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Vulnerability, Digital Technologies and International Law: Reflections on Contemporary Migration Flows

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Abstract

Migration, considered a 'total social fact', remains one of the most debated topics in contemporary society. Unfortunately, migration is not always a positive experience for everyone. Certain categories of people, such as women, children, persecuted ethnic minorities, and those fleeing conflict zones, widespread violence and natural disasters, are undoubtedly more exposed to its adverse effects. The socially disadvantaged conditions of migrants can also overlap with the risk of exclusion from digital literacy. 'Digital availability' is an essential asset for networking through the entire period of migration, which varies according to the departure and destination contexts and skills of use. Vulnerability can be a key concept when it comes to exploring the connection between migration processes and increasing digitisation, with both positive and negative consequences. Despite the frequent use of the term 'vulnerability' in political and legal discourse, its normative content is neither always clear nor universally accepted. Often treated as a self-explanatory condition, it is habitually used to distinguish migrants according to specific groups based on precise characteristics – especially refugees or asylum seekers – without specifying how the notion is conceptually understood or defined. The aim of our work is to provide some suggestions about three different concepts of vulnerability (subjective, situational and structural), the impact of the legal concept of vulnerability on migration processes and how situations of vulnerability are sometimes accentuated by the spread of media and social media.

***Keywords**:* Migration processes; increasing digitisation; international law; digital technologies; refugees; asylum seekers.

1. Introduction[1]

Migration, considered a 'total social fact', remains one of the most debated topics in contemporary society, and is often portrayed as a cultural emergency. Institutional short-sightedness towards emergency measures to cope with mass migration has long had a structural nature. The choice of an essentially repressive emergency policy also prevents the investigation of migration in its varied phenomenology. The structural nature of new transnational migratory processes on one hand, and the progressive legalisation of human rights on the other, unavoidably raise the question of a potentially cosmopolitan reformulation of the right to citizenship.[2]

Migration flows are multifaceted, with different origins and trajectories and consequently different implications in terms of both individual lives and policies. Unfortunately, migration is not always a positive experience for many people. Certain categories of people, such as women, children, persecuted ethnic minorities, people fleeing conflict zones, widespread violence and natural disasters, are undoubtedly more exposed to its adverse effects. Particularly when migration occurs through illegal

[1] This article is the result of pooling of thoughts from the two authors. However, academically speaking, Antonia Cava was responsible for sections 1 and 2, and Maria Rita Bartolomei for sections 3 and 4.
[2] The United Nations defines human rights as rights intrinsic to all human beings, whatever their nationality, place of residence, sex, national or ethnic origin, colour, religion, language and any other status. All human beings are equally entitled to human rights without discrimination. These rights are all interrelated, interdependent and indivisible.

channels, preventing family reunification, forcing individuals to resort to segments of the black-market labour force or to situations of trafficking and exploitation, migrants may be deprived of basic public services and denied basic requests; often their fundamental rights go unrecognised.

In order to have a better understanding of the close relationship between migration processes and vulnerability, some clarifications should be made. According to the International Organisation for Migration (IOM),[3] while we can define migration as the movement of people from their place of habitual residence, either across an international border or within a state, there is no universally accepted definition of a migrant. It can be considered a conventional term that includes a number of legal categories of people, such as migrant workers, international students, illegal immigrants, victims of trafficking, asylum seekers and refugees. For the purposes of migration data collection, the United Nations Department of Economic and Social Affairs (UN DESA) defines an 'international migrant' as 'any person who changes his or her country of habitual residence', usually to improve their economic and social conditions or to rejoin their family.[4] Although it is widely recognised that there is a continuum of agency rather than a voluntary/forced dichotomy, which could undermine the current legal regime of international protection, in the presence of more compelling factors, such as violence, persecution, war, ethnic conflict and disaster, the decision to migrate may be considered involuntary and forced. An asylum seeker is someone who seeks safety from persecution or serious harm in a country other than their own, and who applies for recognition of refugee status or other forms of international protection. The 1948 Universal Declaration of Human Rights (UDHR) enshrines the right to asylum as a fundamental right. Article 14 provides for the right of everyone to 'seek and enjoy in other countries asylum from persecution'.

