in the section on Sustainable Development Goals and targets. With regard to the reasoning to be conducted here, particular emphasis should be placed on Goals no. 8 («Decent work and economic growth»), 9 («Industry, innovation and infrastructure»), and 10 («Reduced inequalities»), of which accessibility is the fundamental prerequisite, so that they can be achieved.

the people's ability to access places, products, and services without discrimination, enabling all individuals to become both protagonists and recipients of sustainable development.⁵⁰

To build on the chosen path, the European Commission subsequently adopted the new «Disability Rights Strategy 2021-2030»,⁵¹ under the banner of the «Union of Equality». The Strategy seeks to advance the target of a «Barrier-Free Europe», pursuing the efforts already started in the previous decade, with the awareness that «persons with disabilities still face considerable barriers in access to [*inter alia*] healthcare, education, [and] employment», and «they have a higher risk of poverty or social exclusion [...] compared to persons without disabilities» (p. 1).⁵² Moreover, it is promoted «an intersectional perspective, addressing specific barriers faced by persons with disabilities who are at the intersection of identities (gender, racial, ethnic, sexual, religious), or in a difficult socioeconomic or other vulnerable situation» (p. 1).⁵³ From the practical side, the Strategy is structured around eight key areas, the first of which is (once again) dedicated to «accessibility»,⁵⁴ understood as the «enabling factor for rights, autonomy, and equality», as well as the «prerequisite for the full participation of persons with disabilities on an equal basis with others».

Through these actions, the European Union has demonstrated its recognition that «accessibility bridges the gap between the special needs of persons with disabilities and the realisation of social, economic, cultural and political inclusion».⁵⁵ This was undertaken with the awareness that, while technical in nature, this issue has profound substantive impacts on people's daily lives, directly influencing their autonomy, dignity, and full participation in social, economic, and cultural spheres.

⁵⁰ See already: United Nations Organization, *Accessibility and Development. Mainstreaming disability in the post-2015 development agenda*, 2013, available at <https://desapublications.un.org/publications/accessibility-and-development-main-streaming-disability-post-2015-development-agenda>. In this perspective, for further discussion, see: J. Madansa, M. Loeba, A. H. Eide, *Measuring Disability and Inclusion in relation to the 2030 Agenda on Sustainable Development*, in *Disability and the Global South*, 2017, 4, 1164, and Maliszewska-Nienartowicz J., *Accessibility for Persons with Disabilities as an Important Element of Economic and Social Development: The European Union Case*, in *European Research Studies Journal*, 2020, 1, 1084.

⁵¹ COM(2021) 101 final, March 3, 2021.

⁵² Among the initiatives related to the Strategy, it is worth mentioning the establishment of the «European Accessibility Resource Centre» (aimed at increasing the accessibility policies and the effective implementation of EU Law, through the collaboration of experts and professionals across all relevant sectors), as well as the creation of the «European Disability Card» (valid in all Member States, to allow persons with disabilities access to specific services and benefits not only at the national level, but consistently across the entire European Union). For an in-depth discussion on these interventions, please refer again to: Pupo V., *nt.* (44), 102.

⁵³ On the intersectional perspective in Anti-discrimination Law, see at least: Crenshaw K., *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*, in *University of Chicago Legal Forum*, 1989, 1, 139 (available at <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1052&context=uclf>), and Mercat-Bruns M., *Multiple discrimination and intersectionality: issues of equality and liberty*, in *International Social Science Journal*, 2017, 67, 43. With regard persons with disabilities, see: Kovačević L., Vujadinović D., Evola M. (eds.), *Intersectional Discrimination of Women and Girls with Disabilities and Means of their Empowerment*, University of Belgrade Faculty of Law Publishing Center, Belgrade, 2022, and, within Italian Labour Law literature, please refer to: De Falco M., *Il collocamento mirato alla prova della origine etnica: non passa lo straniero (disabile)*, in *LABOR. Il Lavoro nel Diritto*, 2022, 4, 423, and to the references mentioned therein.

⁵⁴ The Strategy expressly addresses this principle to «the built and virtual environments, to information and communication technologies (ICT), goods and services, including transport and infrastructure».

⁵⁵ In these terms, see already: United Nations Organization, *nt.* (50), 2.

4. The Italian case as a benchmark for effective accessibility implementation.

The International principle of accessibility for persons with disabilities has found various implementations among European countries. However, the practical translation that each legal system has assigned to it has commonly been oriented towards the removal of architectural barriers that hinder the physical environment, and towards the full usability of informational and communication technologies.

In this perspective, Italy seems to represent an emblematic (and pioneering) case study. Although the transposition of the “biopsychosocial” definition of disability has been slow,⁵⁶ the Italian legislator anticipated both the International and the European impulses on accessibility, initially, prioritizing building regulations and urban planning, and then, extending the focus on digital tools and services.⁵⁷

Indeed, the issue has been primarily addressed as a matter of removal «architectural barriers»⁵⁸ and physical obstacles to the full accessibility of urban spaces by the community (Decrees of the President of the Italian Republic no. 503/1996 and no. 380/2001).⁵⁹ This

⁵⁶ Within the Italian legal system, disability has been associated with various semantic meanings, which have long been based on the medical approach. *Inter alia*, the reference is to the concepts of «invalidity» and «inability» (Art. 2, Law no. 118/1971), «handicap» (Art. 3, par. 1, Law no. 104/1992), «disability» (Art. 1, par. 1, Law no. 68/1999) and «unsuitability» (Art. 41, par. 6, Legislative Decree no. 81/2008). Although the UNCRPD was ratified in 2009 (through Law no. 18/2009), the biopsychosocial model of disability was formally recognized only with Legislative Decree no. 62/2024 [see below, and, for a general overview of disability definitions in the Italian legal system, please refer to: Zilli A., De Falco M., *Disability discrimination*, in Delfino M., Spinelli C., Zilli A. (eds.), *The Great Inequalities Gaps: A National Overview on Italy*, in *EQUAL. Rivista di diritto antidiscriminatorio*, 2025, 1, 669].

⁵⁷ Moreover, even Article 9 of the UNCRPD mainly refers to «physical environment», drawing attention to «a) buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces», and mentioning, only in general terms, «information and communications», such as «b) information, communications and other services, including electronic services and emergency services».

⁵⁸ From the legal perspective, the first definition of architectural barriers dates back to the Ministerial Decree no. 236/1989, where they are defined as: «a) the physical obstacles that hinder mobility for anyone, particularly for those who, for any case, have a reduced or impaired motor capacity on a permanent or temporary basis; b) the obstacles that limit or prevent the comfortable and safe use of spaces, equipment, or components by anyone; c) the absence of measures and signs enabling orientation and recognisability of places and sources of danger for everyone, especially for blind and visually impaired people, as well as for deaf individuals» [Art. 1, par. 1, lett. a)]. See: Marra A. D., *Barriere Architettoniche* (voce), in Vv. AA., *Enciclopedia del Diritto, Annali*, Giuffrè, Milan, 2011, and, for the implications on Anti-discrimination Law, Marra A. D., *Le barriere architettoniche provocano una discriminazione indiretta*, in *Responsabilità Civile e Previdenza*, 2021, 1, 227.

