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|  | United Nations | A/HRC/AC/24/CRP.5 | |
| _unlogo | **General Assembly** | | Distr.: General  24 January 2020  Original: English |

**Human Rights Council**

**Advisory Committee**

**Twenty-fourth session**

17-21 February 2020

Agenda item 3 (i)

**Requests addressed to the Advisory Committee stemming from   
Human Rights Council resolutions and currently under   
consideration by the Committee**

**New and emerging digital technologies and human rights**

New and emerging digital technologies and human rights (draft summary)

Study of the Human Rights Council Advisory Committee

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I. Introduction

1. Pursuant to the adoption by the Human Rights Council resolution 41/11 “New and emerging digital technologies and human rights” at its forty-first session, the Advisory Committee is mandated to prepare a report on the impacts, opportunities and challenges of new and emerging digital technologies with regard to the promotion and protection of human rights, including mapping of relevant existing initiatives by the United Nations and recommendations on how human rights opportunities, challenges and gaps arising from new and emerging digital technologies could be addressed by the Human Rights Council and its special procedures and subsidiary bodies in a holistic, inclusive and pragmatic manner, and to present the report to the Council at its forty-seventh session (June 2021).

2. The Advisory Committee established a drafting group in June 2019, which currently consists of Ludovic Hennebel, Xinsheng Liu, Ajai Malhotra, Mona Omar, Elizabeth Salmón (Chair), Dheerujlall Seetulsingh, and Changrok Soh (Rapporteur). The drafting group then elaborated a questionnaire, in accordance with Human Rights Council resolution 41/11 in which the Council encourages the Committee to consider the views and inputs of relevant stakeholders. The questionnaire was disseminated to different stakeholders including Member States of the United Nations, international organizations, relevant special procedures mandate holders and treaty bodies, civil society organizations and businesses with a deadline of 15 October 2019. As of January 2020, more than 70 responses were received to the questionnaire, including 18 from States, one from intergovernmental organization, two from Nation Human Rights Institutions, seven from special procedure mandate-holders, one from a UN entity, seven from academia, and more than 35 from non-governmental organizations, associations and individuals.

II. New and Emerging Technologies

3. In order to discuss the human rights impacts arising from new and emerging technologies it is necessary to clarify several important assumptions guiding this research. First, it is an oversimplification to argue that technologies are inert or neutral objects and that negative consequences are purely the result of humans misusing them. Technologies, not just users, have human rights consequences. There is a growing body of scholarship in the field of Science and Technology Studies (STS) demonstrating how technical artifacts often embody the values and biases of the organizations or individuals that created them.[[1]](#footnote-2) Moreover, there is also a growing awareness of how technologies can exercise a subtle but powerful regulatory effect on human societies.[[2]](#footnote-3) Human rights scholars are now incorporating these insights into their work on the issue, with Land and Aronson observing that “it is essential to guard against the intentional bias built into technologies and their implementation, as well as unintentional negative consequences.”[[3]](#footnote-4)

4. The second assumption of this report is that the impact of technological systems on human rights cannot be understood in isolation. The problem is not being caused by one type of technology but by broad waves of innovation sweeping across many different fields of human knowledge. This process is variously referred to in the popular media as the fourth industrial revolution, convergence, or the digital transformation. Therefore, this report employs the general term “new and emerging technologies” to better capture the multifaceted nature of these changes. This general approach is especially important because, as Greenfield reminds us, “the truly transformative circumstances will arise not from any one technology standing alone, but from multiple technical capabilities woven together in combination.”[[4]](#footnote-5)

5. Therefore, a common feature of new and emerging technologies is that they are systems that enable and accelerate the synchronization of offline and online spaces. A technical term for this process is the physical-digital-physical loop (PDP), which refers to the flow of data from a real-world object to the internet and then back again into the real-world.[[5]](#footnote-6) Businesses are at the forefront of creating these loops because they enable greater flexibility, such as predictive maintenance in smart factories, but the basic practice also promises to revolutionize private life, public institutions, warfare, and human rights advocacy.

6. This report refers to these loops as the *datafication cycle* and highlights three distinct stages: 1) datafication 2) distribution 3) decision-making. New and emerging technologies are synergistically involved in each step of this cycle. Some illustrative examples are given below:

(i). The first stage is datafication where the translation of real-world objects into digital traces takes place via the internet, smart phones, the Internet of Things, drones, biometrics, and wearable technology.