The granting of asylum is a humanitarian and apolitical action and, until a final decision is made by the competent authorities in the country of arrival, a person has the right to reside there legally, even if they arrived without identity papers or illegally. Not all asylum seekers will be recognised as refugees, but every recognised refugee is initially an asylum seeker.[5] The right to asylum differs from the right to refugee status: in the latter case, not only are fundamental freedoms generally restricted in the country of origin, but the individual applicant must also have suffered, or have a well-founded fear of suffering, specific acts of persecution, i.e., actions that by their nature or frequency are a serious violation of fundamental human rights. A refugee is a person who has fled their country of origin and is unable or unwilling to return because of war, violence or persecution on account of race, religion, nationality, membership of a particular social group or political opinion.[6] Refugees are protected under international law by the 1951 Refugee Convention and its 1967 Protocol, as well as by other legal texts, such as the 1969 OAU Refugee Convention. The legal principles they enshrine have been taken up by countless other international, regional and national legislations and practices.[7] Thanks to the work of the United Nations High Commissioner for Refugees (UNHCR), among others, the scenarios in which refugee status can be granted have expanded to include gender-based persecution, human rights violations, and natural and ecological disasters. Refugee law is an important aspect of international humanitarian law (IHL), which in turn has its foundation in the principle of humanity and the protection of human dignity enshrined in Article 3 of the Universal Declaration of Human Rights, which states that "Everyone has the right to life, liberty and security of person".[8]

Other categories of extremely vulnerable migrants include unaccompanied minors (UNMINS) and undocumented migrants. In the context of migration, children separated from both parents and other caregivers are generally referred to as unaccompanied migrant children.[9] The protection of UNMINS is covered by a range of legal and policy frameworks at the international, regional and national levels. Under international law, the main legal instrument is the United Nations Convention on the Rights of the Child (1989). In terms of the principle of the best interests of the child, General Comments No. 6 (2005)[10] and No. 13 (2011)[11] are particularly important. The Reception Conditions Directive 2013/33/EU (RCD) guarantees a standard level of reception conditions, especially in Articles 21–24, which contain provisions for vulnerable people. Therefore, as well explained by the European Union Agency for Asylum (EUAA),[12] the current Common European Asylum System (CEAS) includes several measures to protect unaccompanied minors.

[3] Sironi, Glossary on Migration.
[4] Sironi, Glossary on Migration, 132, 137.
[5] Sironi, Glossary on Migration, 14.
[6] Sironi, Glossary on Migration, 170–73.
[7] Sironi, Glossary on Migration, 114.
[8] Universal Declaration of Human Rights, https://www.un.org/en/about-us/universal-declaration-of-human-rights.
[9] According to Article 2(e) RCD, an unaccompanied minor is a minor who arrives on the territory of a member state unaccompanied by an adult responsible for them, whether by law or by the practice of the member state concerned, and for as long as they are not effectively taken into the care of such a person. It includes a minor who is left unaccompanied after they have entered the territory of the member state.
[10] On the treatment of unaccompanied and separated children outside their country of origin.
[11] On the right of the child to freedom from all forms of violence.
[12] https://euaa.europa.eu/guidance-reception-unaccompanied-children/legal-framework-and-general-principles.

Undocumented migrants are representative of a socio-legal category that includes subjects who do not have legal standing in the country where they are present.[13] Extending from their lack of legal standing, illegal migrants are habitually relegated to doing invisible labour and suffer extreme conditions of vulnerability.[14]

In order to highlight, monitor and attempt to resolve these situations of suffering, difficulty and lack of legal protection, the international community has developed the legal concept of vulnerability.[15] Vulnerability is a contingent feature, affecting in particular those who are exposed to objective risks.[16] Migrants embody the vulnerability that often remains invisible. The socially disadvantaged conditions of migrants can also have a digital implication: the condition of social marginality overlaps with the risk of exclusion from digital culture. Digital technologies can play an important role in accentuating or reconfiguring vulnerability: they can exacerbate the condition of exclusion or foster pathways to integration.

This work aims to provide some insights into the link between vulnerability and the impact of digital literacy within migrant populations in general, and refugees in particular. By focusing primarily on certain aspects of international regulations and European documents, the concept of vulnerability will be analysed in relation to its legal, humanitarian and social features, highlighting the opportunities and risks of a widespread adoption of digital technologies. Using migrants as a case study, digital inclusion/exclusion can usefully explain the different categories of vulnerability.

The combination of media and migration is a classic topic in the social sciences. If we agree that migration is one of the most powerful factors in the transformation of societies and the media – some of the protagonists in the social construction of reality – then the narratives and media practices produced by migrants, starting from and focusing on their migration experience, are also fundamental agents of change.[17] In the process of social construction of migration, the media system thus plays a crucial role. On the one hand, the media can act as a response to disorientation and the need for information; on the other hand, they are presented as strategies for achieving integration, involving engagement with the local community, language acquisition and familiarity with the lifestyle of the destination country.

The media can be indispensable resources in processes that create forms of cohesion within increasingly multicultural and multiethnic societies. Through the media, a certain familiarity with cultural symbols is developed, facilitating the negotiation of differences and giving rise to what could be described as cultural heterogenisation.[18] Appadurai,[19] for example, highlights the existence of a diasporic communicative landscape – a space in the imagination where images, cultures, consumption models, references and languages circulate and, thanks to new ways of communicating and broadcasting information, can be reappropriated for whichever context one may live in. It is a polygamy of places,[20] an open world that goes beyond the political borders of nations.

