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Lost in digital translation? The humanitarian principles in the digital age

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Abstract

The digital transformation creates significant opportunities and risks for humanitarian action. Current approaches to humanitarian innovation-related issues are too often driven by considerations of competition and relevance, relegating the fundamental humanitarian principles of humanity, impartiality, neutrality and independence to afterthoughts. By reasserting the place and role of these principles in humanitarian decision-making processes, this article argues that it is possible to better understand the political and ethical dimensions of the digital transformation, reverse counterproductive practices, and ultimately better mitigate the negative impact that technologies can have on the safety and dignity of people affected by humanitarian crises, and on principled humanitarian action.

Keywords: humanitarian principles, humanity, impartiality, neutrality, independence, humanitarian ethics, digital humanitarianism, humanitarian innovation.

Introduction

"Innovate or die." In a recent article, Eric Schmidt, the former Google chief executive officer (CEO) and senior adviser to the US government, explained how this tech company mantra has become the "defining force" of international politics.[1] According to him, the ability to "invent, adopt and adapt" new technologies is what defines power in an increasingly competitive international environment.[2] It is indeed difficult to ignore how new technologies such as artificial intelligence (AI) have become a central element of the global competition between States and between private sector actors, and how they are transforming societies at the political, socio-economic and cultural levels.[3]

This "innovate or die" paradigm is a logical consequence of the so-called "Fourth Industrial Revolution"[4] that has placed technological innovation at the centre of a "new chapter in human development".[5] The constant emergence and integration of rapid innovation in computer and data sciences, bio- and neurotechnologies, robotics and other domains is profoundly influencing political agendas and the strategies that States and private sector actors use to develop, compete and survive.[6] Technological innovation is also changing how people relate to one another, how they work and organize their lives, and how they exercise their fundamental rights. The "digital transformation"[7] of everything has become a defining feature of humanity in the twenty-first century.

This global trend is also visible in the humanitarian sector. Over the past years, many international humanitarian organizations have digitally transformed and placed technological innovation high on their development, investment and partnership strategies.[8] Data and digital technologies have proliferated in these organizations' operational toolbox and have become standing issues in humanitarian legal and policy debates. In a sector faced with unabated humanitarian needs, chronic funding gaps and the emergence of new actors,[9] competition for funds continues and innovation is gaining weight as a comparative advantage – turning Mr Schmidt's warning into a reality.

1 Eric Schmidt, "Innovation Power: Why Technology Will Define the Future of Geopolitics", *Foreign Affairs*, March/April 2023, 28 February 2023, available at: www.foreignaffairs.com/united-states/eric-schmidt-innovation-power-technology-geopolitics (all internet references were accessed in February 2024).
2 *Ibid.*
3 "The Battle for Digital Supremacy", *The Economist*, 15 March 2018, available at: www.economist.com/leaders/2018/03/15/the-battle-for-digital-supremacy.
4 Klaus Schwab, *The Fourth Industrial Revolution*, World Economic Forum (WEF), Geneva, 2016.
5 WEF, "Fourth Industrial Revolution", available at: www.weforum.org/focus/fourth-industrial-revolution/.
6 K. Schwab, above note 4, pp. 6-9.
7 WEF, "Accelerating Digital Transformation for Long-Term Growth", available at: https://initiatives.weforum.org/digital-transformation/home.
8 Kristin Bergtora Sandvik, Katja Lindskov Jacobsen and Sean Martin McDonald, "Do No Harm: A Taxonomy of the Challenges of Humanitarian Experimentation", *International Review of the Red Cross*, Vol. 99, No. 904, 2017, p. 324, available at: https://international-review.icrc.org/articles/do-no-harm-taxonomy-challenges-humanitarian-experimentation.
9 See ALNAP, *The State of the Humanitarian System, 2022 Edition*, ALNAP and Overseas Development Institute, 2022, available at: https://sohs.alnap.org/.

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But innovation can also kill and harm. The continuously increasing data flows informing humanitarian responses can be repurposed to surveil people, including at-risk and marginalized groups, exposing them to further risks of targeting or persecution.[10] Digital exclusion and algorithmic biases can exclude hard-to-reach and off-grid communities from the protection and assistance they need to survive conflicts.[11] Millions of euros that could have been used for actual life-saving responses have instead been invested in humanitarian innovation programmes in what have become zero-sum-game humanitarian budgets,[12] where organizations can have to choose between delivering operational solutions and increasing their ability to do so through investing in innovative technologies. In the humanitarian sector, a fear-of-missing-out competition-driven innovation obsession inspired by the private sector's techno-logic is not only unlikely to get an organization ahead of the competition, but can also lead to catastrophic consequences for the lives and dignity of people affected by conflict and other humanitarian crises when it is not thought through carefully and critically.[13]

The digital transformation triggers difficult questions for humanitarian actors in a global context of multiplying conflicts and digitally fuelled political polarization and societal upheavals. On the one hand, digitalization has made aid faster and more efficient.[14] Among other innovative technologies, telemedicine provides the possibility of bringing advanced medical expertise to hard-to-reach areas where it is needed to assist the victims of severe war-related injuries.[15] Digital cash transfers are lowering the cost of economic assistance programmes while supporting the autonomy and agency of those who need such assistance.[16] Data analytics and AI solutions are helping collect and analyze more information to support humanitarian decision-making.[17] In short, digital technologies and data flows have the power to transcend geographical borders and obstacles to help reach people at speed and at scale, while reducing the cost attached to bureaucratic and logistical constraints.

