The role of technology and innovation in digital and social inclusion. The case of disability in a public perspective*

Beatrice Rabai

Abstract

The digital divide for people with disabilities is a barrier to information acquisition, which is a basic need for self-development, social environment and full participation in society development. Accessibility for all, especially those with disabilities, is central to digital and social inclusion.

The paper aims to explore, from a critical perspective, the problem of the web accessibility for people with disabilities, by particular reference of the relevant international and European framework referring to e-accessibility and digital equality.

Summary

1. Introduction. — 2. People with disabilities as a vulnerable group. — 3. Conceptual models of disability. — 4. The social model: disability as a socially constructed phenomenon in International and European law and policy. — 5. The importance of digital technologies as tools of social inclusion for people with disabilities: bridges and barriers. — 6. Conclusions.

Keywords

Digital divide - disabilities - ICT - social inclusion - EU disability policies

1. Introduction

The coronavirus Covid-19 pandemic and social distancing measures, self-quarantines and business closures have caused a multi-layered crisis in societies across the world[1].

---

* L'articolo è stato sottoposto, in conformità al regolamento della Rivista, a referaggio "a doppio cieco".

[1] The coronavirus pandemic began at the end of 2019 in Wuhan, China, and then rapidly is expanded to touch every corner of the globe. The epidemic was declared a Public Health Emergency of International Concern by the Director General of the World Health Organization on 30 January 2020.

Many individuals have experienced disruptions in social, occupational and daily life activities; at the same time, the need for "social distancing" to reduce the spread of the pandemic has massively accelerated the implantation process of the «Fourth Industrial Revolution» (4IR or Industry 4.0)[2] which relies on cloud computing, artificial intelligence, big data, 5G network and more; all tools useful to support the public health as well as to provide quick solutions to governments, organizations and people during the time of crisis[3].

In this context, platforms such as Twitter, Facebook and Google have rapidly become crucial communication devices for information creation, dissemination and consumption, leading to an increasing use of the Internet for daily activities and social interactions[4].

But not all people have been able to gain benefits from it.

The isolation has accentuated the gaps that remain in technology regulation and digital skills (the so called "digital divide") and has put the spotlight on inequalities and vulnerabilities in the population[5]. The pandemic has renewed public attention on the issue of ICT accessibility[6], with particular reference to the social categories which

---

See World Health Organization, *Novel coronavirus [2019-n CoV]: situation Report*, 2020.

[2] It was the idea in K. Schwab, *The Fourth Industrial Revolution*, Geneva, 2016, which asserts that global society is entering a new phase of development, one in which disruptive technologies (artificial intelligence, autonomous vehicles and the internet of things) are merging with humans' physical lives.

[3] The pandemic has highlighted the importance of clear and understandable information and communication and, at the same time, the role of ICT. At that regard, during the crisis public services professionals from institutions like schools, councils and health trusts have had to adapt to delivering services remotely. The cloud-based platform, such as Zoom, Google Meet, Microsoft Teams, Webex Meetings have been used to make it easier for workers to work from home and students to complet their study online. The role of these platforms has been defined in terms of "digital utilities" by O. Pollicino, *Costituzionalismo, privacy e neurodiritti*, in *Rivista di diritto dei media*, 2, 2021, 11. Generally, on the theme of digital technologies, see F. Cardarelli, *Profili di diritto delle tecnologie dell'informazione*, Camerino, 1992; F. Cardarelli, Voce *Informatica*, in E. Picozza (ed), *Dizionario di diritto pubblico dell'economia*, Santarcangelo di Romagna, 1998; F. Cardarelli, *Amministrazione digitale, trasparenza e principio di legalità*, in G. Acocella (ed), *Materiali per una cultura della legalità*, Torino, 2015, ed in *Il diritto dell'informazione e dell'informatica*, 2, 2015. On the power of Algorithms, see G. De Minico, *Fundamental rights, European digital regulation and algorithmic challenge*, in *Rivista di diritto dei media*, 1, 2021, 9 ss.; F. Di Porto, *La regolazione di fronte alle sfide dell'ICT e dell'intelligenza artificiale*, in R. Cavallo Perin - D. U. Galetta (eds), *Il diritto dell'amministrazione pubblica digitale*, Torino, 2020, 277 ss.; G. Avanzini, *Decisioni amministrative e algoritmi informativi. Predeterminazione analisi predittiva e nuove forme di intelligibilità*, Napoli, 2019; K.D. Ashly - D. Kevin, *Artificial Intelligence and Legal Analytics: New Tools for Law practice in The Digital Age*, Cambridge, 2017; C. Devins - T. Felin - S. Kauffman - R. Koppl, *The Law and Big data*, in *Cornell Journal of Law and Public Policy*, 2017, 27, 366 ss.; D.K. Citron, *Technological Due Process*, in *Washington University Law Review*, 6, 2008, 1249 ss.

[4] See G. Vigevani - O. Pollicino - C. Melzi d'Eril - M. Cuniberti - M. Bassini, *Diritto dell'informazione e dei media*, Torino, 2019; G. Vigevani, *I media di servizio pubblico nell'età della rete. Verso un nuovo fondamento costituzionale, tra autonomia e pluralismo*, Torino, 2018; G. Pitruzzella - O. Pollicino - S. Quintarelli, *Parole e potere: libertà d'espressione, hate speech e fake news*, Milano, 2017.