In a global scenario, the whole concept of culture is reformulated. In a context of generalised movement and change, it cannot be considered an object that is external to an individual, predetermined, compact, integrated and firmly fixed in place and time. Hybridisation, blending and liminality represent the new lexicon applied to how we view culture today. The consequence of this is a profound change in what is meant by difference.

Migration is a way of experiencing existence in the world, encompassing both the migrants' culture and the communicative flows that interpret and reinterpret their migratory experience. Information and communication technologies (ICT) are closely linked to migration.[21] The circulation of symbolic flows, initially facilitated by electronic media and later on by digital and interactive technologies, influences the configuration of migratory flows, impacting representations of different parts of the world and the self, as well as the system of expectations and opportunities. The content found on social networks, sometimes shared by migrants themselves, can have a significant impact on how the context of the destination country is perceived, thus influencing a decision to migrate.
Only recently, and particularly thanks to the striking progress made in developing means of communication and the fall in communication costs, it has become possible for a migrant to be almost continuously and actively present within two physically

[13] Sironi, Glossary on Migration, 223.
[14] Segarra, "Undocumented Immigrants at Work."
[15] Bartolomei, "Migrazioni transnazionali, vulnerabilità e diritto dei rifugiati," 37.
[16] Fineman, The Vulnerable Subject; Longo, "Vulnerabilità, rischio e diritti umani tra riflessione sociologica e diritto internazionale"; Fineman, Vulnerability.
[17] Peruzzi, "Uguali o diversi? Sull'uso delle piattaforme digitali da parte dei giovani islamici in Italia," 225.
[18] Nederveen Pieterse, Globalization and Culture.
[19] Appadurai, Modernity at Large.
[20] Beck, World at Risk.
[21] Alonso, Diasporas in the New Media Age.

separate societies.[22] Migrants' access to cultural consumption occupies a significant place in the complex relationship between the culture in which they live and the culture from which they come.[23]

Vulnerable groups such as refugees are often marginalised in mainstream social media. In the next section, we will describe how the inclusiveness of social media can be instrumental in helping these groups to create their own narratives about the place and role of refugees in destination societies. In contrast, the exclusion from digital technologies risks perpetuating discrimination and reinforcing vulnerability. Grave human rights violations occur in instances where subjects are entirely deprived of access to technology.

Reflecting on the relationship between vulnerable migrants and digital technology can prove very complicated. We will analyse advantages/disadvantages of social media use, avoiding the polarisation between outright condemnation and uncritical glorification. As stated by Gillespie and colleagues:

> Access to digital resources plays a crucial role in the planning and navigating of their perilous journeys, as well as in their protection and empowerment after arrival in Europe. But despite their utility, mobile phones have a paradoxical presence in the lives of refugees – they are both a resource and a threat[24]

In the section 3 we will explain how the different concepts of vulnerability (subjective, situational and structural) can meaningfully account for digital (il)literacy among migrants.

2. Digital Devices and Migration Routes

The relationship between digital technologies and migration processes has been the subject of several studies. In particular, various authors have looked at how migrants use technology to connect to their loved ones left behind in their countries of origin or to build new relationships in destination countries,[25] the influence of the internet on migrants' lives in the host country,[26] the costs and benefits of migration and the impact of the information society on migrants' lives. Some research has also investigated the use of digital technology during a migrant's decision-making phase.[27]

The influence of digital technologies is not the same for all migrants; it varies depending on the departure and destination contexts and skills of use. There are substantial inequalities among migrants in terms of their access to social media and also in the quality of their use of social media. The experience of a refugee or asylum seeker in Europe is quite different from that of a family reunification. The digital access gap can further accentuate this difference. A refugee's digital exclusion, for instance, denies the opportunity offered by social platforms to maintain proximity to the community of origin through video calls, instant messaging and sharing brief narratives online. This function is described by Tomaszewski and colleagues as 'refugee situation awareness'.[28]

The internet has given transnational families, with their physically and emotionally long-distance relationships scattered across nations and continents, a hitherto unknown frequency band for closeness of contact. De-synchronised time, as a result of the many time zones, is re-synchronised thanks to digital technology. Stratified living spaces spread across various geographical locations are reunified by the opportunity of inhabiting analogous spaces online.