⁵⁹ Nowadays, the regulatory framework is still governed by the D.P.R. no. 503/1996 (on «standards for the elimination of the architectural barriers in public buildings, spaces, and services»), and by the D.P.R. no. 380/2001 (on «legislative and regulatory provisions in building matters»), which are supplemented by the technical, operational, and design prescriptions established in the mentioned Ministerial Decree no. 236/1989. However, the attention paid to accessibility by the Italian legislature can be seen as far back as the Ministry of Public Works Circular No. 425/1967, which highlighted the need to avoid obstacles to the free movement of persons with disabilities in urban spaces and buildings. Further significant measures on the issue included: a) Law no. 118/1971, which introduced the obligation to construct public buildings and buildings open to the public in compliance with ministerial circulars on the elimination of architectural barriers (Art. 27); b) Law no. 41/1986, which prohibited the approval and funding of public works that fail to comply with the implementing regulations of Law no. 118/1971, requiring all public entities to develop a Plan for the elimination of architectural barriers (Art. 31-32); c) Law no. 13/1989, which established requirements – subsequently incorporated into D.P.R. no. 380/2001 – for new buildings and for the renovation of existing buildings, to ensure the removal and overcoming of architectural barriers; d) Law No. 104/1992, which conditioned the issuance of habitability and usability certificates on the compliance with the regulations on the removal of

objective has been achieved through the imposition of compliance obligations with specific construction and functional requirements,⁶⁰ both in relation to private and public buildings (or transportation),⁶¹ including workplaces.⁶² These commitments pertain not only to newly constructed buildings, but also to existing buildings undergoing renovation, to allow persons with disabilities to participate fully in all aspects of daily life.

By adopting these provisions, the Italian legislator upheld the principle of “substantive equality” outlined in Art. 3, par. 2 of the Constitution.⁶³ In this direction, according also to the Italian Constitutional Court, accessibility must be considered an «essential quality of buildings», which is a direct consequence of «the growing social awareness of the collective duty to proactively eliminate any potential obstacles to the full exercise of fundamental rights by persons with physical disabilities».⁶⁴ Subsequently, as a result of the ratification of the Convention (through Law no. 18/2009), specific Action Plans «for the promotion of the rights and integration of persons with disabilities» have been introduced,⁶⁵ with the purpose of ensuring the accessibility of physical environments, and, in turn, safeguarding their full dignity and equal opportunities.

Even with regard to information and communication technology (ICT), as well as to websites, the Italian legal system was ahead of the adoption of the Directive 2016/2102/EU, introducing specific provisions to enhance accessibility for persons with disabilities to digital tools and services (Law no. 4/2004).⁶⁶ The objective is to achieve the highest capacity of ICT systems «to deliver services and to provide accessible information, that can be used, without discrimination, also by those who, due to disability, require assistive technologies or specific

architectural barriers and introduced a penalty system for non-compliant operators (Art. 24); e) D.P.R. no. 503/1996, which mandated the implementation of at least one accessible route for persons with reduced or impaired mobility or sensory capacities in the design of public buildings, spaces, services, and pedestrian-oriented urban infrastructure. For a detailed analysis of these provisions, see extensively: Almici A., Arengi A., Camodeca R., *Il valore dell'accessibilità. Una prospettiva economico-aziendale*, Franco Angeli, Milan, 2020, spec. 33.

⁶⁰ According to Art. 2 of the Ministerial Decree no. 236/1989, accessibility refers to «the ability, including for persons with reduced or impaired motor or sensory capacities, to reach a building and its individual units, to enter it easily, and to use its facilities and equipment under conditions of adequate safety and autonomy». Therefore, accessibility represents an essential standard for the quality of physical environments, and it serves as of the fundamental criteria in their main design (along with «visitability» and «adaptability», of which – as emphasized by the Italian scholars mentioned above – it is the prerequisite).

⁶¹ On the right to mobility, and the legal requirements for transportation accessibility, please refer again to: Marra A. D., *nt.* (42), 552. For an interdisciplinary perspective, see also: Marcialis M., *Spunti in tema di viaggi, inclusione ed accessibilità*, in *Rivista di Diritto dell'Economia, dei Trasporti e dell'Ambiente*, 2022, 20, 157, available at https://www.giureta.unipa.it/2022/10_Marcialis_DirTrasp_2022.pdf.

⁶² With regard to workers with disabilities, Art. 63, par. 2, Legislative Decree no. 81/2008 (concerning the «protection of workers' health and safety») emphasizes that «workplaces must be designed taking into account [the needs of] workers with disabilities».

⁶³ According to Art. 3, par. 2, Italian Constitution, «it is the duty of the Republic to remove those obstacles of an economic or social nature which constrain the freedom and equality of citizens, thereby impeding the full development of the human person and the effective participation of all workers in the political, economic and social organization of the Country».

⁶⁴ Italian Constitutional Court, April 29, 1999 (p. 5, *translated by myself*), available at <https://www.corte-costituzionale.it/actionSchedaPronuncia.do?anno=1999&numero=167>, and in *Rivista del Notariato*, 1999, 4, 978, with the comment of Gazzoni F., *Disabili e tutela reale*.

⁶⁵ The two Action Plans implementing the UNCRPD, under the responsibility of the National Observatory on the Condition of Persons with Disabilities, were respectively adopted by the D.P.R. October 4, 2013 (approved on February 12, 2013) and by the D.P.R. October 12, 2017 (approved on October 19, 2016).

⁶⁶ Please refer again to: Pupo V., *nt.* (44), 109.

configurations» [Art. 2, par. 1, lett. a)]. The regulation is directed at public administrations, requiring them to consider accessibility requirements (set by the subsequent Decree of the President of the Italian Republic no. 75/2005), as the preferential criterion for evaluating providers' offer, in procedures for the supply of ICT goods and services (Art. 4, par. 1).

Then, the Directive 2016/2102/EU was transposed into the Italian law through the Legislative Decree no. 106/2018, which strengthened the legal framework by establishing the principles governing the «accessibility of the websites and mobile applications of public sector bodies».⁶⁷ According to the provisions of the EU Directive (Whereas no. 37), accessibility has been declined in terms of «perceivability, operability, understandability, and robustness», with regard to both «the content of the service» and the «usability of the information offered» (Art. 3-*bis*, par. 1-2, Law no. 4/2004, introduced by Legislative Decree no. 160/2018),⁶⁸ following the guidelines provided by National institutions.⁶⁹

Finally, in relation to the accessibility requirements of products and services, the Directive 2019/882/EU was transposed into domestic law through the Legislative Decree no. 82/2022. This represents the only case – among those described above – in which the Italian legislator did not anticipate the European provisions but merely incorporates their content within the National legal framework. In terms of implementation, the Legislative Decree no. 82/2022 provides for a compliance monitoring system, to oversee the conformity of products and services placed on the market after June 28, 2025 (Art. 17-21),⁷⁰ and a stringent sanctions regime, to regulate non-compliant economic operators (Art. 24).⁷¹

It is quite remarkable (and rather striking) that these measures were adopted even before the formal acceptance of the biopsychosocial definition of disability.