10 Kristin Bergtora Sandvik and Nathaniel Raymond, "Beyond the Protective Effect: Towards a Theory of Harm for Information Communication Technologies in Mass Atrocity Response", *Genocide Studies and Prevention: An International Journal*, Vol. 11, No. 1, 2017, pp. 14–15, available at: https://digitalcommons.usf.edu/gsp/vol11/iss1/5.

11 See, generally, Jonas Lerman, "Big Data and Its Exclusion", *Stanford Law Review Online*, Vol. 66, 2013, available at: www.stanfordlawreview.org/online/privacy-and-big-data-big-data-and-its-exclusions/.

12 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 335.

13 Mark Latonero and Zackary Gold, *Data, Human Rights and Human Security*, Data and Society, 22 June 2015, available at: https://datasociety.net/wp-content/uploads/2015/06/Data-HumanRights-primer.pdf.

14 Kristin Bergtora Sandvik, Maria Gabrielsen Jumbert, John Karlsrud and Mareile Kaufmann, "Humanitarian Technology: A Critical Research Agenda", *International Review of the Red Cross*, Vol. 96, No 893, 2015, p. 220, available at: https://international-review.icrc.org/articles/humanitarian-technology-critical-research-agenda.

15 Moneeza Walji, "Bringing Telehealth to Humanitarian Settings", *Canadian Medical Association Journal*, Vol. 3, No. 187, 2015, p. 4, available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC4347784/.

16 Pierrick Devidal, "Cashless Cash: Financial Inclusion or Surveillance Humanitarianism?", *Humanitarian Law and Policy Blog*, 2 March 2021, available at: https://blogs.icrc.org/law-and-policy/2021/03/02/cashless-cash/.

17 Sarah Spencer, *Humanitarian AI: The Hope, the Hype and the Future*, Network Paper No. 85, Humanitarian Practice Network, November 2021, available at: https://odihpn.org/wp-content/uploads/2021/11/HPN-Network-Paper_AI_web_181121.pdf.

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On the other hand, digitalization is making humanitarian action more risky for the security of the people that it is meant to protect by exposing their personal data to potentially malicious actors who can use it to target or persecute them. It is also making aid more opaque and less human, fuelling accusations of "surveillance humanitarianism"[18] and "techno-colonialism"[19] and generating daunting practical and ethical challenges for practitioners.[20] It is a double-edged sword that can turn against those who pursue it without understanding it.

These conundrums are not new. Academics have been highlighting the need for a critical research agenda for years,[21] and for new policy tools to inform and maintain an ethical approach to the use of digital technologies in humanitarian action. Since then, a multitude of guidelines[22] have emerged to help humanitarians manage the tensions that digital opportunities and risks can create. But policy-makers and practitioners continue to lag behind innovation, trying to adapt to increasingly fast technological developments and identifying risks reactively as they materialize. The disconnect between theory and practice is gradually increasing and turning into a potentially dangerous game of digital whack-a-mole. Indeed, most organizations do not have the means to balance the potential rewards that technology brings with the need to mitigate the digital risks involved, and to put into practice, effectively and at scale, their ethical commitments to "do no digital harm".[23] The innovation race and the continuously growing and pervasive digitalization of humanitarian activities is widening the gap between theory and practice, and increasing related risks for affected populations and principled humanitarian action.[24]

Today, humanitarianism is at a critical juncture, and in need of a compass to help navigate the many quandaries of the digital transformation. AI hype is accelerating these problems, and the need to address them. Mr Schmidt's simplistic innovation-driven approach is not the right way to address these digital

18 Mark Latonero, "Stop Surveillance Humanitarianism", *New York Times*, 7 November 2019, available at: www.nytimes.com/2019/07/11/opinion/data-humanitarian-aid.html.

19 Mirca Madianou, "Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises", *Social Media and Society*, Vol. 5, No. 3, 2019, available at: https://doi.org/10.1177/2056305119863146.

20 Access Now, *Mapping Humanitarian Tech: Exposing Protection Gaps in Digital Transformation Programs*, December 2023, available at: www.accessnow.org/wp-content/uploads/2024/02/Mapping-humanitarian-tech-February-2024.pdf www.accessnow.org; K. B. Sandvik *et al.*, above note 14, p. 221.

21 K. B. Sandvik *et al.*, above note 14, p. 221.

22 See, for instance, UN Office for the Coordination of Humanitarian Affairs (OCHA) Centre for Humanitarian Data, "Resources Library", available at: https://centre.humdata.org/category/resource-library/; Enhance Learning and Research for Humanitarian Assistance, "Humanitarian Innovation Guide", available at: https://higuide.elrha.org/.

23 Rachel Dette, "Do No Digital Harm: Mitigating Technology Risks in Humanitarian Contexts", In Silvia Hostettler, Samira Najih Besson and Jean-Claude Bolay (eds), *Technologies for Development*, 2016 UNESCO Chair Conference on Technologies for Development, Springer, Cham, 2018, available at: https://doi.org/10.1007/978-3-319-91068-0_2; Access Now, above note 20, p. 58.