The difficulty of the journey faced by refugees often complicates the possibility of remaining in touch with family and friends. Refugees' access to technology is unstable and characterised by frequent periods of disconnection. When refugees do not have access to local SIM cards or reliable power supplies, this technology maintenance has a negative impact on their network capital.[29] The fragility of their condition is aggravated by the emotional loneliness they are forced to experience.
According to Dekker and Engbersen,[30] social media first and foremost enhance the chances of maintaining strong ties with family and friends. Second, they are used to address weak ties that are relevant to organising the process of migration and integration. Third, social media establish a new infrastructure consisting of latent ties. Finally, they offer a rich source of insider

[22] Witteborn, "Diaspora."
[23] Etchegaray, "Media consumption and immigration."
[24] Gillespie, Mapping Refugee Media Journeys, 2.
[25] Horst, "The Role of Mobile Phones in the Mediation of Border Crossings."
[26] Collier, Exodus.
[27] Wall, "Syrian Refugees and Information Precarity."
[28] Tomaszewski, "Refugee Situation Awareness."
[29] Gillespie, Mapping Refugee Media Journeys, 32.
[30] Dekker, How Social Media Transform Migrant Networks and Facilitate Migration.

knowledge on migration that is discreet and unofficial. From this perspective, refugees' digital literacy and easy access to technology could be tools of empowerment.

Not only is 'digital availability' an essential asset in networking before migration; this is also the case throughout the entire duration of the process.[31] Smartphones are also map tools and contact providers. Social media can thus become ultimate 'survival technologies', especially when crossing the Mediterranean (communicating, for example, one's geolocation in case of shipwreck risk), and function in successive phases as all-important tools to support inclusion in the new host societies.[32]

Social media can mitigate the risks of social isolation – see, for example, digital platforms such as RefAid, Refugeeinfo, JumaMap, which connect services, help desks, public and private services present in the area to bring refugees closer to rights, information and work opportunities.[33] Refugees face various issues, from clothing requirements to the need to access assistance; from document-related problems to healthcare needs; and from the search for lost travel companions to language difficulties.

On the other hand, content shared on social media can construct a narrative that is far from the reality of migratory routes – for example, by making a challenging and dangerous journey appear attractive due to the perceived appeal of life in Europe. Social media can provide users with unrealistic or even false information. In this case, we are dealing with distorted information that spreads a false belief in positive migratory processes. In the case of vulnerable migrants – the focus of this contribution – shared social media content can also have dramatic effects: young individuals dreaming of Europe and in search of a different life often do not survive to tell their stories due to the numerous risks faced on their journeys.

Social platforms are also spaces that make the networks of organisations managing illegal journeys more visible. Smugglers leverage new technologies to recruit clients and communicate with them, even when geographically distant; thus, social networks act as 'criminal facilitators',[34] expanding the business of smugglers and their reach in an increasingly global market. Not only can smugglers be contacted on these platforms, but a 'knowledge capital' is also shared with those who have already undertaken or are planning this journey. Potential migrants use platforms such as Facebook, WhatsApp and Viber to share or seek information about migratory routes and the most effective means to reach Europe. In this way, they become digital consumers and producers of knowledge about emigration. Migrants communicate with other clients and members of their communities who are already living in the destination country to obtain emotional support or information about reliable routes and potential dangers they might encounter along the way.[35]

So far in this article, we have described how digital technology both empowers and endangers migrant groups, making them vulnerable. The remainder of the article will develop the concept of vulnerability in relation to the digital exclusion/inclusion of three categories of migrants: unaccompanied minors, refugees and illegal immigrants.

3. Transnational Migrations, Vulnerability and Digitisation

In the current era, we can easily find a close correlation between migration processes and increasing digitisation, with both positive and negative consequences. Vulnerability can be a key concept through which to explore this connection.

The terms 'vulnerability' and 'vulnerable groups' have become increasingly prominent in academic literature, policy-making, political debates and everyday discourse on migration and asylum. However, as we have already explained in a previous work, despite the frequent use of the term 'vulnerability' in political and legal discourse, its normative content is neither always clear nor universally accepted.[36] Often treated as a self-explanatory condition or phenomenon in the context of migration, it is habitually used to categorise migrants – especially refugees and asylum seekers, but also unaccompanied minors and undocumented migrants – as belonging to specific groups based on precise characteristics, without specifying how the notion is conceptually understood or defined.
The aim of our work is to provide some suggestions about three different concepts of vulnerability (subjective, situational and structural),[37] the impact of the legal concept of vulnerability on migration processes, the relationship between vulnerability and human rights, and how situations of vulnerability are sometimes both a cause and a consequence of digital exclusion, with specific reference to three categories of migrants: unaccompanied minors, refugees and illegal immigrants.

[31] Alencar, "Refugee Integration and Social Media."
[32] Pasta, "Web 2.0, dispositivi digitali mobili e flussi migratori," 83.
[33] Conti, "L'impatto della digitalizzazione sui processi migratori: tra rischi e opportunità."
[34] Von Lampe, "The Application of the Framework of Situational Crime Prevention to 'Organized Crime'."
[35] Di Nicola, "Social Smugglers."
[36] Bartolomei, "Migrazioni transnazionali, vulnerabilità e diritto dei rifugiati."
[37] See Gilodi, "Vulnerabilityin the Context of Migration."