[5] See L. Robinson - J. Schulz - A. Khilnani - H. Ono - S.R. Cotton - N. McClain - L. Levine - W. Chen - G. Huang, A.A. Casilli - P. Tubaro - M. Dodel - A. Quan-Haase - M. Laura Ruiu - M. Ragnedda - D. Aikat - N. Tolentino, *Digital inequalities in time of pandemic: COVID-19 exposure risk profiles and new forms of vulnerability*, in *First Monday*, 7, 2020; J.M. Ryan (ed), *COVID-19: Global Pandemic, Societal Responses, Ideological Solutions*, Routledge, 2020.

[6] Accessibility refers to the extent to which a product, device, service, or environment is available and navigable for persons with disabilities, or for persons with other special needs or functional limitations.

appear to be more at risk of social exclusion than the rest of the population, such as people with disabilities[7].

Lack of equal internet access and use has led to the discrimination of this people and to the creation of social barriers between them and the society, causing the spread of digital inequalities.

The digital divide is not a new issue but is one that has been intensified by the crisis. This article aims to examine the most recent European Union regulatory approaches to web accessibility for persons with disabilities, aimed to pursue digital inclusion and equity.

Further to this introductory paragraph, the second paragraph traces briefly the key concept concerning the academic debates on vulnerability, the third paragraph examines the relationship between vulnerability and disability focusing on the two distinct models of how society views disabilities, the medical model and the social model, the fourth paragraph focuses on the evolution of the supranational legal framework regarding the promotion and protection of the rights of the persons with disabilities, the fifth paragraph discusses the most relevant European legal framework referring to e-accessibility and digital equality, the sixth paragraph concludes with some general remarks concerning how the European Union can reach the goal of the digital inclusion and fully involve the people with disabilities, in order to decrease the digital divide.

2. People with disabilities as a vulnerable group

Vulnerability has become an important paradigm in our times, but is not a straightforward concept[8]. Although the notion is in common use, its meaning is often characterised by vagueness and plurality of meanings[9].

The vulnerability notion seems to most prominently have emerged in the fields of

---

[7] Despite the progress made in the past decade, persons with disabilities still face considerable barriers and have a higher risk of poverty and social exclusion. For interesting remarks on the theme of poverty in general, see C. Franchini, *L'intervento pubblico di contrasto alla povertà*, Napoli, 2021.

[8] For the origin of the word, see B.S. Turner, *Vulnerability and human right*, University Park, 2006. See also R.E. Goodin, *Protecting the Vulnerable. A reanalysis of Our Social Responsibilities*, Chicago-London, 1985, xi, according to which «many more people are vulnerable to us – individually or collectively – than we have made any commitments to, in any sense. We (individually or collectively) have the same sort of strong responsibilities toward all those who are vulnerable to our action and choices»; M. Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, Cambridge, 2006; P. Ricoeur, *Autonomy and vulnerability*, in P. Ricoeur, *Reflections on the just*, Chicago, 2007; A. Wrigley, *An Eliminativist Approach To Vulnerability*, in *Bioethics*, 7, 2015, 478 ss.; Henk ten Have, *Vulnerability. Challenging bioethics*, New York, 2016.

[9] In this sense, see M.C. Ruof, *Vulnerability, Vulnerable Populations, and Policy*, in *Kennedy Inst. Ethics J.*, 4, 2004, 411 ss.; M.A. Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, in *Yale J.L. & Feminism*, 1, 2008-2009, 9; B. Fawcett, *Vulnerability: questioning the certainties in social work and health*, in *International Social Work*, 4, 2009, 473 ss.

political theory[10], philosophy[11] and sociology[12], but has recently triggered increasing interest in the areas of ethics[13] and law[14].

In the context of legal discourse, in particular, according to Fineman, vulnerability is an ontological condition of mankind, «a universal, inevitable, enduring aspect of the human condition that must be at the heart of our concept of social and state responsibility»[14].

Setting out an alternative to the liberal theory, which images an ideal citizen autonomous and independent who inhabits a world defined by individual - where State intervention is perceived as a violation of his liberty because vulnerability and dependency are confined to the private sphere[15] - the vulnerable subject model gives priority to the value of equality, conceptualizing vulnerability as a shared, universal ontological experience for all human beings, by virtue of our nature as interdependent social beings[16].

In particular, the central thesis of vulnerability theory is that everyone is vulnerable, although some people are more resilient than others and the State therefore has a corresponding obligation to reduce, ameliorate, and compensate for that vulnerability.

In her work on vulnerability, Fineman criticizes the liberal subject model which is centred on the «myth» of autonomy, arguing on the contrary the need for the role of State institutions in order to provide «collectively form systems that play an important role in lessening, ameliorating, and compensating for vulnerability»[17], with particular attention to inequalities in the distribution of resources[18].

Her account is based on an analysis of American legislation, but it may be helpful for understanding some of the problems with the European welfare system.

The legal approach to vulnerability so takes on particular importance in disability studies, as we will say in the following paragraph.