24 Nathaniel Raymond and Brittany Card, *Applying Humanitarian Principles to Current Uses of Information Communication Technologies: Gaps in Doctrine and Challenges to Practice*, Signal Program on Human Security and Technology, Harvard Humanitarian Initiative, July 2015, p. 2, available at: https://hhi.harvard.edu/files/humanitarianinitiative/files/signal_program_humanitarian_principles_white_paper.pdf?m=1610038871.

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humanitarian dilemmas.[25] Humanitarian settings and front lines are more complex – and dangerous – to manoeuvre than the competitive environment of Silicon Valley. Instead, humanitarians should look to the fundamental principles that underpin humanitarian action – humanity, impartiality, neutrality and independence, known collectively as the humanitarian principles – to find their own ways to manage those risks and challenges, and to mitigate their negative consequences.[26]

The humanitarian principles have been critical tools for confronting humanitarian challenges across time and space. They have demonstrated their added value as an analytical prism, ethical compass and operational tool for thinking critically and pragmatically about ways around the obstacles that political and conflict realities create. They can and should continue to do so in the digital age,[27] even if the framework they provide does not guarantee easy or perfect solutions. Managing dilemmas is about choosing the least bad option between two morally imperfect solutions, but without systematic evidence-based approaches and adequate ethical frameworks, decisions are left to the mercy of circumstances or unproductive or contentious debates based on the personal preferences and biases of those involved.[28] Structuring strategic and operational decision-making processes on innovation and the use of new technologies through a principled framework can help avoid these meeting-room traps.

A principled framework for decision-making starts with rejecting the binary framing that often characterizes debates on innovation and new technologies – i.e., enthusiasm, depicting them as the panacea for the challenges of the future, versus pessimism, portraying them as existential threats. It also requires deconstructing private sector assumptions attached to innovation and digital partnerships, and using the humanitarian principles to help design rights-based solutions that respect and advance the safety and dignity of populations affected by conflict and humanitarian crises, while preserving the essential elements of humanitarian action.

This article seeks to demonstrate how humanitarians can and should use the humanitarian principles of humanity, impartiality, neutrality and independence to approach innovation and new technologies. To do this, it first outlines the problems that the assumptions attached to the digital transformation pose for humanitarian action. The subsequent four sections address in turn how digitalization impacts the ability of humanitarians to operate in line with the

25 Pierrick Devidal, "'Back to Basics' with a Digital Twist: Humanitarian Principles and Dilemmas in the Digital Age", *Humanitarian Law and Policy Blog*, 2 February 2023, available at: https://blogs.icrc.org/law-and-policy/2023/02/02/back-to-basics-digital-twist-humanitarian-principles/. See also International Committee of the Red Cross (ICRC), "Digital Dilemmas, Real Life Consequences", available at: https://digital-dilemmas.com/info/.

26 P. Devidal, above note 25.

27 Isabelle Vonèche Cardia, Adrian Holzer, Ying Xu, Carleen Maitland and Denis Gillet, "Towards a Principled Approach to Humanitarian Information and Communication Technology", *ICTD '17: Proceedings of the Ninth International Conference on Information and Communication Technologies and Development*, Article No. 23, November 2017, available at: https://doi.org/10.1145/3136560.3136588; K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 342.

28 Mark Bowden *et al.*, *Navigating Ethical Dilemmas for Humanitarian Action in Afghanistan*, Humanitarian Outcomes, June 2023, available at: www.humanitarianoutcomes.org/HRRI_Afghanistan_June_2023.

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requirements of the humanitarian principles. The conclusion proposes orientations to better integrate the principles into humanitarian strategies, policies and practices, in order to ensure a more responsible approach to digital innovation.

Digitalization and the "shifting problem definition"[29]

The current majority approach to digital transformation in the humanitarian sector seems overly driven by considerations of convenience and organizational interests that are not necessarily aligned with the needs of populations affected by humanitarian crises. Asking critical questions about innovation practices in the humanitarian sector should not be mistaken as an opinionated Luddite rejection of new technologies. Innovation has, without a doubt, had a positive impact on humanitarian action and the ability to alleviate the suffering and enhance the agency of victims of conflict and other humanitarian crises. Across the spectrum of prevention, mitigation, preparedness, response and recovery efforts,[30] and from digitalized humanitarian logistics[31] to AI-informed medical diagnostics,[32] new technologies and innovation have always been key to humanitarian action and its progress.[33]

As already highlighted by others, the conversation is mostly ethical, and it needs attention. It is about trying to take a step back, "moving from a discussion of what technology does *for* humanitarian action to asking what technology does *to* humanitarian action."[34] It is about ensuring that humanitarians keep a cool head vis-à-vis technological determinism and that they are in a position to use innovation responsibly, in line with the interests of the populations they serve, and with their mandate and values. This necessary but difficult task requires a slower time frame and sequencing that is at odds with the innovation dynamic and the speed of technological progress – this explains why it is neglected, but also why it is urgent.

Technology is not neutral

First, humanitarians need to explicitly acknowledge and integrate the fact that innovation and technology are neither neutral nor necessarily good in and of

29 Kristin Bergtora Sandvik, "Now Is the Time to Deliver: Looking for Humanitarian Innovation's Theory of Change", *International Journal of Humanitarian Action*, Vol. 2, No. 8, 2017, p. 4, available at: https://doi.org/10.1186/s41018-017-0023-2.

30 Patrick Vinck, "Humanitarian Technology", in Patrick Vinck (ed.) *World Disasters Report 2013*, International Federation of Red Cross and Red Crescent Societies (IFRC), 2013, p. 20.