(ii). The second stage is the distribution and transfer of digital information within organizations and between them and/or the rearrangement of this data in novel ways. This may occur through several technologies, including cloud computing, unstructured datasets, the blockchain, augmented reality, or the Internet of Things.

(iii). The third stage is decision-making when these digital traces are used to make decisions about people in the real-world, which may occur via algorithmic decision making (AI), automated systems, or human-in-the-loop systems.

7. This report’s use of the term “new and emerging technologies” elicited a broad selection of responses, on many different types of systems, including robotics, automation, wireless waves, predictive analytics, and various types of ICTs. These are not a random assortment of technologies because they are all part of the datafication cycle. Moreover, looking at them comprehensively allows us to develop a better understanding of how the various challenges and opportunities of digital technologies are interrelated. Understanding this interrelatedness is essential because our goal is not halting the spread of new and emerging technologies but ensuring that their possible harms are mitigated and maximizing their benefits.

III. Opportunities

8. Respondents were unanimous that new and emerging technologies can contribute, and have contributed to advancing human rights worldwide. Although the benefits of new and emerging technologies have the potential to be nearly limitless—especially in the field of health and life sciences—respondents highlighted several key beneficial impacts that are already occurring. The first is that these technologies significantly expand our capabilities to communicate and share ideas at a global level, which significantly contribute to the realization of many rights, including the freedom of expression and freedom of peaceful assembly and association. But these new and emerging technologies are more than communication tools. The second benefit is that they empower individuals by directly augmenting their capabilities in the real world. These opportunities can potentially benefit everyone but are especially important for marginalized groups such as women, children, the disabled, and refugees. For human rights defenders, these new tools enable better advocacy and more effective promotion and protection of human rights on the ground. However, respondents also noted that these benefits are not guaranteed and require the removal of digital divides as well as the mitigation of privacy and security threats.

* Examples of the benefits of information-sharing and communication due to technological advances.
* Discussion of the specific rights being affected such as the right to privacy, freedom of expression and freedom of association.
* Examples of how new technologies are empowering individuals in the physical world such as automation helping the elderly live more productive lives and AI helping health screening for diseases.
* Discussion of the specific human rights being affected, which include the rights of the disabled, gender rights and physical integrity rights
* Examples and discussion of human rights defenders/legal systems using new technology to better protect and promote human rights.
* Briefly discuss how these positive outcomes are not guaranteed and we require proactive policies that foreground human rights

IV. Key Challenges

9. Although new and emerging technologies have immense potential to contribute to the protection and promotion of human rights, respondents also identified two categories of challenges that must be addressed. The first group of challenges revolve around the unintended consequences of datafication cycles, such as the erosion of privacy because of too much transparency, security flaws, or the exacerbation of discriminatory outcomes at the decision-making level. In short, this group of concerns largely focus on ways that new technologies may be failing to live up to their potential. If this happens, respondents warned, then vulnerable populations will be subjected to additional threats to their human rights. Conversely, the second group of concerns revolve around the consequences of these technologies and datafication cycles if they work as advertised but access is not widely shared. This will lead to uneven empowerment as some individuals or groups monopolize the benefits of new and emerging technologies and may even lead to the emergence of novel capabilities or methods of violating human rights by state and non-state actors.

* Discussion of the unintended consequences of datafication cycles and new and emerging technologies with a focus on two key aspects:
* Privacy violations from excessive datafication and the cybersecurity concerns that arise when this data is shared or transmitted between organizations. Discussion of the specific rights being negatively affected such as the right to privacy, freedom of expression and freedom of association.
* Discriminatory outcomes from AI decision-making. Discussion of the wide spectrum of specific rights being negatively affected, especially the rights of women, minorities, and the disabled, among others.
* Discussion of the uneven empowerment that results when the benefits of these technological systems are not shared and/or access is limited
* Discussion of arbitrary and mass surveillance and emerging forms of population control and other examples mentioned by respondents
* Information/power asymmetries between businesses and consumers/citizens
* Possible emergence of new capabilities or methods for violating human rights

V. Current Progress of the United Nations and International Community

10. This section reviews current progress of the United Nations and the international community in understanding and responding to the issue of new technologies and identifies two main categories of best practices. The first are safeguards and preventative measures to ensure that digital technologies are not being misused. This has included fact-finding, consultation, as well as preliminary attempts to regulate or create norms for new and emerging technologies. The second category of best practices are ongoing efforts to directly utilize new technologies to make states, UN bodies, and international organizations more responsive and equitable in their dealings with citizens and other stakeholders.