---

[10]   R.E. Goodin, *Vulnerabilities and Responsibilities: An Ethical Defense of the Welfare State*, in *The American Political Science Review*, 3, 1985, 775 ss.

[11]   M.C. Nussbaum, *Frontiers of justice. Disability, Nationality, Species Membership*, Mass-London, 2006, 170 ss.

[12]   B.L. Turner, *Vulnerability and resilience: Coalescing or paralleling approaches for sustainability science?*, in *Global Environmental Change*, 4, 2010, 570 ss.

[13]   C. Mackenzie - W. Rogers - S. Dodds, *Vulnerability: New Essays in Ethics and Feminist Philosophy*, New York, 2013.   [14] M.A. Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, cit., 9; M.A. Fineman, *The vulnerable subject and the responsive State*, in *Public Law & Legal Theory Research Paper Series*, 2010, 251 ss.; M.A. Fineman, *Equality, Autonomy and the Vulnerable Subject in Law and Politics*, in M.A. Fineman - A. Grear, *Vulnerability: Reflections on a New Ethical Foundation for Law and Politics*, Surrey, 2013; M.A. Fineman, *Vulnerability, Resilience, and LGBT Youth*, in *Temple Political and Civil Rights Law Review*, 2, 2014, 307 ss.; M.A. Fineman, *Equality and Difference - The Restrained State*, in *Alabama Law Review*, 3, 2015, 609 ss.

[14]   M.A. Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, cit., 8.

[15]   In this latter field, in particular, for several years western systems of law have inherited a political liberalism that imagines a 'liberal legal subject' autonomous and independent, who inhabits a world defined by individual, not societal responsibility, because State intervention or regulation is perceived as a violation of his liberty.

[16]   At that regard, see also remarks by B.S. Turner, *Vulnerability and Human Rights*, Philadelphia, 2006.

[17]   M.A. Fineman*, The vulnerable subject and the responsive State*, cit., 269.

[18]   Critically on this point J.L. Scully, *Disability and Vulnerability*, in *Vulnerability*, Oxford, 2014, 219.

3. Conceptual models of disability

According to the World Health Organization, 15 % of the world's population (an estimated 1.1 billion people) is identified as having some form of disability[19].

People with a disability are often prevented from taking fully part into the society and the economy due to environmental and attitudinal barriers.

For a long time, disability has been described differently in scientific literature.

Particularly, there are a number of "models" of disability which have been defined over the last few years but the two most frequently mentioned are the "medical" and "social" paradigms of disability, as I said before[20].

On the one hand, the first one describes disability as an individual deficiency, illness[21] or impairment in a person's body[22].

This approach is based on a belief that the difficulties associated with the disability lies in the individual[23].

So the medical model views disability as an obstacle stemming from the functional limitations of the disabled person rather than as a societal problem arising from disabling and discriminatory barriers[24]. The social model, on the other hand, describes disability as being socially constructed, a condition attributed to the socio-economic and political disadvantage which limits one's ability to function effectively in society[25].

---

[19]   See World Health Organisation, *World Report on Disabilities*, 2021.

[20]   Such as the medical model, the social model, the economic model, the minority group model, the universalist model, the Nordic relational model, the capabilities model and others. The analysis of the different disability models can be found in T. Shakespeare et al., *Models*, in G. Albrecht (ed), *Encyclopedia of Disability*, Thousand Oaks, 2006, 1101 ss.; J.H. Stone - M. Blouin (eds), *International Encyclopedia of Rehabilitation*, 2010, New York; N. Erevelles, *Disability and difference in global context. Enabling a Transformative Body Politic*, New York, 2011; J.E. Bickenbach, *The International Classification of Functioning, Disability and Health and its Relationship to Disab*ility Studies, in N. Watson et al (eds), New York, 2012, 51 ss.; D. Wasserman et al., *Disability: Definitions, Models, Experience*, in E.N. Zalta (ed),
The Stanford Encyclopedia of Philosophy, 2013; M. Berghs - K. Atkin - H. Graham - C. Hatton - C. Thomas*, Implications for public health research of models and theories of disability: a scoping study and evidence synthesis*, Southampton, 2016; M. Oliver, *Defining Impairment and Disability*, in Emens, *Disability and Equality Law*, London, 2017, 3 ss.

[21]   See U. Gerhardt*, Ideas about Illness: An Intellectual and Political History of Medical Sociology,* London, 1989.

[22]   See remarks by B. Clough - J. Herring (eds), *Disability, Care and Family*, New York, 2021, 17 ss.

[23]   While in the first approach, disability is commonly viewed as a problem that exists in a person's body and requires medical treatment, the social model is more inclusive because it holds that much of the disadvantage experienced by those with disabilities or impairment is socially imposed rather than pertaining to their bodily or mental state.

[24]   See C.E. Drum - G.L. Krahn - H. Bersani, *Disability and Public Health*, New York, 2009, 27 ss.; C. Boorse, *Disability and Medical Theory*, in D. Ralston and J. Ho (eds), in *Philosophical Reflections on Disability*, Dordrecht, 2010, 55 ss.