As previously mentioned, despite the formal ratification of the UNCPRD (through the Law no. 18/2009), the Italian legal system has preserved a series of disability-related concepts that remain rooted in the medical approach, focusing on the characteristics of the person, and neglecting to consider what surrounds them. Therefore, accessibility has been effectively implemented as a fundamental principle for equal opportunities, yet without being framed within a biopsychosocial approach.

⁶⁷ See: Di Gregorio V., *Principio di non discriminazione e diritti delle persone con disabilità: dal modello sociale alla Web Accessibility Directive*, in Imperiale F., Gianelli N. (eds.), *Accessibilità web e tecnologia assistiva. Strumenti di inclusione digitale*, Genova University Press, Genova, 2019, 19.

⁶⁸ Furthermore, it is worth pointing out that an «accessibility statement» has been introduced (Art. 3-*quater*, Law no. 4/2004), which service providers are required to submit and periodically update on the compliance of their websites and mobile applications. This statement must also specify the reasons for any accessibility barriers and outline alternative accessibility solutions.

⁶⁹ In particular, a decisive role in defining guidelines is played by the «AgID» («*Agenzia per l'Italia Digitale*»), which is entrusted with the task of «promoting digital innovation in the Country and fostering the use of digital technologies in the organization of public administration, as well as in its interactions with citizens and companies» (art. 14-*bis*, Legislative Decree no. 82/2005). See: Leone C., *Il ruolo del diritto europeo nella costruzione dell'amministrazione digitale*, in *Rivista Italiana di Diritto Pubblico Comunitario*, 2014, 3-4, 867.

⁷⁰ The responsibility for monitoring accessibility requirements has been assigned to the Ministry of Economic Development (for products) and to «AgID» (for services), which, in the event of non-compliance, set a deadline for the economic operator to implement the necessary corrective measures.

⁷¹ Since the Directive 2019/882/EU left the definition of sanctions to the Member States, Legislative Decree no. 82/2022 established significant administrative penalties (ranging from 5,000 to 40,000 Euro), proportional to the degree of non-compliance, for economic operators failing to meet accessibility requirements for products and services.

However, the «Delegation to the Government on the subject of disability» (contained within the Law no. 227/2021),⁷² represented a fundamental step for the revision of the National legislation, to harmonize it with the principles established at International and European level. The first Legislative Decree implementing the Delegation (no. 62/2024)⁷³ focused on the definition of disability and on the multidimensional assessment procedure of individual conditions,⁷⁴ but it is widely believed that this act could pave the way for further provisions aimed at advancing the rights of persons with disabilities, including through strengthened accessibility measures.⁷⁵

5. From *work-place* to *work-organization*: the necessary path of accessibility in the AI era.

Shifting the focus to Labour Law, the principle of accessibility becomes even more crucial. The low employment rates of persons with disabilities, at the International⁷⁶ and National⁷⁷ levels, reflect both the employers' reluctance to hire them, and the broader inability of work environments, *lato sensu*, to adapt to the specific needs of individuals.⁷⁸

⁷² On the main provision of the Law no. 227/2021, please refer to De Falco M., *Ragionando attorno alla L. delega in materia di disabilità: una prospettiva giuslavoristica*, in *Responsabilità Civile e Previdenza*, 5, 2022, 1738.

⁷³ See: Monaco M. P., *Il decreto legislativo 2 maggio 2024, n. 62: una lettura giuslavoristica*, in *Professionalità Studi*, 2024, 3, 3, available at https://moodle.adaptland.it/pluginfile.php/84060/mod_resource/content/2/PS_2024_3.pdf.

⁷⁴ According to Art. 2, Legislative Decree no. 62/2024, the (new) Italian definition of disability includes the «condition» of a person with «a long-term physical, mental, intellectual, neurodevelopmental, or sensory impairment that, in interaction with various barriers, may hinder full and effective participation in different life contexts on an equal basis with others». From this, it is evident that the Italian legal system aligns closely with the definition provided by the UNCRPD. On the legal implications of this definition and on the corresponding assessment procedures, please refer to: Alifano F., Dalla Segà M., De Falco M., Di Gioia F., Maini T., *La nuova definizione della "condizione di disabilità": implicazioni e procedure ex D.Lgs. n. 62/2024*, in *Bollettino ADAPT*, 2024, 26, 1, available at <https://www.bollettinoadapt.it/la-nuova-definizione-della-condizione-di-disabilita-implicazioni-e-procedure-ex-d-lgs-n-62-2024/?pdf=226347>.

⁷⁵ In this direction, it should be emphasized that the guiding criteria identified by Law No. 227/2021 include the «requalification of public services in the field of inclusion and accessibility» [Art. 2, par. 2, lett. e)], which provides as implementing actions: *a)* the designation of a manager in charge of strategic accessibility planning; *b)* the inclusion of accessibility measures among the productivity objectives of public administrations; *c)* the appointment of a person responsible for the process of inclusion of persons with disabilities in workplaces; *d)* the definition of service quality standards that ensure persons with disabilities effective access to public services. These actions have been implemented through the Legislative Decree no. 222/2023 (on which see: Corti M., Sartori A., *I provvedimenti giuslavoristici della legge di bilancio*, in *Rivista Italiana di Diritto del Lavoro*, 2024, 3, 43).

⁷⁶ Please refer to the institutional reports and researches mentioned above.

⁷⁷ Although European Disability Forum, *European Human Rights Report. Issue no. 7 – 2023. The Right to Work: the Employment Situation of Persons with Disabilities in Europe*, 2023, available at https://www.edffeph.org/content/uploads/2023/05/hr7_2023_press-accessible.pdf, shows that, among the EU countries, Italy is not in the worst situation in terms of the occupational inclusion of persons with disabilities, it holds the lowest gap between the employment of persons with disabilities and the employment of persons without disabilities (14.9 p.p., compared to 24.4 p.p. on average in the 27 EU Member States). See already: Giovannone M., *Il collocamento dei disabili nel mercato del lavoro post-emergenziale: criticità e prospettive*, in *Federalismi.it*, 2021, 10, 113, available at <https://www.federalismi.it/nv14/articolo-documento.cfm?Artid=45182>.

⁷⁸ See at least: Priestley M., *Mainstreaming disability equality in the European Semester 2019-20 and retrospective analysis*, ANED report, 2019, and Zolyomi E., Birtha M., *Towards inclusive employment of persons with disabilities*, European Centre for Social Welfare Policy and Research, 2020, 20, available at <https://www.euro.centre.org/publications/detail/4101>. In the Italian context, this disadvantageous situation persists despite both the legal

The issue warrants further examination, not only in relation to the tangible dimension (workplaces), but also with regard to the intangible one (work organization),⁷⁹ especially in the AI era. Indeed, the employers' (alleged) impossibility of including persons with disabilities in companies stems not so much from architectural and material inaccessibility – addressed by the mentioned requirements – but rather from organisational and immaterial barriers.