31 Dorit Schumann-Bölsche, "Information Technology in Humanitarian Logistics and Supply Chain Management", in Gyongi Kovács, Karen Spens and Mohammed Moshtari (eds), *The Palgrave Handbook of Humanitarian Logistics and Supply Chain Management*, Palgrave Macmillan, London, 2018, available at: https://link.springer.com/chapter/10.1057/978-1-137-59099-2_19.

32 Mèdecins Sans Frontières, "Artificial Intelligence (AI) for TB", Transformational Investment Capacity Project Summary, May 2022, available at: https://msf-transformation.org/wp-content/uploads/2022/05/AI-For-TB-Project-Summary.pdf.

33 K. B. Sandvik *et al.*, above note 14, p. 225.

34 *Ibid.*, p. 222.

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themselves.[35] They constitute complex socio-technical constructs carrying underlying but significant assumptions and values, usually aligned with those of the people who develop and promote them.[36] The "digital transformation" is, for instance, not a mere factual description of a trend, but also an agenda for change that comes with implicit but important structural shifts reflecting neoliberal and capitalist orientations.[37] It is shaping and shaped by society and by political and economic interests, and it triggers serious consequences and impacts.[38] Neglecting these considerations comes with significant risks for humanitarian action.[39]

Academics have already highlighted how these structural shifts are impacting the humanitarian sector. Its centre of gravity is moving from a focus on mostly physical and human methods to the technological and digital, from largely public and non-profit to hybrid and commercial approaches, and from a central role of States and governments to the growing role of private sector actors.[40] Humanitarian organizations are recruiting more data scientists and AI experts, but fewer anthropologists and ethnologists. They are developing public–private partnerships, but are less at ease with civil society organizations. Their donors are requesting more "value for money",[41] but not necessarily human rights impact assessments.[42]

The consequences of those shifts are contributing to what has been described as a "privatization",[43] "commodification"[44] and "marketization"[45] of the sector. This evolution is reflected in the changing vocabulary of humanitarian professionals.[46] It has become relatively common to hear discussions on improving "productivity" (instead of impact) through innovation and ensuring "scalability" (instead of relevance). People affected by conflict and other humanitarian crises have over

35 Note that here, "neutral" is used in the general sense – not to refer to the humanitarian principle of neutrality. Melvin Kranzberg, "Technology and History: 'Kranzberg's Laws'", *Technology and Culture*, Vol. 27, No. 3, 1986, p. 547, available at: www.jstor.org/stable/3105385.

36 Kristin Bergtora Sandvik, *Humanitarian Extractivism: The Digital Transformation of Aid*, Humanitarianism: Key Debates and New Approaches, Manchester University Press, Manchester, 2023, p. 25.

37 WEF, above note 7.

38 Donald MacKenzie and Judy Wajcman, *The Social Shaping of Technology*, Open University Press, Buckingham, 1999, cited in K. B. Sandvik and N. Raymond, above note 10, p. 13.

39 R. Dette, above note 23, p. 13.

40 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 341; and see, generally, M. Madianou, above note 19.

41 Jock Baker, Ester Dross, Valsa Shah and Riccardo Polastro, *Study: How to Define and Measure Value for Money in the Humanitarian Sector*, SIDA Decentralised Evaluation 2013:29, Swedish International Development Agency (SIDA), September 2013, available at: https://daraint.org/wp-content/uploads/2013/11/Study-How-to-Define-and-Measure-Value-for-Money-in-the-Humanitarian-Sector-Final-Report_3659.pdf.

42 Access Now, above note 20, p. 48.

43 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 321.

44 Access Now, above note 20.

45 Jutta Joachim and Andrea Schneiker, "Humanitarian NGOs as Businesses and Managers: Theoretical Reflection on an Under-Explored Phenomenon", *International Studies Perspectives*, Vol. 19, No. 2, 2018, available at: https://doi.org/10.1093/isp/ekx001; Gilles Carbonnier, "The Humanitarian Market", in *Humanitarian Economics: War, Disaster, and the Global Aid Market*, Oxford University Press, Oxford, 2016, available at: https://doi.org/10.1093/acprof:oso/9780190491543.003.0003.

46 K. B. Sandvik, above note 36, p. 14.

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time turned into "customers" and "clients" for humanitarian "services".[47] Donors request "returns on investment" and private sector partners offer expertise in leveraging market opportunities for "social good".[48] Analyzing this lexicon is interesting because it reveals the assumptions and dynamics that come with it – namely, a focus on perceived efficiency and measurable outputs at the cost of qualitative humanitarian outcomes, and on market-based commercial strategies at the cost of needs-based humanitarian approaches.