[25]   The model appears to have had a profound impact on academics, politics and law since the 1970s. At that regard, see M. Oliver, *The handicapped person: a new perspective for social works?*, London, 1981; M. Oliver, *Social Work and Disabled People*, Macmillan, 1983; M. Oliver, *The Politics of Disablement*, London, 1990, 1 (in this book the author has mentioned the disability as a «personal tragedy theory, in contrast with social oppression theory»); A. Llewellyn - K. Hogan, *The Use and Abuse of models of Disability*, in *Disability & Society*, 2000, 157 ss.; C. Barnes, *The social model of Disability: Valuable or Irrelevant?*, in N. Watson - A. Roulstone - C. Thomas (ed)*, The Routledge Handbook of Disability Studies*, New York, 2012, 12 ss.

The basic idea of the social model is that disability should not be considered as an individual problem, but as a matter of life in society, which transfers the responsibility for the disadvantages of a person's bodily limitations to the incapacity of society to predict and adjust in order to diversities.

In other words, according to the social model it is society that oppresses people with disabilities by conditioning their potential and participation within society itself, whereas for the medical model disability represents only a physical impairment[26].

As seen above, the focus on structures and institutions - that is central in vulnerability paradigm - has important theoretical links with the social model of disability.

By combining vulnerability studies with the so called "social model", there opens up the possibility of rethinking the concept of disability in a legal perspective.

4. The social model: disability as a socially constructed phenomenon in International and European law and policy

The social model of disability underpins the entire UN Convention on the Rights of Persons with Disabilities (UNCRPD), which has been hailed as a milestone in the pursuit of the promotion and protection of disabled persons rights[27].

The UNCRPD seeks to bring about a paradigm shift in disability policy that is based on a new understanding of disabled persons as right holders and human rights subjects[28].

---

[26] For a critique of the social model of disability see, among others, D. Marks, *Dimensions of Oppression: theorising the Embodied Subject*, in *Disability and Society*, 5, 1999, 611 ss.

[27] The United Nation Convention on the Rights of Persons with Disabilities (CRPD) was adopted by the UN General Assembly on 13 December 2006, and the Optional Protocol governing enforcement mechanisms came into force on 3 April 2008 (to see the Map of Signatures and Ratifications, you can visit the page www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html). It establishes a comprehensive framework for the protection and promotion of rights for disabled people and includes 50 articles, which require parties to adopt its general principles, to take specific actions in relation to specific articles, and to put in place arrangements for monitoring and reporting on their progress. On this theme, see F. Mégret, *The Disabilities Convention: Human Rights of Persons with Disabilities or Disability Rights?*, in *Human Rights Quarterly*, 2, 2008, which said that «the Convention has rightly generated tremendous expectations that it can bring succor to persons with disabilities the world over, whose rights have often been persistently and systematically violated» and F. Mégret, *The Disabilities Convention: Towards a Holistic Concept of rights*, in *The International Journal of Human Rights*, 2008, 261 ss., where the author highlights the "olistic" concept of disability rights as it is emerged from the Convention.

[28] A. Broderik - D. Ferri, *International and European Disability Law and Policy. Text, Cases and Materials*, Cambridge, 2019, 23, «the CRPD is the first international human rights treaty that seeks to ensure the protection and promotion of the rights of persons with disabilities on an equal basis with others. The primary aim of the CRPD was, arguably, not to create new rights but to ensure that existing human rights were made equally effective for persons with disabilities». For a comparison between social model and human rights model, see T. Degener, *A Human Rights Model of Disability*, in P. Blanck - E. Flynn (ed), *Routledge Handbook of Disability Law and Human Rights, London*, 2017, 31 ss. and S. Favalli, *Disabilità, diritti umani e diritto internazionale*, Milano, 2021, 11 ss. On the definition of disability, see J. Swain et al. (eds), *Disabling Barriers, Enabling Environments*, London, 1993; S.D. Edwards, *Disability. Definitions, Value and Identity*, Oxford, 2005; L. Nordenfelt, *On the Notions of Disability and their Classification*, Linkopping, 1997. On the theme of fundamental rights of disabled person in Italian context, see G. Arconzo, *I diritti*

In particular, under art. 1, the Convention defines people with disabilities as «*those who have longterm physical, mental, intellectual or sensory impairments which, in interaction with various attitudinal and environmental barriers, hinder their full and effective participation in society on an equal basis with others*»[29].

In that regard the Convention - for the first time - promotes the social, not the medical, approach of disability, whereby social and environmental factors - in conjunction with certain health conditions - are regarded as the causes of disability[30].

The aim of the UNCRPD is to ensure the protection and promotion of the rights of persons with disabilities on an equal basis with others, through the creation of a legislative framework with concrete, enforceable and time-bound benchmarks to monitoring the gradual implementation of accessibility.

Particularly, art. 4 requires States Parties to ensure disability policymaking, in order to adopt an inclusive policy approach to protect and promote the rights of persons with a disability in all laws and programs.

The Convention highlights that persons with disabilities have long-term physical, mental, intellectual or sensory impairments that - in interaction with various barriers - may hinder their full and effective participation in society on an equal basis with others[31].