In these cases, even in the Courts' application of the law, the principle of «equal treatment in employment and occupation» required by the Directive 2000/78/EC is typically ensured through «reasonable solutions» (Art. 5).⁸⁰ This mechanism imposes an obligation on employers to implement «appropriate measure, where needed in a particular case, to enable a person with a disability to have access to, participate in, or advance in employment, or to undergo training» on an equal basis with others. These accommodations – which are mandatory, unless they «would impose a disproportionate burden on the employer» (Art. 5)⁸¹ – are not limited to architectural modifications aimed at adapting the workplace to the disability (i.e., installing a ramp to enable a person with reduced mobility to access her or his office on the first floor), but they also include organizational adjustments⁸² (i.e., relocating the employee to the ground floor, or implementing telework).⁸³

obligation to hire persons with disabilities and the employers' discretion in selecting the candidate to be employed. On the legislative framework and on the (still ineffective) sanctioning system for non-compliant employers, please refer to: De Falco M., *From “Carbon” to “Social” Offsetting. An Italian tool to accommodate workplaces for person with disabilities*, in *Italian Labour Law E-Journal*, 2024, 1, 29, available at <https://illej.unibo.it/article/view/19784/18189>, and to the references mentioned therein.

⁷⁹ This consideration is corroborated by occupational health and safety legislations. Indeed, taking the Italian legal system as a benchmark, employers are required to adopt the necessary measures to «protect the physical integrity and moral personality of workers» (Art. 2087, Italian Civil Code): this means that «work environment» constitutes a «multifaceted concept that contains multiple aspects [including] the work organization» [in these terms, Tullini P., *Sicurezza sul lavoro e modello sociale europeo: un'ipotesi di sviluppo*, in Vv. Aa., *Scritti in onore di Edoardo Ghera*, Cacucci, Bari, 2008, spec. 1264, , translated by myself]. Therefore, according to Malzani F., *Ambiente di lavoro e tutela della persona. Diritti e rimedi*, Giuffrè, Milan, 2014, spec. 26 (translated by myself), the «work environment» represents the «synthesis of various elements pertaining to the new ways of organizing economic and work activities».

⁸⁰ On the mechanism of «reasonable accommodations», already provided by Art. 2, UNCRPD, see: Goldschmidt J. E., *Reasonable accommodation in EU equality law in a broader perspective*, in *ERA Forum*, 2007, 8, 39, and, for a recent analysis of the provision in a comparative perspective, Abril J. D., Braj Choubey S., Leonardi M. A., Zampieri G., *Reasonable accommodation and Disability: a Comparative Analysis*, in *Diritto della Sicurezza sul Lavoro*, 2024, 1, 18. Within the Italian legal system – where it has been transposed only in 2013, through the introduction of par. 3-bis integrating Art. 3, Legislative Decree no. 216/2003 – please refer again to the literature previously mentioned [nt. (33)], as well as to the most recent essay of Bresciani I., *Sanctionary consequences deriving from the violation of the obligation of reasonable accommodations in Italian labour law*, in *Italian Labour Law E-Journal*, 2023, 2, 1–15, for the most recent jurisprudential approaches.

⁸¹ According to Directive 2000/78/EC, «to determine whether the measures in question give rise to a disproportionate burden, account should be taken in particular of the financial and other costs entailed, the scale and financial resources of the organization or undertaking and the possibility of obtaining public funding or any other assistance» (Whereas no. 21). Moreover, «this burden shall not be disproportionate when it is sufficiently remedied by measures existing within the framework of the disability policy of the Member State concerned» (Art. 5).

⁸² Whereas no. 20, Directive 2000/78/EC includes, as examples of reasonable solutions, «adapting premises and equipment, patterns of working time, the distribution of tasks or the provision of training or integration resources».

⁸³ For the interpretation – now recognized within the Italian legal system by Law no. 81/2017 – of teleworking as an application of reasonable accommodation, see: Zilli A., *Il lavoro agile come “accomodamento ragionevole”, fra tutela della salute, diritto al lavoro e libertà di organizzazione d'impresa*, in *LABOR. Il Lavoro nel Diritto*, 2020, 4, 531.

To ensure the effectiveness of these measures, the UNCRPD included the «denial of reasonable accommodation» within the definition of «discrimination on the basis of disability» (Art. 2). This protection should extend throughout the entire employment relationship, from the selection process to the fulfilment of working tasks. However, in practice, it serves as a remedial action, typically invoked in the event of a supervening disability, to guarantee accessibility when it becomes necessary.

While reasonable solutions recall the need to adopt an (*ex post*) remedy to break down the (architectural, economic and social) barriers that hinder persons with disabilities from fully participating in professional life, accessibility conveys the idea of an (*ex ante*) universal design, aimed at ensuring their access to both material environments and immaterial working conditions tailored to their personal characteristics.⁸⁴ Therefore, accessibility is not only a prerequisite for ensuring the enjoyment or exercise, on an equal basis with others, of all fundamental rights, but it also constitutes an autonomous fundamental right, able to shape a «relational environment» in which equality becomes truly effective.⁸⁵

This challenge has become even more pressing in the AI era. On the one hand, the access to smart devices and assistive technologies have significantly improved the lives of persons with disabilities, enhancing their autonomy in interacting with their surroundings, including the workplace and the work organization as a whole.⁸⁶ On the other hand, as mentioned above, the adoption of AI systems entails several risks and, in the labour context, affects both parties in the employment relationship,⁸⁷ potentially endangering the health, safety or fundamental rights of workers with disabilities, and leading to discrimination based on statistical data in both recruitment processes and in the performance of working tasks.⁸⁸

With regard to this restriction on access to a fair labour market and equal opportunities in employment relations, the AI Act plays a crucial role in ensuring «that persons with disabilities have access, on an equal basis with others, to information and communications technologies and systems, and [...] respect for [their] privacy». Indeed, «given the growing importance and use of AI systems», it emphasises that «the application of universal design principles to all new technologies and services should ensure full and equal access for everyone potentially affected by or using AI technologies, including persons with disabilities, in a way that takes full account of their inherent dignity and diversity». Therefore, it is essential «that providers ensure full compliance with accessibility requirements, including

⁸⁴ For a more in-depth analysis of this position, within the National legal system, please refer to: De Falco M., *Accomodamenti ragionevoli: sovvenzioni nel settore private, accessibilità ovunque*, in *Rivista Italiana di Diritto del Lavoro*, 2021, 4, 429, and to the references mentioned therein.

⁸⁵ In this direction, see: Rossi S., *L'accessibilità come diritto sociale delle persone disabili*, in *Materiali per una Storia della Cultura Giuridica*, 2019, 2, 399.