Humanitarians have a lot to learn from private sector actors in terms of efficiency and the ability to deliver on commitments. Partnering with private companies can help improve effectiveness and management practices, and humanitarian organizations have been notoriously and legitimately criticized for their failures in these domains.[49] But these partnerships do not always work two ways, and humanitarian actors are often more impacted by the transfer of knowledge and values from the private sector than the other way around. This is particularly true in the field of innovation and new technologies.[50]

It is argued that "while 'technology' and 'the private sector' have both been constant entities in the humanitarian sector", their significant influence in humanitarian innovation "represents something qualitatively new",[51] "changing the very nature of humanitarianism".[52] The assumptions integrated in tech companies' business strategies and practices can have a transformative impact on humanitarian ethics and practice.[53] Private tech companies' utilitarian approach to humanitarian partnerships is understandable because the partnerships represent good branding, visibility, corporate social responsibility and new market entry possibilities, among other incentives.[54] This approach, however, comes with supply-driven opportunistic and experimental methodologies[55] that do not necessarily align with the needs-driven and precautionary ones that ought to characterize humanitarian practices.[56]

47 K. B. Sandvik *et al.*, above note 14, p. 232.

48 Nena Stoijkovic, "The IFRC Wants to Leverage Financial Markets to Keep Up with the World's Unprecedented Humanitarian Needs. Here's How", *Fortune*, 11 October 2022, available at: https://fortune.com/europe/2022/10/11/ifrc-wants-to-leverage-financial-markets-world-humanitarian-crisis-nena-stoiljkovic/; WEF, *Market-Based Solutions and Innovative Finance: New Approaches to Addressing Humanitarian Needs*, Workshop Summary, October 2018, available at: www3.weforum.org/docs/WEF_Market-Based_Solutions_Innovative_Finance_report_2018.pdf; ICRC, "The World's First 'Humanitarian Impact Bond' Launched to Transform Financing of Aid in Conflict-Hit Countries", news release, 6 September 2017, available at: www.icrc.org/en/document/worlds-first-humanitarian-impact-bond-launched-transform-financing-aid-conflict-hit.

49 Paul B. Spiegel, "The Humanitarian System Is Not Just Broke, but Broken: Recommendations for Future Humanitarian Action", Health in Humanitarian Crises Series, *The Lancet*, 8 June 2017, available at: www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31278-3/fulltext.

50 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 330; Access Now, above note 20, pp. 2–3.

51 K. B. Sandvik, above note 29, p. 2.

52 Access Now, above note 20, p. 2.

53 K. B. Sandvik *et al.*, above note 14, p. 231.

54 *Ibid.*; M. Madianou, above note 19, p. 5; Access Now, above note 20, p. 5.

55 Francesco Mancini and Marie O'Reilly, "New Technology and the Prevention of Violence and Conflict", *International Journal of Security and Development*, Vol. 2, No. 3, 2013, cited in K. B. Sandvik and N. Raymond, above note 10, p. 13.

56 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 321.

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"Techno-solutionism" and utilitarian approaches

Tech companies, by their purpose and nature, function on the business- and profit-driven assumption that technological innovations are intrinsically good and can fix all sorts of human and societal problems. This so-called "techno-solutionism"[57] is difficult to resist for humanitarian organizations faced with unbearable levels of suffering, intractable needs and limited resources in particularly fluid and insecure environments. There is therefore high humanitarian receptivity for "tech-utopianism"[58] and opportunistic solutions to alleviate suffering.[59] In simple terms, the prevailing attitude is: if tech can help, let's use it.

This pragmatism is explicit in the humanitarian narrative vis-à-vis emerging technologies, which focuses on leveraging the opportunities they create while mitigating the risks they bring, in order to help "more" people.[60] This approach seems *a priori* adapted to the double-edged nature of digital technologies. Utilitarian ethics are neither unfamiliar nor illegitimate in humanitarian action: prioritizing solutions that help improve the situation of as many people as possible makes sense. The problem is that utilitarian ethics alone are insufficient in the humanitarian context.[61] Deontological, value-based and professional ethics are important complementary guard-rails against overly pragmatic choices – and this is where the humanitarian principles, taken as an interdependent whole and in hierarchical order, are useful checks and balances.[62]

Indeed, a more granular analysis of the "opportunities versus risks" utilitarian frame based on the techno-solutionist promises and assumptions of tech companies often reveals that the binary equation is not a fair one. In practice, the supply-driven opportunities that these technologies offer can be "solutions in need of a problem" for which humanitarian action constitutes an interesting testing ground.[63] This framing can reverse the humanitarian problem identification process from a problem-driven approach to one driven by solutions.[64] Instead of asking if and how new technologies can help alleviate suffering, the leading question becomes if and how humanitarian needs can help "keep up" with new technologies. Instead of being a means to achieve humanitarian ends, the use of new technologies becomes the end, and humanitarian needs the means to achieve it. Instead of being "bottom-up" and

57 "Techno-solutionism" is "the idea that given the right code, algorithms and robots, technology can solve all of mankind's problems, effectively making life 'frictionless' and trouble-free." See Evgeny Morozov, *To Save Everything, Click Here: The Folly of Technological Solutionism*, Public Affairs, New York, 2014.

58 "Techno-utopianism" is "a naïve belief in the emancipatory nature of online communication, along with a refusal to acknowledge any negative impact of the Internet on society": K. B. Sandvik and N. Raymond, above note 10, p. 11.

59 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 328.

60 Saman Rejali and Yannick Heiniger, "The Role of Digital Technologies in Humanitarian Law, Policy and Action: Charting a Path Forward", *International Review of the Red Cross*, Vol. 102, No. 913, 2020, available at: https://international-review.icrc.org/articles/digital-technologies-humanitarian-law-policy-action-913.