The European Union officially became a Party on the UNCRPD on 23 December 2010, and since that moment the Convention has become an integral element of EU Law[32].

---

delle persone con disabilità. Profili costituzionali, Milano, 2020; C. Colapietro - F. Girelli, *Persone con disabilità e Costituzione*, Napoli, 2020; M. Ramajoli, *Sui molteplici criteri di riparto della giurisdizione in materia di servizi di sostegno scolastico alle persone con disabilità*, in *Dir. proc. amm.*, 2, 2020, 275 ss.; M. D'amico - F. Biondi (eds), *Diritti sociali e crisi economica*, Milano, 2017; F. Fontana - A. Tarantino (eds), *Dignità e fragilità della persona umana*, Napoli, 2017; N. Zanon, *Corte costituzionale, evoluzione della "coscienza sociale", interpretazione della Costituzione e diritti fondamentali: questioni e interrogative a partire da un caso paradigmatico*, in *RivistaAic.it*, 4, 2017; M.G. Bernardini, *Disabilità, giustizia, diritto. Itinerari tra filosofia del diritto e Disability Studies*, Torino, 2016; S. Cassese, *Dentro la Corte. Diario di un giudice costituzionale*, Bologna, 2015; D. Siclari, *Riflessioni sullo stato giuridico della disabilità nell'ordinamento italiano*, in *Il diritto dell'economia*, 2015; L. Violini, *Il diritto all'assistenza delle persone disabili*, in C. Colapietro - A. Salvia (eds), *Assistenza, inclusione sociale e diritti delle persone con disabilità*, Napoli, 2013; D.A. Marra, *Diritto e disability studies*, Reggio Calabria, 2009, 27 ss.; V. Vadalà, *La tutela delle disabilità*, Milano, 2009; F. Furlan, *La tutela costituzionale del cittadino portatore di handicap*, in C. Cattaneo (ed), *Terzo settore, statualità e solidarietà sociale*, Milano, 2001, 231 ss.; M. Ainis, *I soggetti deboli nella giurisprudenza costituzionale*, in *Politica del Diritto*, 1999; M. Luciani, *Sui diritti sociali*, in VV.AA., *Studi in onore di Manlio Mazziotti di Celso*, Padova, 1995; R. Bin, *Diritti e argomenti. Il bilanciamento degli interessi nella giurisprudenza costituzionale*, Milano, 1992; S. Panunzio, *Il cittadino handicappato psichico nel quadro costituzionale*, in *Scritti in memoria di Pietro Gismondi*, Milano, 1988.

[29] For a critique of the definition (or not definition) of disability, see S. Favalli, *Disabilità, diritti umani e diritto internazionale*, cit., 45 ss.

[30] See again A. Broderik - D. Ferri, *International and European Disability Law and Policy*, cit., 37 and G. Arconzo, *I diritti delle persone con disabilità. Profili costituzionali*, cit., 52 ss., which explains the different approaches used throughout the years by the World Health Organization (WHO) to define persons with disabilities.

[31] The preamble to the Convention states that discrimination against persons with disabilities «is a violation of the inherent dignity and worth of the human person». In addition, artt. 21 and 30 recommend the full participation in cultural life, recreation and leisure for persons with disability which should enjoy access to cultural materials, to television programs, films, theatre and others in accessible formats, through the Internet.

[32] See Council Decision 2010/48/EC of 26.11.2009 concerning the conclusion, by the European Community of the United Nations Convention on the rights of Persons with Disabilities, OJ 2010 no.

Should be considered that the focus on the social model of disability in EU law was impossible for a long time due to lack of EU competences in the sphere of social policy that prevented active influence on the situation of people with disabilities[33].

The origin of today's EU policy is to be found in the 1996 Communication, "A New European Community Disability Strategy", in which the Commission proposed a paradigm shift from its previous medical model approach to disability to a social model based on rights[34].

In particular, the Commission proposed an equal opportunities model based on «the core value of equality […] [which forms] the essence of the rights-based approach to disability»[35].

However, it was not until 1999, when the Treaty of Amsterdam came into force, that the Community acquired the legal basis to pass binding measures regarding the treatment of persons with disabilities across its territory[36].

The Amsterdam Treaty was therefore the first European treaty to mention people with disabilities[37].

Therefore, only after much time the social model of disability has been officially recognized by the European Union as the basis for its disability policy[38].

L. 23/35. In later years the Court of Justice of the European Union (CJEU) reinforces the fact that the CRPD is binding on the EU and on its Member States when adopting and implementing EU law, as it is an instrument of secondary law. In this sense, see CJEU, C-335/11 and C-337/11, *Skouboe Werge* (2011), §§ 29-30; CGEU, C-363/12, *Z.* (2014), § 73; CJEU, C-356/12, *Glatzel* (2014).

[33] The initial policy agenda of the European community was preoccupied with creating the economic and monetary conditions for a single market (based upon freedom of movement for capital, labour and products between member states). On the theme, see F. Kayness, *Out of Darkness into light? Introducing the Convention on the Rights of Persons with Disabilities under EU Law*, in *Human Rights Law Rev.*, 2008, 12 ss.