In an age of increasing technological development, digital literacy is an important aspect of empowerment, health and well-being, education and social justice. Unequal access to digital resources is both a cause and an effect of vulnerability, as it (re)produces a range of social and economic inequalities.[38] Although the term 'digital divide' is commonly used by scholars, we prefer to adopt the concept of digital inclusion, since it considers the intersections of class, ethnicity, race, ideology, religion, gender and disability, and more accurately captures the phenomenon of ICT gaps.[39] Digital inclusion, in fact, is much more than universal access to the internet or the use of digital technology; it entails 'having proper support and the right digital skills to achieve personal and professional success'.[40]

The *subjective* understanding of vulnerability sees it as a 'natural' condition characterising certain persons or groups. As indicated by the International Federation of Red Cross and Red Crescent Societies (IFRC),[41] which partly incorporates the definition by Blaikie,[42] and the United Nations Office for Disaster Risk Reduction (UNDRR),[43] vulnerability is a concept relating to the capacity of an individual or group to anticipate, cope with, resolve, resist and recover from the impact of risks, natural hazards and human threats. Reference to capacity can also be found in the definition elaborated by the IOM[44] and the UNHCR has often, albeit implicitly, relied on this understanding of 'innate' vulnerability to describe migrants, women, children, elderly and disabled people. It goes without saying that such a definition may have significant political consequences. For instance, measures and policies could be protective, devaluating, victimising and sometime paradoxical. Suffice to think of the case of unaccompanied minors, a group commonly considered among the 'most vulnerable':[45] when they can legally be considered adults, they suddenly lose their 'legal vulnerable status', and thus their essential protections. Such a situation may also cause and exacerbate new vulnerabilities, such as limited access to services and healthcare, homelessness and deportation.[46]

A shift towards considering a *situational* character of vulnerability is also present in the European Directives. In order to better understand the legal meaning of vulnerability and its progressive introduction into European law,[47] in addition to Directive 2008/115/EU, which defines 'vulnerable persons' in Art. 3 no. 9, Directive 2011/36/EU appears decisive, insofar as it refers both to vulnerable persons, broadening the categories envisaged by the 2008 Directive (Recital 12), and to the 'position of vulnerability', understood as 'a situation in which the person in question has no real and acceptable choice but to give in to the abuse of which he or she is a victim' (Art. 2, par. 2). Vulnerable people include, in addition to women, pregnant women, the sick, people with disabilities, people with mental disorders, people who have suffered torture, rape or other serious forms of psychological, physical, sexual or gender-based violence, minors and unaccompanied minors (Recital 12). Other important documents are Directive 2013/32/EU, on common procedures for granting and withdrawing international protection status, and Directive 2013/33/EU, on standards for the reception of applicants for international protection.

According to this perspective, certain people or groups are considered vulnerable because of a specific situation they have experienced, are experiencing or may be exposed to. This conceptualisation of vulnerability in a dynamic, relative and specific way (vulnerability to what?), as a result of the interaction between contextual circumstances and personal characteristics, seems to better account for the possibility of change through time (also thanks to legal protection) as well as agency, and thus would also lean toward proactive and not just protective policies.[48] This approach considers the migration process as a situational condition of vulnerability and allows us to focus on the rather complex and sometimes controversial relationship between vulnerability and human rights.

Contrary to what one might think, 'using the human rights paradigm to counteract vulnerability can enable both individuals and disadvantaged groups to use it as a powerful tool for social empowerment'.[49] Not surprisingly, a specific focus on so-called vulnerable groups (human rights laws indeed recognise individual and community rights)[50] is also central to the Human Rights-

[38] Roth, "Deconstructing the Data Life Cycle in Digital Humanitarianism"; Mendonça, "Inequality in the Network Society."
[39] Parsons, "Moving from Digital Divide to Digital Inclusion"; Tomczyk, From Digital Divide to Digital Inclusion; Warschauer, Technology and Social Inclusion.
[40] Ragnedda, "Digital Inclusion," 11.
[41] International Federation of Red Cross and Red Crescent Societies, Vulnerability and Capacity Assessment.
[42] Blaikie, At Risk.
[43] https://www.undrr.org/terminology/vulnerability.
[44] Sironi, Glossary on Migration, 229.
[45] Flegar, "Who is Deemed Vulnerable in the Governance of Migration?"; Ní Raghallaigh, "Vulnerable Childhood, Vulnerable Adulthood."
[46] Gilodi, Vulnerability in the Context of Migration, 7.
[47] Ippolito, Protecting Vulnerable Groups.
[48] Gilodi, Vulnerability in the Context of Migration, 8.
[49] Bartolomei, "Migrazioni transnazionali, vulnerabilità e diritto dei rifugiati," 43.
[50] Harris, "Data Rights and Responsibilities."