A. United Nations

* UN General Secretary’s High-Level Panel on Digital Cooperation and Strategy on New Technologies
* Summary of major work done by the Office of the United Nations High Commissioner for Human Rights and Special Procedures, including some of the following:
* Work done by the Special Rapporteur on the right to privacy, Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, and Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and elated intolerance, and the Special Rapporteur on violence against women
* Brief discussion of the digitalization and technology related initiatives of other UN bodies such as the UNDP, United Nations Commission on Science and Technology

B. States

* Discussion of state best practices aimed at creating safeguards, which includes discussions of some of the following activities:
* States’ efforts to create new privacy regulations and the establishment of new data protection agencies
* Attempts to prevent online disinformation, radicalization, and cyberbullying
* Discussion of research and policymaking attempts to use new technologies to empower citizens, such as the following:
* Educational and awareness raising efforts to expand digital literacy
* Attempts to implement new technologies in the work of government agencies and institutions to make them more effective in protecting and promoting the rights of citizens.

C. International Organizations

* Discussion of the best practices of international organizations to 1) safeguard human rights from new and emerging technologies and 2) how they are utilizing new technologies to expand citizen engagement and service provision.

\*Unfortunately, the EU is the only regional organization to submit a response so hopefully this section can be expanded with more inputs from the international community.

D. Private Sector

11. The private sector is the source of many of these new and emerging technologies and respondents emphasized the obligation of businesses to act responsibly in the area of human rights.

* This section will discuss the best practices of the private sector mentioned by respondents
* Importance of human rights due diligence of new and emerging technologies
* UN partnerships with businesses for the protection and promotion of human rights

VI. Gaps

12. There is a strong consensus that our current international human rights framework is humanity’s best bet for a better future. However, new technologies and business models are putting this framework under unprecedented strain and exposing conceptual as well as operational gaps. Tackling these challenges will require a new commitment to provide more resources (human, fiscal, and research) to human rights bodies as well as innovative efforts to conceptualize and more comprehensively respond to technological risks.

13. **Conceptual gaps** are caused because new and emerging technologies are creating a fundamentally different world. Some respondents questioned if human rights treaties, documents and practices have fully adapted to the digital age.

* Discussion that human rights treaties were created for an offline world, but their language does not reflect online realities.
* Discussion of the complexity problem. In other words, the engineering community does not have a holistic understanding of human rights and the human rights community does not have a holistic understanding of technology.
* Discussion of the tendency of a few technological systems or their harms being disproportionately prioritized by researchers and policymakers but other technologies and their consequences (positive or negative) being relatively neglected.

14. **Operational gaps** are the second challenge. This refers to how new technologies are causing practical challenges for states, international organizations and institutions as they seek to protect and promote human rights.

* Discussion of the resource limitations faced by human rights mechanisms as they seek to expand their competencies to deal with new and emerging technologies.
* Discussion of how new and emerging technologies are creating governance gaps. These include the following:
* Transnational and global nature of new technologies but national or regional scope of regulatory efforts
* Governance gaps being created by the emergence of new business models such as the platform economy.
* Discussion of the strategic and economic importance of emerging and new technologies, especially AI, which will complicate efforts to put the protection and promotion of human rights first.

VII. Recommendations

15. Although our human rights framework has demonstrated its effectiveness in protecting and promoting human rights since the end of World War II, the challenges created by new technologies need to be addressed. Most respondents agreed that a holistic and inclusive approach to the issue seems preferable, since it means more coordination, better use of resources, faster and more effective actions and, consequently, possibly better results.[[6]](#footnote-7) This holistic approach should include three pillars:

i. **Holistic understanding of technology** that is aware of the complexity and interdependency of new and emerging technologies as well as the ways they modify, shape, and magnify human agency. In this regard, a holistic approach should not focus only on a few popular digital technologies but carefully trace the interconnections between different types of innovations and their overall human rights consequences. This will require the human rights community finding new ways to cooperate with technology experts and the private sector to better understand these systems. Moreover, we need to understand the human rights implications of each stage of a technology’s development cycle, including its design, manufacture, implementation and even disposal. For example, algorithms can create negative human rights outcomes because of faulty design, discriminatory training inputs, or their subsequent misuse by business or governance models.