[34] See Communication of the Commission of 30 July 1996 on equality of opportunity for people with disabilities: A New European Community Disability Strategy, COM(96) 406 final. See also Resolution of the Council and of the Representatives of the Governments of the Member States meeting within the Council of 20 December 1996 on equality of opportunity for people with disabilities, OJ No C 12/1.

[35] Ivi, 4. But yet in Recommendation 1185, *Rehabilitation policies for the disabled*, text adopted by the Assembly on 7 May 1992 (6th Sitting), «a disability is a restriction caused by physical, psychological, sensory, social, cultural, legal or other obstacles that prevent disabled people from becoming integrated and taking part in family life and the community on the same footing as everyone else. Society has a duty to adapt its standards to the specific needs of disabled people in order to ensure that they can lead independent lives».

[36] See art. 6a Treaty of Amsterdam, with particular reference to art. 19, according to which: «1. Without prejudice to the other provisions of the Treaties and within the limits of the powers conferred by them upon the Union, the Council, acting unanimously in accordance with a special legislative procedure and after obtaining the consent of the European Parliament, may take appropriate action to combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.2. By way of derogation from paragraph 1, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, may adopt the basic principles of Union incentive measures, excluding any harmonization of the laws and regulations of the Member States, to support action taken by the Member States in order to contribute to the achievement of the objectives referred to in paragraph 1».

[37] For the first time, article 13 of the Treaty empowered the Council to make law to combat discrimination on grounds of disability (along with grounds of sex, racial or ethnic origin, religion or belief, age and sexual orientation).

[38] On this theme, see A. Lawson, *The social and human rights models of disability: towards a complementarity*

Within disability studies, this rights-based approach in disability was characterized as a tool for stipulating citizenship and equality.

Post Amsterdam, the European Union has adopted, among others[39], the European Disability Strategy

2010-2020[40], which has attempted to mainstream disability in all EU policy fields, trying to ensure that people with disabilities can enjoy their full rights on an equal basis with others and benefit fully from participating in society and in the European economy, notably through the Single market[41]. In line with the UNCRPD the Strategy focuses on eliminating barriers, identifying eight main areas for action, among which accessibility[42], that is a precondition for participation in the society and in the economy[43], and aims to ensure the accessibility of products and services.

Positive steps in the form of UNCRPD have led to discussion of the need for providing persons with disability access to new information and technologies.

In this regard, at the European level significant reforms are underway with particular reference to the issue of web accessibility and digital inclusion for European Union citizens with disabilities, as we'll see in the next paragraph.

5. The importance of digital technologies as tools of social inclusion for people with disabilities: bridges and barriers

The diffusion of information and communications technology (ICT) and the use of

---

thesis, in *The international Journal of Human Rights*, 2020, 348 ss.

[39]   Including the Communication from the Commission of 12 May 2000 "Towards a barrier-free Europe for people with disabilities", COM(2000) 284 final, and Directive 2000/78/EC, which prohibiting all discrimination, whether direct or indirect, based on religion or belief, disability, age or sexual orientation, as regards access to employment. Where disability is concerned, this Directive recognizes that the failure to provide "reasonable accommodation" in the workplace can constitute discrimination. The Directive does not contain a definition of disability; for this reason, the role of the Court of Justice has been extremely important. On this point, see G. Arconzo, *I diritti delle persone con disabilità. Profili costituzionali*, cit., 89 ss.

[40]   See Commission from the Commission of 15 November 2010 "European Disability Strategy 2010-2020: A renewed Commitment to a Barrier-Free Europe", COM(2010) 636 final, in which the European institutions and the Member States have called upon to work together under this Strategy to build a barrier-free Europe for all.

[41]   The structure and content of the European Disability Strategy 2010-2020 have been greatly influenced by the EU's negotiation, signing and accession to the UNCRPD. The protection of the rights of persons with disabilities has also been embedded in the European Pillar of Social Rights, jointly proclaimed and signed by the European Parliament, the Council and the Commission on 17 November 2017. See, on this point, Communication from the Commission of 24 April 2017, "Establishing a European Pillar of Social Rights", COM(2017) 250 final, and European Commission, "Commission Recommendation of 26 April 2017 on the European Pillar of Social Rights", C(2017) 2600 final.

[42]   "Accessibility" is defined as meaning that people with disabilities have access, on an equal basis with others, to the physical environment, transportation, information and communications technologies and systems (ICT), and other facilities and services.

[43]   In relation to accessibility, a key theme in the European Disability Strategy, a need was identified to move beyond high level legislation and to identify, where possible, the existence of standards documents and regulations at the national level.

Internet's World Wide Web (hereafter "web") have fundamentally changed the way in which we all participate socially, politically and culturally within a global network of dispersed communities.

The rapid development of information technology has transformed globalization process making the world a «global village»[44], contributing to quality of life and social connectedness.

However, technologies can also increase social inequalities and exclusion among people with disabilities, which need to have appropriate assistive technologies that can make the content accessible to their requires[45].

Even though Assistive Technologies (ATS) do not in themselves suffice to reduce all barriers, they can certainly become a means for people with disabilities to retain choice and autonomy in their lives[46].