61 K. B. Sandvik and N. Raymond, above note 10, p. 10.

62 N. Raymond and B. Card, above note 24, p. 2.

63 K. B. Sandvik and N. Raymond, above note 10, p. 13; Access Now, above note 20, p. 54.

64 K. B. Sandvik, above note 36, p. 5.

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triggered by operational needs and challenges, innovation becomes "top-down" and justified by considerations of competitive relevance and the availability of technology and funding.[65]

As a result, technological choices are often used to address the problems of humanitarian organizations, their donors and their partners. For example, digital advances have improved traceability for fraud prevention and security by improving the identification and authentication of people in need – but this process can sometimes create or reinforce a *de facto* presumption that affected populations are potential fraudsters or security threats, highlighting a reversed burden of proof and a lack of trust in them.[66] New technologies have also improved scalability, creating economies of scale in operational delivery methods[67] and enabling bureaucratic cost reduction for humanitarian organizations – but this process can lead humanitarians to neglect the differences and specificities of individual contexts. These dynamics can reverse humanitarian logic: while the opportunities are mostly benefiting the providers of humanitarian aid and their partners, the risks are mostly carried by the populations at the receiving end, in particular when the personal data they provide to feed innovative digital solutions are not adequately protected.

Any humanitarian interventions, innovative or not, are likely to cause some degree of harm.[68] Utilitarian ethics illustrate this reality in requesting a positive balance between that level of consequential harm and the greater good achieved. What is fundamental is that this calculus is made explicit, adequately assessed, and accounted for to the extent possible. In the context of humanitarian innovation, those requirements often seem to have become neglected afterthoughts.[69] Despite efforts to improve accountability to affected populations and increase their participation in the design and delivery of humanitarian responses,[70] affected people still do not really contribute to decision-making or risk analysis attached to the specific deployment or use of innovative technological solutions by humanitarian organizations.[71] When they are consulted, it is often to support a confirmation bias, and without allowing or helping them to truly understand what is at stake.

The attached risks are therefore imposed on them, sometimes without their knowledge or truly informed consent – including when those are required due to the processing of sometimes sensitive personal information.[72] It is often argued that, when asked, affected people would certainly want to have access to innovative

65 K. B. Sandvik, above note 29, p. 1.
66 K. B. Sandvik, above note 36, p. 12.
67 Access Now, above note 20, p. 52.
68 See, generally, K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8.
69 *Ibid.*, p. 322.
70 Council of Delegates of the International Red Cross and Red Crescent Movement, "Movement-Wide Commitments for Community Engagement and Accountability", Res. CD/19/R1, Geneva, 8 December 2019, available at: https://communityengagementhub.org/wp-content/uploads/sites/2/2020/04/R1-Movement-wide-commitments-for-CEA.pdf.
71 Access Now, above note 20, p. 5.
72 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 340.

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digital tools and that it would be paternalistic to deny it to them. Like everyone else, affected people have a fascination bias towards technology, and a desire not to be left behind in the wake of the digital transformation. But this does not mean that they understand what the risks attached to digital technologies are in their contexts, or that many of the safeguard mechanisms available to others are necessarily available or functioning where they find themselves. To better respect their safety, dignity and autonomy, humanitarians have the duty to go beyond this assumption and to help them be in a better position to make a truly informed decision. This requires explaining to them, in a language they understand, why a specific technology is used for a particular programme, and translating into real-life examples what the risks and consequences of using that technology may be.

In many situations, however, affected people are not even asked for their opinion, and this is also true for the use of innovative technology for humanitarian action. It is often assumed that in their dire situation and exceptional circumstances, the risks attached to the digitalization of humanitarian responses are justified by the potential gains.[73] In the context of humanitarian emergencies, suffering and urgency are sometimes used as excuses to justify experimentation, exceptionality and higher risk appetite at the cost of safety and ethical guarantees[74] that can be seen as obstacles to action and immediacy. This trade-off management approach is ethically questionable because it contradicts the "do no harm" requirement attached to the humanitarian principle of humanity[75] and does not respect the agency that is so central to the dignity of affected people. When technological experimentation can cause or lead to real additional human harm, it creates a risk of defeating the very purpose of humanitarian action: the alleviation of suffering. And when new technologies are deployed without the participation or consent of affected people, they neglect those people's agency and ability to participate in decisions that affect their lives. These potential drawbacks are significant pressure points on the ability of humanitarian actors to operate in line with the principle of humanity.

Eroding humanity through datafication and automation?

The principle of humanity embodies the *raison d'être* of humanitarianism, and if there "were to [be] only one principle, it would be this one".[76] It is a principle superior to the other humanitarian principles because it captures the motivational

73 *Ibid.*, p. 322.
74 Katja Lindskov Jacobsen, "Making Design Safe for Citizens: A Hidden History of Humanitarian Experimentation", *Citizenship Studies*, Vol. 14, No.1, 2010.
75 K. B. Sandvik and N. Raymond, above note 10, p. 20; K. B. Sandvik, above note 36, p. 42.
76 Jean Pictet, *The Fundamental Principles of the Red Cross: Commentary*, IFRC, 1979, p. 14, available at: https://volunteeringredcross.org/en/recurso/the-fundamental-principles-of-the-red-cross-commentary-by-jean-pictet/. The seven Fundamental Principles of the Red Cross consist of the four humanitarian principles discussed in this article along with the three additional principles of voluntary service, unity and universality.