⁸⁶ See: Chakraborty N., Mishra Y., Bhattacharya R., Bhattacharya B., *Artificial Intelligence: The road ahead for the accessibility of persons with disability*, in *Materials Today: Proceedings*, 2023, 80, 3757, and Borzaga M., *Le ripercussioni del progresso tecnologico e dell'Intelligenza Artificiale sui rapporti di lavoro in Italia*, in *Diritto Pubblico Comparato ed Europeo online*, 2022, 1, 395, available at <https://www.dpceonline.it/index.php/dpceonline/article/view/1581>.

⁸⁷ Please refer again to: Boscati A., *nt.* (1), and Sartori A., *nt.* (2), 809.

⁸⁸ Prince A., Schwarcz D., *Proxy discrimination in the age of artificial intelligence and big data*, in *Iowa Law Review*, 2019, 105, 1257, available at https://ilr.law.uiowa.edu/sites/ilr.law.uiowa.edu/files/2023-02/Prince_Schwarcz.pdf, and Chen X., *Algorithmic proxy discrimination and its regulations*, in *Computer Law & Security Review*, 2024, 54, 1.

Directive 2016/2102/EU [and] Directive 2019/882/EU» by integrating «the necessary measures [...] into the design of the high-risk AI system» (Whereas no. 80).

Moreover, Member States should «support and promote research and development of AI solutions in support of socially and environmentally beneficial outcomes, such as AI-based solutions to increase accessibility for persons with disabilities [...]» (Whereas no. 142), while providers and deployers should be directed towards «inclusive and diverse design and development of AI systems, including attention to vulnerable persons and accessibility to persons with disability» (Whereas no. 165).

In this scenario, IA is treated as a tangible good, whose proper functioning, technical quality, and full accessibility must be ensured. From the Labour Law perspective, this approach – based on Art. 114, and 16, TFEU⁸⁹ – may appear unsatisfactory, as the position of the deployer – *rectius*, of the employer – remains secondary and functionally dependent on that of the provider.⁹⁰ Indeed, as far as this reasoning is concerned, it is the responsibility of the provider to «ensure that the high-risk AI system complies with accessibility requirements in accordance with Directives 2016/2102/EU and 2019/882/EU» [Art. 16, lett. l), AI Act].

At first glance, this provision might seem sufficient to ensure equal opportunities for persons with disabilities in work environments where AI systems are deployed. However, it is quite striking that the «assess[ment] and prevent[on of] the negative impact of AI systems on vulnerable persons or groups of vulnerable persons, including as regards accessibility for persons with a disability», appears among the key performance indicators that deployers – and, thus, employers – are encouraged to introduce within their «Codes of conduct», but not compulsorily [Art. 95, par. 2, lett. e), AI Act].⁹¹ Although only employers can assess the concrete impact of the adoption of AI in the work environment (both in the “work-place”, and in the “work-organization”), the voluntary nature of these Codes does not impose any binding obligation on them to verify and monitor the effects of AI systems on workers with disabilities.⁹² This regulatory approach raises significant concerns about the effectiveness of accessibility, not so much in relation to AI systems themselves, but rather regarding their integration into the work organization.

The risk is to create an inconsistent framework of protection, leading employers to overlook or insufficiently address the potential discriminatory effects of AI systems. While significant progress has been made in ensuring the accessibility of environments, products,

⁸⁹ See: Peruzzi M., *Intelligenza artificiale e lavoro: l'impatto dell'AI Act nella ricostruzione del sistema regolativo UE di tutela*, in Biasi M. (ed.), *Diritto del lavoro e intelligenza artificiale*, Giuffrè, Milan, 2024, 115.

⁹⁰ See: Alaimo A., *nt.* (2), 138, who emphasized this consideration, highlighting that the «approximation of laws» does not apply to provisions «relating to the rights and interest of employed persons» (Art. 114, par. 2, TFEU).

⁹¹ Among key performance indicators, the «Codes of conduct for voluntary application of specific requirements» should include «applicable elements provided for in Union ethical guidelines for trustworthy AI» [Art. 95, par. 2, lett. a), AI Act]. These guidelines – elaborated by AI High-Level Expert Group in the publication of European Commission, *Ethics guidelines for trustworthy AI*, 2019 (available at <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>), and merged in the E.U. Communication *Building Trust in Human-Centric Artificial Intelligence* [COM(2019)168 final] – list seven non-binding ethical principles, including «diversity, non-discrimination and fairness» and «societal and environmental well-being and accountability».

⁹² For a critical discussion of this Codes, and for some insights on their introduction by the representative bodies, see: Ciucciovino S., *nt.* (2), 592.

services, and tools, much remains to be done to guarantee that their integration into work organization is equally accessible and does not inadvertently reinforce existing barriers.

At the National level, a potential solution could be to mandate the application of Codes of Conduct for employers deploying («high-risk») AI systems,⁹³ but this hypothesis has not yet been considered by the legislator. Therefore, at present, the best prospect lies in the capacity of «Member States [to] facilitate the drawing up of Codes of conduct concerning the voluntary application, including by deployers, of specific requirements to all AI systems, on the basis of clear objectives and key performance indicators to measure the achievement of those objectives» [Art. 95, par. 2, AI Act].

6. Closing remarks.

In this paper, the impact of AI on contemporary society and on the Labour market has been addressed from the perspective of fundamental rights risk assessment. As has historically occurred in all industrial revolutions, it has been crucial to consider the trade-off between employers' technological innovation and workers' rights protection, taking into account the values that constrain the freedom of private economic initiative (§ 1).

In the awareness of how the emerging barriers may hinder equal opportunities in working contexts, the focus has been directed on accessibility, as a general principle recognized by the U.N. Convention on «the rights of persons with disabilities» for their full enjoyment of all human rights and fundamental freedoms, even in the AI era. Indeed, the international definition of disability, developed through the W.H.O. biopsychosocial approach, highlights the relevance of all elements of the surrounding environment, and underscores the need to eliminate (tangible and intangible) obstacles that prevent individuals from being appreciated and truly included within it (§ 2).

Subsequently, the issue has been further examined by focusing on European law and on the actions adopted to ensure a «Barrier-Free Europe», both in the physical and digital realms (§ 3). To assess the state of implementation of these measures, the Italian legal system has been identified as a case study, enhancing its efforts – undertaken even before International and European initiatives propelled the issue forward – for an accessible world (§ 4).

Although significant progress has been made in incorporating accessibility into the regulatory framework – both at the European and National level, such as within the Italian legal system – the current approaches remain predominantly centered on the material aspects of accessibility, often neglecting its broader implications for intangible inequalities. This is reflected in Labour Law, where it is essential to ensure the effective implementation of accessibility through a broader preventive approach, rather than relying solely on posthumous accommodations. In these terms, the crucial issue to move beyond a reactive

⁹³ Indeed, the AI Act «does not preclude the Union or Member States from maintaining or introducing laws, regulations or administrative provisions which are more favourable to workers in terms of protecting their rights in respect of the use of AI systems by employers, or from encouraging or allowing the application of collective agreements which are more favourable to workers» (Art. 2, par. 11).

adaptation-based model and towards a proactive one, that embeds accessibility into the very design of work environments, in relation to both “work-places” and “work-organization”.