The pandemic has revealed the limited commitment of supranational and national governments to disability equality, simultaneously opening up opportunities for new forms of social inclusion in the field of web content.

Indeed, the Crisis is having a profound impact on the importance of digital inclusion for all people, in order to have equal access to the Internet in the information and communication technology society. However, the European Union media Sector is still far to meet the UN requirements set by artt. 30 and 21 of the Convention on the rights of person with disabilities[47], that recommend the full participation in cultural life, recreation and leisure for persons with disability which should enjoy access to cultural materials, to television programs, films, theatre and others in accessible formats, through the Internet[48].

In addition to this, the Convention affirms that assistive technology is essential to

---

[44] C. Dalglish, *From globalization to the 'global village'*, in *Global Change, Peace & Security*, 2, 2006, 115 ss.

[45] See generally F. Scholz - B.Yalcin - M. Priestley, *Internet Access for Disabled People: Understanding Socio-Relational Factors in Europe*, in *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 1, 2017, 1 ss.; A. Adam - D. Kreps, *Enabling or Disabling Technologies? A Critical Approach to Web Accessibility*, in *Information Technology and People*, 19, 2006, 203 ss.; G. Goggin, *Disability and Digital Inequalities: Rethinking Digital Divides with Disability Theory*, in G.W. Muschert - M. Ragnedda (eds.), *Theorizing Digital Divides*, New York, 2017, 69 ss. S.J. Macdonald - J. Clayton, *Back to the Future, Disability and the Digital Divide*, *Disability & Society*, 5, 2013, 702 ss.

[46] On this theme, see P. Falletta, *Le linee guida dell'Agenzia per l'Italia digitale*, in *Giornale di diritto amministrativo*, 2021, 2, 163 ss; C. Ricci (ed), *Building an inclusive Digital Society for persons with Disabilities. New Challenges and future potentials*, Pavia, 2019; M. Caporale, *L'accessibilità ai siti web e alle applicazioni mobili delle pubbliche amministrazioni. Commento a dec. lgs. 10 agosto 2018 n. 106*, in *Giornale di diritto amministrativo*, 2019, 3, 357 ss.; A. Masucci, *Digitalizzazione dell'amministrazione e servizi pubblici "on line". Lineamenti del disegno normativo*, in *Diritto Pubblico*, 2019, 1, 117 ss.; V. Pagnanelli, *Accesso, accessibilità, "Open Data". Il modello italiano di "Open Data" pubblico nel contesto europeo*, in *Giornale di storia costituzionale*, 2016, 205 ss.

[47] Upon closer examination already the CRPD provides that States Parties «promote other appropriate forms of assistance and support to persons with disabilities to ensure then access to information» and «promote access for persons with disabilities to new information and communication technologies and systems, including the Internet», (respectively 9 2 f and g). In addition, article 9 (2 h) obliges States Parties to «promote the design development, production and distribution of accessible information and communications technologies and system at an early stage, so that these technologies and systems become accessible at minimum cost».

[48] On this point, see generally, D. Ferri - S. Favalli, *Web Accessibility for People with Disabilities in the European Union: Paving the Road to Social Inclusion*, in *Societies*, 2, 2018, 40 ss.

enable persons with disabilities to live independently[49] and to participate fully in all aspects of life[50].

Despite embracing the social model, the European Disability Strategy 2010-2020 does not include a unique prescriptive definition of disability or of what constitutes an assistive technology.

Furthermore, the implementation of this Strategy has met with uneven success given patchy acknowledgement of national regulations and laws.

At a closer look, therefore, the institutional landscape comprises various key stakeholders who undertake positive steps towards accessibility, but fall short in some ways. The European Union has taken positive steps towards digital accessibility.

In this perspective, particular attention is paid to recent regulatory interventions by the European Union on digital accessibility, including the so-called "European Accessibility Act"[51] on the accessibility requirements of numerous products and services[52], currently being implemented by the Member States, which completes the so-called "Web Accessibility Directive"[53] on the accessibility of websites and mobile applications of public bodies.

For the purpose of comply with this new legislation, not only public sector organisations but also private companies and organisations will need to monitor the accessibility of their websites, mobile apps, and media content and to make information from the monitoring available in an accessibility statement, in order to render digital contents usable and comprehensible by all citizens (with and out abilities), in a fully inclusive perspective.

Added to this, numerous governance initiatives that have relevance in the field of new technologies and people with disabilities, starting with the United Nations Agenda for Sustainable Development 2030, with particular regard to the explicit disability references in the SDGs related to education (SDG 4), growth and employment (SDG 8), inequality (SDG 10), accessibility of human settlements (SDG 11) and data collection (SDG 17)[54].

Recently, the European Parliament, in a resolution of June 2020 on the European Disability Strategy post-2020[55], underlined serious challenges and rights violations ex-

---

[49]   See art. 19.

[50]   See art. 29.

[51]   Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act), [2019] OJ L 151, 70 ss. See also European Disability Forum, *European Accessibility Act: A Big Step Forward on a Long Journey*, 2019, according to which the European disability movement hailed the Directive as "an important step" that improves the accessibility of these kinds of products and services.

[52]   See Rectials 25 and 31.