 Specific recommendations for **first pillar** (tentative)

1. More research on the interrelatedness of new technologies and their complex impacts on human rights.

2. Greater involvement of technical experts in the work of UN human rights mechanisms.

3. We should seek to create technology neutral regulations that focus on the *effects* of new and emerging technologies rather than attempts to regulate specific systems such as smart phones or drones.

ii. **Holistic approach to human rights in the context of new technologies** requires three distinct steps. First is the difficult task of translating human rights norms into practical standards that are comprehensible for businesses and engineers. Second, this framework needs to balance the human rights opportunities and the risks associated with new technologies. Too much focus on the mitigation of harm could lead to missed opportunities and vice versa. Third, this framework cannot privilege a few types of human rights issues at the expense of others but needs to encompass the full spectrum of human rights.

 Specific recommendations for **second pillar** (tentative)

1. The datafication cycle provides a useful integrated model for understanding the interdependence of new and emerging technologies and their various human rights implications. For example, the same technology can affect multiple human rights at different stages of the cycle.

2. This comprehensive framework needs to carefully balance the benefits of innovations with the risks that they create for human rights

3. The development of human rights due diligence processes for new technologies need to be expanded and explicitly include all human rights. This is in in contrast to ethical principles that may only cover a limited range of human rights.

4. There may also be a need to update human rights treaties to reflect the expanded capabilities and new modes of human experience in the digital age.

iii. **Holistic governance and regulatory efforts** by states, international organizations, human rights mechanisms, and the private sector. Because the issues created by new technologies are cross-cutting and global in scope, only comprehensive solutions to this issue will promote and protect human rights. Moreover, coordinated responses are needed if we are to avoid the risk of a trade-off between human rights, the proliferation of alternative regulatory and ethical standards, or governance gaps resulting from the growing role of non-state actors, especially businesses. Care should also be taken to include the voices of all implicated users of these technologies, especially marginalized populations that are especially vulnerable to new governance and business models.

 Specific recommendations for the **third pillar** (tentative)

1. Multi-stakeholder approach is needed to shape a comprehensive human rights approach to new technologies which may require the expansion of existing mechanisms for information sharing with the private sector.

2. Users should have an active role in the design and development process of new and emerging technologies and be included in decision-making processes involved in the use of these technologies by public institutions.

3. UN human rights mechanisms would benefit from the creation of a regular information-sharing mechanism so that their work on the issue is better coordinated.

VIII. Conclusion

1. For a sample of this literature see Andrew Feenberg, *Transforming Technology a Critical Theory Revisited* (Oxford: Oxford University Press, 2002); Bruno Latour, *Aramis, or the Love of Technology*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1996); Cathy O’Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York, NY: Crown, 2016). [↑](#footnote-ref-2)
2. Lawrence Lessig, *Code, Version 2.0* (New York, NY: Basic Books, 2006); Roger Brownsword, “In the Year 2061: From Law to Technological Management,” *Law, Innovation and Technology* 7, no. 1 (January 2, 2015): 1–51, https://doi.org/10.1080/17579961.2015.1052642. [↑](#footnote-ref-3)
3. Molly K. Land and Jay D. Aronson, eds., *New Technologies for Human Rights Law and Practice* (Cambridge, UK: Cambridge University Press, 2018), 9. [↑](#footnote-ref-4)
4. Adam Greenfield, *Radical Technologies: The Design of Everyday Life*, EPUB (New York, NY: Verso, 2017), chap. 10 para. 2. [↑](#footnote-ref-5)
5. Mark Cotteleer and Brenna Sniderman, “Forces of Change: Industry 4.0” (Deloitte University Press, 2017), 3, https://www2.deloitte.com/insights/us/en/focus/industry-4-0/overview.html. [↑](#footnote-ref-6)
6. Response by UN SP to right to privacy, the State of Portugal, The EU, American University of Paris Working Group on HR, The Danish Institute of Human Rights [↑](#footnote-ref-7)