This consideration seems to have been reinforced by the European “AI Act” (Regulation 2024/1689/UE), which – consistently with the previous Directives 2016/2102/EU and 2019/882/EU – has ensured that AI systems comply with established accessibility requirements. Once again, however, the emphasis remains on the “tangible” nature of accessibility, focusing only on providers, without considering the broader impact of AI on the work organization as a whole. Indeed, although the assessment and prevention of the discriminatory effects of AI systems have been included among the specific requirements of the codes of conduct implemented by employers-deployers, their «voluntary application» raises doubt on the mandatory nature of the provision and of its application (§ 5).

These issues were brought to the institutional attention of the G7 on «Inclusion and Disability», organized in Assisi and in Polifagno (Perugia, Italy) from October 14 to October 16, 2024.⁹⁴ In providing «access and accessibility» as one of the eight challenges to be faced, it has been stressed that «accessibility, following a universal design approach [...], is required to prevent and remove barriers to ensure that persons with disabilities have equal access to all aspects of the daily life, including the physical and digital environment, such as [*inter alia*] information and communication, including new technologies such as websites, apps, and software, and artificial intelligence among others». Indeed, «AI systems can be positive and determining factors for inclusion provided that they are accessible and that persons, including workers, with disabilities are involved in the design, development and production, deployment and maintenance phases».

Therefore, to shape the AI deployment in a way that genuinely promotes work inclusion, accessibility cannot be an afterthought or a voluntary commitment, but it must be a foundational principle, legally binding and deeply embedded in the design of both technologies and work organization. A viable path forward may involve establishing a binding EU-level obligation to guarantee the accessibility of AI in the workplace, or, at the very least, issuing strong recommendations to Member States to embed accessibility within human resources policies and practices.

The true test of AI regulation will lie not only in its ability to mitigate risks, but in its capacity to foster work environments that are both innovative and fundamentally equal, in which accessibility is not a merely formal (“material”) requirement, but a cornerstone of technological progress as a whole. Without such a paradigm shift, the promise of inclusion risks remaining nothing more than a well-intentioned aspiration, especially in the AI era.

⁹⁴ See the Final Document: G7 Italia 2024, *G7 Inclusion and disability. Everyone's right to full and effective participation and inclusion in civil, social, economic, cultural and political life in our countries. The Solfagnano Charter*, 2025, available at: https://www.g7italy.it/wp-content/uploads/G7-Inclusion-and-disability_Solfagnano-Charter.def_.pdf.

Bibliography

- Abril J. D., Braj Choubey S., Leonardi M. A., Zampieri G., *Reasonable accommodation and Disability: a Comparative Analysis*, in *Diritto della Sicurezza sul Lavoro*, 2024, 1, 18-52;
- Adams-Prassl J., *Regulating Algorithms at Work: Lessons for a 'European Approach to Artificial Intelligence'*, in *European Labour Law Journal*, 2022, 12, 1-21, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4024374;
- Alaimo A., *Il Regolamento sull'Intelligenza Artificiale: dalla proposta della Commissione al testo approvato dal Parlamento. Ha ancora senso il pensiero pessimistico?*, in *Federalismi.it*, 2023, 25, 133-149, available at <https://www.federalismi.it/nv14/articolo-documento.cfm?Artid=49476>;
- Alifano F., Dalla Sega M., De Falco M., Di Gioia F., Maini T., *La nuova definizione della "condizione di disabilità": implicazioni e procedure ex D.Lgs. n. 62/2024*, in *Bollettino ADAPT*, 2024, 26, 1-8, available at <https://www.bollettinoadapt.it/la-nuova-definizione-della-condizione-di-disabilita-implicazioni-e-procedure-ex-d-lgs-n-62-2024/?pdf=226347>;
- Almici A., Arengi A., Camodeca R., *Il valore dell'accessibilità. Una prospettiva economico-aziendale*, Franco Angeli, Milan, 2020;
- Arengi A., *Design for All. Progettare senza barriere architettoniche*, Utet, Milan, 2007;
- Barnes C., Mercer G., *Implementing the Social Model of Disability: Theory and Research*, The Disability Press, Leeds, 2004;
- Barton L., Oliver M. (eds.), *Disability Studies: Past, Present and Future*, The Disability Press, Leeds, 1997;
- Borzaga M., *Le ripercussioni del progresso tecnologico e dell'Intelligenza Artificiale sui rapporti di lavoro in Italia*, in *Diritto Pubblico Comparato ed Europeo online*, 2022, 1, 395, available at <https://www.dpceonline.it/index.php/dpceonline/article/view/1581>;
- Boscati A., *Artificial Intelligence and fulfilment of working tasks: rules and responsibilities*, currently in the process of being published in the *Book* dedicated to VI Colóquio Ítalo-brasileiro de Direitos Sociais: diálogos transdisciplinares, University of Milan "La Statale", January 21-23, 2025;
- Bresciani I., *Sanctionary consequences deriving from the violation of the obligation of reasonable accommodations in Italian labour law*, in *Italian Labour Law E-Journal*, 2023, 2, 1-15;
- Broderick A., *Of rights and obligations: the birth of accessibility*, in *The International Journal of Human Rights*, 2020, 4, 393-413;
- Broderick A., Ferri D., *International and European Disability Law and Policy*, Cambridge University Press, Cambridge, 2019;
- Buoso S., *L'inclusione sociale dei disabili alla luce del diritto dell'Unione europea*, in *Diritti Lavori Mercati*, 2019, 1, 85-102;
- Cantero Gamito M., Marsden C. T., *Artificial intelligence co-regulation? The role of standards in the EU AI Act*, in *International Journal of Law and Information Technology*, 2024, 32, 1, 1-19;
- Chakraborty N., Mishra Y., Bhattacharya R., Bhattacharya B., *Artificial Intelligence: The road ahead for the accessibility of persons with disability*, in *Materials Today: Proceedings*, 2023, 80, 3757-3761;