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and founding values of humanitarian action. Humanity is indeed humanitarian action's engine, compelling humanitarians to do as much as they can to save lives, reduce suffering, and improve the well-being and respect for the rights and dignity of people affected by humanitarian crises. Digital technologies can help them do this in many ways, and humanitarians have a duty to explore, within the limits of their mandate, if and how these tools can help them advance this fundamental objective, while doing no harm – or rather, while minimizing as much as possible the unintended harms they may create.[77]

In his Commentary on the Fundamental Principles of the Red Cross, Jean Pictet explained how the principle of humanity requires humanitarians to "not threaten … the lives, integrity and the means of existence" of populations in need, and to "have regard for their individual personality and dignity".[78] Writing in 1979, Pictet anticipated the need to interpret these considerations in light of historical evolution, indicating that "it would be useless and hazardous to enumerate all [that the principle] constitutes, since it varies according to circumstances".[79] It seems clear today that the digital transformation represents a new "circumstance" significant enough to be factored into the modern interpretation of the principle of humanity.

Generative AI and the risk of degenerative humanitarianism

One of the key tenets of the humanity principle resides in the sentiment or attitude of someone who shows themself to be human.[80] Yet, one of the objectives of the digital transformation – particularly with AI – is to use technology to perform tasks normally carried out by humans. In a sense, it aims to "de-humanize" certain activities. As a result of digitalization, some humanitarian activities and processes are likely to become literally less human because the professional "aid deliverer", or the interface that represents it, becomes a machine rather than a human being. In some domains – such as information or financial management – this transformation is not necessarily problematic, and can reduce the burden attached to repetitive and unpleasant but necessary bureaucratic tasks.[81] In others, where empathy is important, it raises significant questions related to the increasing disappearance of humans, and their ability to demonstrate empathy and understanding, in the delivery and management of humanitarian activities.

Respecting the dignity of people in need implies the ability to show empathy and to understand their situation or feelings. This requires an ability to listen and to discern the complexities and nuances of their experiences, as dignity is a personal feeling that is necessarily self-defined.[82] This explains why humanitarians have always attached importance to being physically present where

77 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 323.
78 J. Pictet, above note 76, p. 10.
79 *Ibid.*
80 *Ibid.*
81 R. Dette, above note 23, p. 17.
82 J. Pictet, above note 76, p. 10.

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affected populations find themselves. When humans are replaced by digital interfaces that introduce different forms of intermediation and remoteness – for instance, when a trained humanitarian worker able to show empathy is replaced by a smartphone app for "self-registering" needs – this essential proximity element is mechanically lessened.[83] It is therefore important that humanitarians strive to use digital tools to enhance, and not replace, human interactions – but it is essential to understand that their efforts to do so will be jeopardized by the pervasive nature of digital technologies, which tend to spread and expand organically.[84]

An illustrative example of the digitalization of human interactions is the development of "humanitarian chatbots". It is argued that "in recent years, chatbots have offered humanitarian operators the possibility to automate personalised engagement and support, inform tailored programme design and gather and share information at a large scale".[85] According to the Office of the UN High Commissioner for Refugees (UNHCR), chatbots

> represent an opportunity to engage at scale, ensure that data is adequately captured, securely stored and shared with front-line staff, who are currently wading through ad-hoc unstructured requests for support. … The advent of artificial intelligence presents an opportunity. The capacity for technology to navigate human speech and text has evolved to such an extent that it is becoming ever more possible and plausible to create dialogue and understanding to the level where … *users cannot discern between a human and a machine.*[86]

Without entering into a detailed analysis of the pros and cons of these tools – which others have aptly analyzed[87] – the above statements confirm that these innovations are mostly geared towards organizational interests (i.e., data collection and scalability) and rely on the assumption, or confusion, that humans and machines are interchangeable.

But research is showing that they are not. Indeed, humans do have a natural tendency to anthropomorphize technological innovations and give them human attributes that they do not possess. The so-called "Eliza effect"[88] is a cognitive bias associated with textual interface computer programs, leading users to believe that the machine has human capabilities such as intelligence or empathy.

83 R. Dette, above note 23, pp. 13–14.
84 See the below section on "Digital Dependencies and the 'Splinternet'".
85 IFRC and The Engine Room, *Chatbots in Humanitarian Contexts: Learning from Practitioner Experiences*, Geneva, 2023, p. 5, available at: https://communityengagementhub.org/wp-content/uploads/sites/2/2023/06/20230623_CEA_Chatbots.pdf.
86 UNHCR Innovation Service, "Chatbots in Humanitarian Settings: Revolutionary, a Fad or Something In-Between?", 2023 (emphasis added), available at: www.unhcr.org/innovation/chatbots-in-humanitarian-settings-revolutionary-a-fad-or-something-inbetween/.
87 IFRC and The Engine Room, above note 85.
88 Joseph Weizenbaum, "ELIZA – a Computer Program for the Study of Natural Language Communication between Man and Machine", *Communications of the ACM*, Vol. 9, No. 1, 1966, available at: www.csee.umbc.edu/courses/331/papers/eliza.html; Lawrence Switzky; "ELIZA Effects: Pygmalion and the Early Development of Artificial Intelligence", *Shaw*, Vol. 40, No. 1, 2020, available at: https://doi.org/10.5325/shaw.40.1.0050.