Based Approach to Development (HRBAD),[51] which has been adopted by several nations and international organisations – including the European Union – since the early 2000s.[52]

Besides being a clear objective of the United Nations,[53] the protection of vulnerable groups is a priority of all human rights implementation policies by the European Union. Furthermore, although no clear legal definition of vulnerability can be found in the jurisprudence of the European Court of Human Rights (ECHR), the court has nevertheless recognised the vulnerability of people belonging to some social groups, such as the Roma, the disabled, minors and ethnic and sexual minorities. In this regard, the social disadvantage and cultural and material deprivation of the contexts of origin have been considered, as well as the harm resulting from the prejudice and stigmatisation suffered by migrants in the countries of arrival.[54]

However, after carefully analysing all documents guiding both internal and external European policies, the reference to the concepts of vulnerability is rather implicit and indirect. Additionally, in any case the current European human rights discourse uses the concept of vulnerability in a collective sense, as an attribute of certain groups. While a collective approach to the protection of certain categories of people is indispensable to ensure substantive equality, labelling all individuals belonging to a given social group as vulnerable could sometimes be counterproductive. It can be discriminating because it reduces the complexity of the social, structural and temporal dynamics that contribute to creating and shaping the condition of vulnerability. Such a collective approach can even be normative and stigmatising, insofar as it neglects the specificity of each individual situation. For example, a gendered conceptualisation of vulnerability may lead to the stigmatisation of refugee women as helpless, dependent and powerless victims.[55]

Relating vulnerability to a set of personal or situational characteristics may run the risk of ignoring the social, institutional, legal and economic conditions that create inequality, precariousness, exploitation and discrimination in society, and thus vulnerability itself.[56] Another approach, which is emerging at the international scientific level, considers vulnerability as the product of structural characteristics and dynamics that threaten individual survival or the possibility of leading a dignified life.[57] In this case, vulnerability is often associated with poverty, but it implies a combination of factors and reflects situations of absence or scarcity of education, economic and social security. Considering the concept of vulnerability in a contextual way undoubtedly allows us to shift the focus from indicators of inequality to the structural causes of inequality.

Interestingly, Martha Albertson Fineman conceptualises vulnerability as an intrinsic aspect of the human condition, 'universal and constant', which also varies between individuals and between the individual and society.[58] The author closely links the notion of vulnerability to that of resilience, stating that an individual's degree of vulnerability or resilience depends on the quality and quantity of resources they have at their disposal at a given time in life. Therefore, both subjective characteristics, such as disability and age, and objective characteristics, related to economic, social and cultural contexts, must be considered as possible indicators of a likely exposure to vulnerability.[59] Interpreted in this way, the concept of vulnerability acquires considerable individual and social transformative power; moreover, as it focuses attention on the concrete experiences of individual migrants within the contexts of departure, transit and arrival, it can help to contextualise various migration policies and coordinate them at the international level.[60]

While we are aware that the analysis of vulnerability requires an integrated approach and a holistic view of both the individual and the group under examination, for analytical purposes we will link each of these notions of vulnerability to a specific category of migrants considered to be extremely vulnerable: unaccompanied minors for subjective vulnerability; refugees for situational vulnerability; and illegal migrants for structural vulnerability. Although an in-depth analysis of how the relationship between vulnerability and digital inequality is articulated in each category is beyond the scope of this article, we will try to offer some insights into the digital divide experienced, and thus the lack of digital inclusion and the violation of the human right to culture.

[51] "Data collectors should proactively consider participation options and groups to be represented.' United Nations Human Rights, A Human Rights-Based Approach to Data, 7.
[52] Timmer, EU Human Right, Democracy and the Rule of Law.
[53] Chapman, "Human Rights Protections for Vulnerable and Disadvantaged Groups."
[54] Peroni, "Vulnerable Groups," 1062; Ippolito, "Introduction."
[55] Freedman, "The Uses and Abuses of 'Vulnerability' in EU Asylum and Refugee Protection."
[56] Cole, "All of Us are Vulnerable, but Some are More Vulnerable Than Others"; Brown, "The Many Faces of Vulnerability."
[57] Virokannas, "The Contested Concept of Vulnerability."
[58] Fineman, The Vulnerable Subject.
[59] Fineman, Vulnerability.
[60] Bartolomei, "Migrazioni transnazionali, vulnerabilità e diritto dei rifugiati," 46.