- Charlton J. I., *Nothing About Us Without Us: Disability Oppression And Empowerment*, University of California Press, Berkeley, 1998;
- Chen X., *Algorithmic proxy discrimination and its regulations*, in *Computer Law & Security Review*, 2024, 54, 1-19;
- Chiaromonte W., *L'inclusione sociale dei lavoratori disabili fra diritto dell'Unione europea e orientamenti della Corte di giustizia*, in *Variazioni su Temi di Diritto del Lavoro*, 2020, 4, 897-921;
- Ciucciovino S., *Risorse umane e intelligenza artificiale alla luce del regolamento (UE) 2024/1689, tra norme legali, etica e codici di condotta*, in *Diritto delle Relazioni Industriali*, 2024, 3, 573-614;
- Corti M., Sartori A., *I provvedimenti giuslavoristici della legge di bilancio*, in *Rivista Italiana di Diritto del Lavoro*, 2024, 3, 43-49;
- Crenshaw K., *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*, in *University of Chicago Legal Forum*, 1989, 1, 139-167, available at <https://chicagounbound.uchicago.edu/cgi/view-content.cgi?article=1052&context=uclf>;
- Cremona M., *External Relations of the EU and the Member States: Competence, Mixed Agreements, International Responsibility, and Effects of International Law*, in *EUI Working Paper Law*, 2006, 22;
- Davis L. J., *The Disability Studies Reader*, Second Edition, Routledge, London, 2006, available at https://disabilitystudies.nl/sites/default/files/beeld/onderwijs/lennard_davis_the_disability_studies_reader_secbookzz-org_0.pdf;
- De Falco M., *Accomodamenti ragionevoli: sovvenzioni nel settore private, accessibilità ovunque*, in *Rivista Italiana di Diritto del Lavoro*, 2021, 4, 429-451;
- De Falco M., *Il collocamento mirato alla prova della origine etnica: non passa lo straniero (disabile)*, in *LABOR. Il Lavoro nel Diritto*, 2022, 4, 423-436;
- De Falco M., *Ragionando attorno alla L. delega in materia di disabilità: una prospettiva giuslavoristica*, in *Responsabilità Civile e Previdenza*, 5, 2022, 1738-1760;
- De Falco M., *From "Carbon" to "Social" Offsetting. An Italian tool to accommodate workplaces for person with disabilities*, in *Italian Labour Law E-Journal*, 2024, 1, 29-44, available at <https://illej.unibo.it/article/view/19784/18189>;
- Di Gregorio V., *Principio di non discriminazione e diritti delle persone con disabilità: dal modello sociale alla Web Accessibility Directive*, in Imperiale F., Gianelli N. (eds.), *Accessibilità web e tecnologia assistiva. Strumenti di inclusione digitale*, Genova University Press, Genova, 2019, 19-42;
- European Commission, *Ethics guidelines for trustworthy AI*, 2019, available at <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>;
- European Disability Forum, *European Human Rights Report. Issue no. 7 – 2023. The Right to Work: the Employment Situation of Persons with Disabilities in Europe*, 2023, available at https://www.edffeph.org/content/uploads/2023/05/hr7_2023_press-accessible.pdf;
- Faioli M., *Prospects on Risks, Liabilities and Artificial Intelligence, empowering Robots at Workplace Level. The EU Regulation 2024/1689, with the related EU and Domestic Legal Frames, compared to the U.S. Legal System*, in *Working Paper della Fondazione Giacomo Brodolini*, 2024, n. 24, available at https://www.fondazionebrodolini.it/sites/default/files/pubblicazioni/file/WP24_1.pdf;
- G7 Italia 2024, *G7 Inclusion and disability. Everyone's right to full and effective participation and inclusion in civil, social, economic, cultural and political life in our countries. The Solfagnano Charter*, 2025, available

- at: https://www.g7italy.it/wp-content/uploads/G7-Inclusion-and-disability_Solfagnano-Charter.def_.pdf;
- Giacomello E., Alberti F., Trabucco D., *Architectural Barriers vs Universal Design*, in Villa F. (ed.), *The Accessible World*, 2018, Volpe, Milan, 24-41;
- Goodley D., *Disability Studies: an interdisciplinary introduction*, Sage Publications, New York, 2010;
- Garofalo D., *La tutela del lavoratore disabile nel prisma degli accomodamenti ragionevoli*, in *Argomenti di Diritto del Lavoro*, 2019, 6, 21-57;
- Gazzoni F., *Disabili e tutela reale*, in *Rivista del Notariato*, 1999, 4, 978-982;
- Giovannone M., *Il collocamento dei disabili nel mercato del lavoro post-emergenziale: criticità e prospettive*, in *Federalismi.it*, 2021, 10, 100-124, available at <https://www.federalismi.it/nv14/articolo-documento.cfm?Artid=45182>;
- Goldschmidt J. E., *Reasonable accommodation in EU equality law in a broader perspective*, in *ERA Forum*, 2007, 8, 39-48;
- International Labour Organization, *Advancing social justice. Promoting decent work. Disability and work*, 2023, available at <https://www.ilo.org/ja/media/254991/download>;
- Janssen H., Seng Ah Lee M., Singh J., *Practical fundamental rights impact assessments*, in *International Journal of Law and Information Technology*, 2022, 30, 200-232, available at <https://academic.oup.com/ijlit/article/30/2/200/6835507>;
- Kayess R., French P., *Out of Darkness into Light? Introducing the Convention on the Rights of Persons with Disabilities*, in *Human Rights Law Review*, 2008, 1, 1-34;
- Khare S. K., Blanes V., Nadimi Vidal E. S., Rajendra Acharya U., *Emotion recognition and artificial intelligence: A systemic review (2014-2023) and research recommendations*, in *Information Fusion*, 2024, 102, 1-36;
- Kovačević L., Vujadinović D., Evola M. (eds.), *Intersectional Discrimination of Women and Girls with Disabilities and Means of their Empowerment*, University of Belgrade Faculty of Law Publishing Center, Belgrade, 2022;
- Leone C., *Il ruolo del diritto europeo nella costruzione dell'amministrazione digitale*, in *Rivista Italiana di Diritto Pubblico Comunitario*, 2014, 3-4, 867-878;
- Madansa J., Loeba M., Eide A.H., *Measuring Disability and Inclusion in relation to the 2030 Agenda on Sustainable Development*, in *Disability and the Global South*, 2017, 4, 1164-1179, available at <https://sintef.brage.unit.no/sintef-xmlui/bitstream/handle/11250/2586798/dgs-04-01-06.pdf?sequence=1>;
- Maliszewska-Nienartowicz J., *Accessibility for Persons with Disabilities as an Important Element of Economic and Social Development: The European Union Case*, in *European Research Studies Journal*, 2020, 1, 1084-1099;
- Malloy R. P., *Inclusion by design: accessible housing and mobility impairment*, in *Hast Law J. Hastings Law Journal*, vol. 60, 2009, 699-748, available at: https://repository.uclawsf.edu/hastings-law_journal/vol60/iss4/1;
- Malzani F., *Ambiente di lavoro e tutela della persona. Diritti e rimedi*, Giuffrè, Milan, 2014;
- Malzani F., *Inidoneità alla mansione e soluzioni ragionevoli, oltre il repêchage*, in *Argomenti di Diritto del Lavoro*, 2020, 4, 963-976;