[53]   Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies, [2016] OJ L 327, p. 1 ss. This directive requests from all EU member states to meet common accessibility standards in public bodies websites and mobile apps.

[54]   See the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), which the EU is committed to implementing.

[55]   European Parliament resolution of 18 June 2020 on the European Disability Strategy post-2020 (2019/2975-RSP).

perienced by persons with a disabilty during the Covid-19 crisis[56], specifying as still exist legislations without any reference to the CRPD and accessibility[57].

Lastly, in March 2021 the European Commission adopted a new strategy for the rights of persons with disabilities 2021-2030, which aims to establish the goals of the European countries as regards for their efforts to improve the life of this category of vulnerable individuals.

The goals of this Strategy will need to be achieved through a strong commitment by the Member States, by promoting policies and actions that will bring about accessible environments and ever more digitalization, in order to allow people with disabilities to fully participate and contribute to the transition to a digital, inclusive, and green economy and society[58].

6. Conclusions

The very rapid evolution of digital technologies and the Internet of things have transformed may aspects of work and daily life.

The increasingly widespread use of computers and the Internet have enabled rapid access to ever greater sources of information and services but, at the same time, it has also led to the emergence of new barriers and new consequent exclusions from the access to these online resources[59].

In particular, evidence suggests that the level of use of information and communications technology (ICT) by persons with disabilities is significantly lower than the one

---

[56]   Such as «disruptions in personal assistance, care and support services, unequal access to and/ or complete exclusion from health-related information and healthcare, including urgent care, lack of general, public safety-related information presented in a clear and simple manner, including in accessible, barrier-free and usable formats, lack of precautionary measures in residential institutions, unequal access to the alternatives offered by educational institutions, namely distance and online learning, and an increase in instances of domestic violence».

[57]   See in particular point 8, according to which the Commission «calls on the Member States to fully implement and continuously monitor all accessibility-related legislation, including the European Accessibility Act, the Audiovisual Media Services Directive, the Telecoms Package and the Web Accessibility Directive, and the relevant transport and passengers rights regulations; insists that monitoring should be conducted not through self-assessment but by an independent entity that includes persons with disabilities; calls, therefore, on the Commission to facilitate implementation and to establish a European Access Board to monitor the implementation of EU accessibility legislation».

[58]   In this sense in the Stategy, the Commission will: 1) adopt, in 2021, an Action Plan on web accessibility, to be shared and promoted in all EU institutions, bodies and agencies in view of ensuring compliance of EU websites, documents published on these websites and online platforms, with European accessibility standards106; 2) improve by 2023 accessibility across its audiovisual communications and graphic design services as well as of its publications and events, including where relevant sign language interpretation and documents in "easy-to-read" format; 3) ensure accessibility for all newly occupied buildings of the Commission, subject to possible urban planning requirements of the host countries; 4) ensure the accessibility of venues where Commission events are organized; 5) ensure that by 2030 all Commission buildings follow European accessibility standards, subject to urban planning requirement.

[59]   Furthermore, similar to other discriminated persons in the EU, persons with disabilities are at higher risk of being victims of hate speech and hate crime. On this point see, G. Pitruzzella - O. Pollicino - S. Quintarelli, *Parole e potere: libertà d'espressione, hate speech e fake news*, cit.; S. Braschi, *Social media e responsabilità penale dell'Internet service provider*, in this *Rivista*, 2, 2020, 157 ss.

among persons without a disability[60].

The digital technologies (and in particular Assistive Technologies) can become a driving force for the inclusion of persons with disabilities, but are far from available to all, as the Covid-19 situation has highlighted.

In order to promote digital accessibility - with the removal of barriers in accessing the Web - and to close the digital divide, the UE Institutions in this last year have adopted numerous initiatives to improve the transition to an inclusive and digital society.

But the way is still long.

In the social model perspective, the idea of «living independently and being included in the community»[61] plays a central role.

Digital accessibility can therefore level the playing field for persons with disability and allow for productivity and inclusion through participation in educational, economic, and political spheres. Laws protecting the rights of people with disabilities to access digital services and content - whether those services and content is found on the web, in a mobile application, through electronic kiosks or elsewhere - are an important piece of the framework that makes digital accessibility a reality. However, it is important to view such accessibility as beneficial for everyone, and not just to a small group of people.

Digitalization could produce both catastrophic or beneficial effects in society over the next years. The ability of governments to handle such future trends will be contingent upon their ability to handle the changes that technology has already thrust into way at present, in order to improve people with disabilities on an equal basis to others in digital societies.

SMo the success or the failure of this goal is not going to only determined by our ability to handle the present challenges, but even more so, to correctly foresee and to plan for future ones as well, towards a society ever more marked by solidarity, inclusion and respectful of the rights and innate values of each individual.

---

[60] See World Health Organisation, World Report on Disabilities, 2021. Moreover, on 1 December 2020, the organisation refers that over 1 billion people live with some form of disability. Recently, WHO launched a new initiative: Digital and Assistive Technologies for ageing (DATA) which try to encourage the development, synthesis, and use of solutions that promote access to affordable, quality, digital and assistive technologies for people with impairment or decline in physical or mental capacity.

[61] See art. 19 UNCRPD.