For all three categories considered, owning a mobile phone is quite easy, and the positive effects of its use certainly outweigh the possible risks. A real digital divide emerges, on the other hand, if we consider a situation which we could call 'digital homelessness'[61] – that is, the lack of access to broadband and computer ownership, items that certainly offer a greater and better acquisition of so-called technological capital,[62] and consequently a series of economic and social advantages: 'low-cost online education, private access to medical care and medical information; a key source of news, politics, community engagement; support for entrepreneurship and small business; critical tools for seeking and maintaining employment opportunities' and so forth.[63] However, this same situation of digital inequality which forces users to use public services (where possible), such as those offered by libraries, differs to some extent in each of the categories considered, if we take into account certain aspects which we can consider relevant to effective digital inclusion.

In the case of subjective vulnerability of unaccompanied minors, who generally have a lower level of education, the consequences of 'digital homelessness' are exacerbated by language and cultural barriers and low digital literacy. As a result, even when they are able to access the internet, their lack of digital literacy and skills prevents useful and appropriate use of ICT as learning opportunities.

Providing a comprehensive theoretical framework of the digital competences needed to tackle social and digital inequalities is a complex issue, but scholars and experts seem to agree that digital literacy is based on the following main digital skills and competences: the capacity to access, find, select, decode and interpret information and knowledge found online; critical thinking; the readiness to respond pragmatically and intuitively to challenges and opportunities in a way that exploits the internet's potential; the motivation to access and use ICT; the digital creativity that encourages users from participating actively in the online scenario; the capacity to create meanings and feelings in the digital arena; and the ability to generate and adapt new knowledge by using ICT.[64] A lack of digital skills can also lead to a lack of privacy: to access digital services, a user must necessarily be assisted by another person who, in this way, becomes aware of data and information that the user may not wish to share.

As critical pedagogy emphasises, the use of Technology Enhanced Learning (TEL) and ICT plays a vital role in democratising education, especially in terms of cultural adaptation and social inclusion.[65] Even in the case of refugees, who experience mainly situational vulnerability, ICT plays an important role in social inclusion processes.[66] In this second example, the 'digital homelessness' is accentuated not so much by a lack of technological literacy or culture in general – in fact, it is not uncommon for refugees to have played an educational role in their countries of origin (teachers, lecturers or professors) or, in any case, to be graduates – doctors, architects, engineers. But refugees are generally low-income people who cannot afford the costs of digital innovations. Moreover, if they live in rural areas, access to libraries or public internet services is either limited or impossible. Thus, they cannot work on aspects of their own identity and skills, nor do they have the opportunity to actively participate in the cultural life of the place where they live, not even to promote knowledge of their own culture and customs, whereas the practice of 'audience development' contributes to the social inclusion and engagement of people in society.[67] As we all know, empowerment is closely related to agency; consequently, digital exclusion prevents conscious and free decision-making, as well as effective integration in the host country.

When it comes to undocumented immigrant women, the concept of intersectionality can be very useful to describe the multiple situations of structural vulnerability that characterise their condition: illegal immigration status, barriers in terms of access to health or social care, unemployment or informal employment, low levels of education, gender discrimination, lack of access to basic services such as opening a bank account, social or physical education and so forth. In this case, 'digital homelessness' intersects with broader processes of social exclusion, often taking the form of an inability to access digital resources. An example would be not being physically able to enter a library.

Moreover, the ambiguity of the role that increasing digitisation plays regarding migrants clearly emerges. One example would be the emancipation–control nexus – in other words, the complex interactions between emancipatory practices enabled by ICT and the constraint created by the technological tools used for the surveillance and control of migration.[68] We need only think

[61] Comi, "Digital Home-lessness."
[62] Carlson, "Technological Capital."
[63] Comi, "Digital Home-lessness," 68.
[64] Pérez-Escolar, "Research on Vulnerable People and Digital Inclusion."
[65] Akinlar, "Bridging the Digital Divide in Migrant Education," 33.
[66] Akinlar, "Bridging the Digital Divide in Migrant Education."
[67] The practice of 'audience development' as a strategy for democratisation of culture is particularly important for vulnerable groups, who are often excluded from cultural activities. See Higgins, "Enhancing Access to Digital Culture for Vulnerable Groups," 2107–08; Hadley, "European Commission Final Report."
[68] Nedelcu, "Precarious Migrants, Migration Regimes and Digital Technologies."

of biometric data, in particular fingerprints collected on arrival in detention centres. The technologisation of control and monitoring functions potentially undermines undocumented migrants dealing with deportability. It should also be pointed out that even when institutions, public authorities, NGOs and other migrant-support associations adopt digital inclusion policies, migrants do not always succeed in making strategic use of ICT to improve their situation.