- Marcialis M., *Spunti in tema di viaggi, inclusione ed accessibilità*, in *Rivista di Diritto dell'Economia, dei Trasporti e dell'Ambiente*, 2022, 20, 157-173, available at https://www.giureta.uni-pa.it/2022/10_Marcialis_DirTrasp_2022.pdf;
- Marra A. D., *Barriere Architettoniche* (voce), in Vv. AA., *Enciclopedia del Diritto. Annali*, Giuffrè, Milan, 2011;
- Marra A. D., *Disabilità e diritto: qual è l'utilità dei disability studies per la ricerca giuridica*, in *Italian Journal of Disability Studies*, 2011, 1, 23-29;
- Marra A. D., *Le barriere architettoniche provocano una discriminazione indiretta*, in *Responsabilità Civile e Previdenza*, 2021, n. 1, 227-239;
- Marra A. D., *I diritti dell'accessibilità e della mobilità della persona con disabilità*, in *Forum di Quaderni costituzionali*, 2021, 1, 541-562;
- Mercat-Bruns M., *Multiple discrimination and intersectionality: issues of equality and liberty*, in *International Social Science Journal*, 2017, 67, 43-54;
- Miller J. A., *The European disability right revolution*, in *European Law Review*, 2019, 1, 67-88;
- Monaco M. P., *Il decreto legislativo 2 maggio 2024, n. 62: una lettura giuslavoristica*, in *Professionalità Studi*, 2024, 3, 3-33, available at https://moodle.adaptland.it/plugin-file.php/84060/mod_resorce/content/2/PS_2024_3.pdf;
- Mantelero A., *Beyond data. Human rights, ethical and social impact assessment in AI*, Springer-Asser, The Hague, Berlin, 2022, available at <https://link.springer.com/book/10.1007/978-94-6265-531-7>;
- Mantelero A., *The Fundamental rights impact assessment (Fria) in the AI Act: Roots, legal obligations and key elements for a model template*, in *Computer Law and Security Review*, 2024, 54, 1-18, available at <https://www.sciencedirect.com/science/article/pii/S0267364924000864>;
- Mantelero A., Esposito M. S., *An evidence-based methodology for human rights impact assessment (Hria) in the development of AI data-intensive systems*, in *Computer Law & Security Review*, 2021, 41, 1-35, available at <https://www.sciencedirect.com/science/article/pii/S0267364921000340>;
- Montelero A., Peruzzi M., *L'AI Act e la gestione del rischio nel sistema integrato delle fonti*, in *Rivista Giuridica del Lavoro*, 2024, 4, 517-537;
- Organization for Economic Cooperation and Development, *Disability, Work and Inclusion, Mainstreaming in All Policies and Practices*, 2022, available at <https://www.oecd.org/employment/disability-work-and-inclusion-1ea5e9c-en.htm>;
- Peruzzi M., *Intelligenza artificiale e lavoro. Uno studio su poteri datoriali e tecniche di tutela*, Giappichelli, Turin, 2023;
- Peruzzi M., *Intelligenza artificiale e lavoro: l'impatto dell'AI Act nella ricostruzione del sistema regolativo UE di tutela*, in Biasi M. (ed.), *Diritto del lavoro e intelligenza artificiale*, Giuffrè, Milan, 2024, 115-146;
- Priestley M., *Mainstreaming disability equality in the European Semester 2019-20 and retrospective analysis*, ANED report, 2019;
- Prince A., Schwarcz D., *Proxy discrimination in the age of artificial intelligence and big data*, in *Iowa Law Review*, 2019, 105, 1257-1318, available at https://ilr.law.uiowa.edu/sites/ilr.law.uiowa.edu/files/2023-02/Prince_Schwarcz.pdf;
- Pupo V., *La progressiva attuazione del principio di accessibilità delle persone con disabilità*, in *Rivista AIC*, 2023, 4, 93-126;

- Redek T., Pahor M., Boškosi P., Mileva Boshkoska B., Kostevc Č., Franca, V., *A Comparative Analysis of the Labour Market Position of Disabled Workers*, in *Revija za Socijalnu Politiku*, 2024, 2, 203-229, available at <https://hrcak.srce.hr/en/file/471504>;
- Rifkin J., *The End of Work? The Decline of the Global Labor Force and the Dawn of the Post-Market Era*, G.P. Putnam's Sons, New York, 1995;
- Rossi S., *L'accessibilità come diritto sociale delle persone disabili*, in *Materiali per una Storia della Cultura Giuridica*, 2019, 2, 399-415;
- Sartori A., *Intelligenza artificiale e gestione del rapporto di lavoro. Appunti da un cantiere ancora aperto*, in *Variazioni su Temi di Diritto del Lavoro*, 2024, 3, 806-845;
- Slattery P., Saeri A. K., Grundy E. A. C., Graham J., Noetel M., Uuk R., Dao J., Pour S., Casper S., Thompson N., *The AI risk repository. A comprehensive meta-review, database, and taxonomy of risks from Artificial Intelligence*, 2024, available at <https://arxiv.org/abs/2408.12622>;
- Tullini P., *Sicurezza sul lavoro e modello sociale europeo: un'ipotesi di sviluppo*, in Vv. Aa., *Scritti in onore di Edoardo Ghera*, Cacucci, Bari, 2008, 1257-1274;
- United Nations Organization, *Rules for the Equalization of Opportunities for Persons with Disabilities*, 1993, available at <https://social.desa.un.org/issues/disability/resources/disability-resources/ru-les/standard-rules-on-the-equal-ization-of>;
- United Nations Organization, *Convention on the Rights of Persons with Disability*, 2006, available at <https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>;
- United Nations Organization, *Accessibility and Development. Mainstreaming disability in the post-2015 development agenda*, 2013, available at <https://desapublications.un.org/publications/accessibility-and-development-main-streaming-disability-post-2015-development-agenda>;
- United Nations Organization, *Transforming our world: the 2030 Agenda for Sustainable Development*, 2015, available at <https://sdgs.un.org/2030agenda>;
- Waldschmidt A., *Disability policy of the European Union: The supranational level*, in *ALTER. European Journal of Disability Research*, 2009, 3, 8-23, available at <https://www.science-direct.com/science/article/pii/S1875067208000862>;
- Wansing G., Welti F., Schäfers M. (eds.), *The Right to Work for Persons with Disabilities. International Perspectives*, Nomos, Glashütte, 2018;
- World Health Organization, *International Classification of Impairments, Disabilities and Handicap*, 1980, available at https://iris.who.int/bitstream/handle/10665/41003/9241541-261_eng.pdf;jsessionid=11AE0579E45C477F0D0572D89AFE6F3B?sequence=1;
- World Health Organization, *International Classification of Functioning, Disability and Health*, 2001, available at https://apps.who.int/gb/archive/pdf_files/WHA54/ca54r21.pdf;
- Zilli A., *Il lavoro agile come "accomodamento ragionevole", fra tutela della salute, diritto al lavoro e libertà di organizzazione d'impresa*, in *LABOR. Il Lavoro nel Diritto*, 2020, 4, 531-542;
- Zilli A., *La trasparenza nel lavoro subordinato. Principi e tecniche di tutela*, Pacini, Pisa, 2022;
- Zilli A., De Falco M., *Disability discrimination*, in M. Delfino, C. Spinelli, A. Zilli (eds.), *The Great Inequalities Gaps: A National Overview on Italy*, in *EQUAL. Rivista di diritto antidiscriminatorio*, 2025, 1, 646-684, spec. 669-684;

Zolyomi E., BIRTHA M., *Towards inclusive employment of persons with disabilities*, European Centre for Social Welfare Policy and Research, 2020, available at <https://www.euro.centre.org/publications/detail/4101>.

Copyright © 2025 Massimiliano De Falco. This article is released under a Creative Commons Attribution 4.0 International License