Some scholars argue that digital inclusion policies aimed at vulnerable groups, rather than introducing them to the economic, social and political benefits of using new technologies, can often have harmful effects. In fact, due to their digital illiteracy, these individuals are potentially more vulnerable than the rest of the population to surveillance technology, especially commercial data profiling.[69] Marginal internet users may more easily become victims of online scams, identity theft, differential pricing of goods and discriminatory profiling. In the worst cases, they may become victims of human trafficking or fall into the recruitment networks of organised crime. In any case, the impact of possible negative experiences in the already precarious lives of many public computer users can be very strong. Digital discrimination and experiences of online victimisation can lead marginalised internet users to self-limit their online activity, further aggravating their social and civic isolation.[70] Unfortunately, the issues of privacy and online surveillance have not yet been addressed in the discourse on digital inclusion. Until this happens, digital inclusion policies run the risk of bringing the most vulnerable groups into online worlds that reinforce and exacerbate social exclusion and inequality.[71]

4. Concluding Remarks

The introduction of the concept of vulnerability as a legal standard of reference in the field of migration represents an important innovation. It encourages an approach focused on the protection of the interests and security of the people involved and allows governments to address issues of prevention, protection and social reintegration of migrants who are victims of exploitation, human trafficking and migration-related crimes in a more timely, tangible and diversified way. However, as we have tried to highlight, when discussing migration processes, we cannot underestimate the impact of new technologies, increasing digitisation and the spread of social media on fostering or counteracting situations of subjective, situational and structural vulnerability.

By way of example, we might consider some of the results of a research study concerning the 'ambivalent potentials of social media use by unaccompanied minor refugees'.[72] If we consider the subjective dimension of vulnerability, research which explores how unaccompanied minor refugees use digital media in the context of their forced migration mainly highlights the 'affective dimensions' of the issue.[73] The availability of digital media is considered a basic need to communicate across national borders and stay in contact with family and friends in their country of origin and beyond, to establish new relationships, to orient themselves in the receiving country and to search for (professional) support. It can be helpful when learning a new language and offers basic functions for integration and participation. On the other hand, newly arrived refugees experience 'situational vulnerability'. They initially find it difficult to access the internet due to limited language skills (many of them are illiterate), their financial situation and a lack of media skills. Computers are available in many youth welfare institutions, but there are often limitations to the use of digital media. For example, several people may have to share one computer or the opportunity to use computers and/or the internet may be limited to a few hours a day. From a structural vulnerability perspective, we cannot ignore the quality of social capital and its high relevance: young refugees often neither have had, nor receive, any professional or pedagogical support with digital media, so they cannot make the most of coping strategies and opportunities. Not to mention the fact that they are almost always the victims of trafficking, especially young girls recruited for sexual exploitation. In this case, they suffer the most devastating negative consequences of structural vulnerability in both source and destination countries. It is evident that opportunities are unevenly distributed, and the pursuit of positive goals cannot be attributed to individuals alone. Subjective capabilities and situational and structural conditions together determine the availability of cultural, social and economic capital, as well as public infrastructure such as internet access, hardware and professional assistance. In other words, the coexistence of the three main aspects of vulnerability that we have been discussing determines the reproduction of disadvantages and discrimination when accessing information and resources, as well as the opportunity of meeting and forming relationships with people of higher rank. Furthermore, the lack of social, economic and cultural capital makes it easier for vulnerable people to be seduced by the media – especially social media – and fall into the trap of national or international criminal circuits, either as victims or perpetrators.

[69] Gangadharan, "Digital Inclusion and Data Profiling."
[70] Madden, Privacy, Security and Digital Inequality.
[71] Pérez-Escolar, "Research on Vulnerable People and Digital Inclusion," 1067.
[72] Kutscher, "The Ambivalent Potentials of Social Media Use by Unaccompanied Minor Refugees."
[73] Kutscher, "The Ambivalent Potentials of Social Media Use by Unaccompanied Minor Refugees."

Access to education is one of the most important human rights, fundamental to the practice of other human rights, and Sustainable Development Goal 4 (SDG4) is about inclusive and quality education. Technological capital and digital inclusion are crucial to achieving this and other development goals of the 2030 Agenda. Unfortunately, the digital divide remains pervasive all over the world, and is closely linked to the various conditions of vulnerability that affect the poorest and most marginalised segments of the population – particularly migrants.

As we have tried to point out, 'digital homelessness' is a multifaceted problem that libraries address to some extent, but do not solve simply by providing public access to information technology. The experience of 'digital homelessness' is at the root of a series of structural and infrastructural problems, which are compounded by other existing vulnerabilities. It is therefore a series of intersecting issues that are exacerbated by users with low technological capital and who, in turn, reproduce socio-economic inequalities that can be difficult to resolve.

To sum up, beyond possible political and ideological exploitation, an interdisciplinary and multidimensional approach to vulnerability, in all its individual, collective and structural dimensions, seems indispensable for effective public policies and social interventions. In any case, a more consistent approach to vulnerability and related digital exclusion and social inequalities would require not only state responsibility, but also cooperation and social solidarity. In fact, an effective response by the legal and social systems cannot disregard a greater collective awareness of a notion of justice also understood as a matter of inclusion of the disadvantaged.

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