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Impressive progress in machine learning and large language models (LLMs) in recent years has considerably improved chatbots' performance and has magnified this cognitive bias (on which AI marketing lexicon and visuals heavily relies),[89] leading to debates on whether these machines can be "sentient"[90] or perform "any" human tasks (i.e., "artificial general intelligence").[91]

A recent scientific study demonstrated that in the health-care domain, patients tend to prefer the quality and empathy of chatbots' responses to their medical questions compared to the responses of physicians.[92] This finding highlights the power of the AI systems behind chatbots and their ability to generate an illusionary feeling of empathy in their users. Yet, clinical experts have documented the negative secondary impact of artificial empathy in terms of trust and effective care, pointing to the impossibility of truly replacing human empathy with an AI version of it.[93] According to them, the illusion is eventually counterproductive, and it is critical to maintain "human monitoring and emotional intervention" in order to ensure effective empathy. Ignoring that requirement can trigger "difficult moral and legal responsibility" issues for medical professionals.[94]

This lesson is highly relevant for humanitarians, for whom the concepts of care, trust and effectiveness are indispensable. The negative long-term secondary effects that chatbots may have on the effectiveness of humanitarian care and the trust of the populations who now partly depend on these technologies put at stake the human elements without which the humanity principle cannot be operationalized. Care and trust are not productivity metrics, but essential requirements of the humanitarian endeavour. Without appropriate safeguards, the growing use of chatbots and other "generative AI" systems risks becoming the seed of degenerative humanitarianism.

Protecting data is protecting people

Digitalization brings other challenges vis-à-vis the principle of humanity. Some have argued that the process of "datafication" – which turns information about people

89 Gulnara Z. Karimova and Valerie Priscilla Goby, "The Adaptation of Anthropomorphism and Archetypes for Marketing Artificial Intelligence", *Journal of Consumer Marketing*, Vol. 38, No. 2, 2020, available at: www.emerald.com/insight/content/doi/10.1108/JCM-04-2020-3785/full/html.

90 Dylan Matthews, "Does this AI Knows It's Alive?", *Vox*, 15 June 2022, available at: www.vox.com/23167703/google-artificial-intelligence-lamda-blake-lemoine-language-model-sentient.

91 Reece Rogers, "What's AGI, and Why Are AI Experts Skeptical?", *Wired*, 20 April 2023, available at: www.wired.com/story/what-is-artificial-general-intelligence-agi-explained/; Ragnar Fjelland, "Why General Artificial Intelligence Will Not Be Realized", *Nature Humanity and Social Science Communications*, Vol. 7, No. 10, 2020, available at: https://doi.org/10.1057/s41599-020-0494-4.

92 John Ayers *et al.*, "Comparing Physician and Artificial Intelligence Chatbot Responses to Patient Questions Posted to a Public Social Media Forum", *JAMA Internal Medicine*, Vol. 183, No. 6, 2023, available at: https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2804309.

93 Carlos Montemayor, Jodi Halpern and Abrol Fairweather, "In Principle Obstacles for Empathic AI: Why We Can't Replace Human Empathy in Healthcare", *AI and Society*, Vol. 37, 2022, available at: https://doi.org/10.1007/s00146-021-01230-z.

94 *Ibid.*, p. 1353.

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into data points feeding "quantitative processes that used to be experienced qualitatively"[95] – is itself a dehumanization process necessarily reducing people's complex realities and identities to intangible data and predefined categories.[96] It seems indeed questionable that the binary nature of data,[97] or the categorization labelling requirements of databases and LLMs, can adequately capture the complex and multifaceted identities, experiences and needs of people affected by humanitarian crises.[98] Instead of making data fit for humanitarian needs, the focus is on fitting needs into data and getting as much data as possible about them.[99] Unstructured, localized, nuanced and qualitative information are not in sync with the data hygiene requirements needed to facilitate data flows.[100] "Datafication" can therefore lead to "ignor[ing] or even smother[ing] the unquantifiable, immeasurable, ineffable parts of human experience"[101] and can reduce affected people to their "electronic double", or mere digital avatars.[102] When these important nuances are lost to quantitative methodologies supporting the auditing and securitization objectives of digital innovation,[103] there is a significant risk that those methodologies will end up replacing qualitative ones, eventually eroding the quality of humanitarian responses.

Other concerning threats hide behind the growing number of humanitarian data flows. Humanitarian data streams contribute to understanding and documenting needs or international humanitarian and human rights law violations, but they can also "be a causal vector for harm" through "unpredictable or unpredicted knock-on effects".[104] For example, if such data are not adequately protected, personally and demographically identifiable information – combined with other, less sensitive data through a "mosaic effect"[105] – can help identify and locate people for surveillance or targeting.[106] Such data can also help to draw up their political or emotional profiles for influence or manipulation purposes.[107] In many countries and for most people, the mis- or repurposed use of these data usually leads to targeted online advertisements and unsolicited commercial offers – what has been described as

95 M. Madianou, above note 19, p. 2.
96 K. B. Sandvik and N. Raymond, above note 10, p. 18.
97 Slawomir Chodnicki, "Understanding Binary Data", *Towards Data Science*, 3 December 2019, available at: https://towardsdatascience.com/understanding-binary-data-fc4c78c9e677.
98 R. Dette, above note 23, p. 20.
99 K. B. Sandvik, above note 36, p. 55.
100 R. Dette, above note 23, p. 13.
101 J. Lerman, above note 11, p. 56.
102 K. B. Sandvik, above note 36, p. 22.
103 M. Madianou, above note 19, pp. 4–6.
104 K. B. Sandvik and N. Raymond, above note 10, pp. 9, 15.
105 Jill Capotosto, "The Mosaic Effect: The Revelation Risks of Combining Humanitarian and Social Protection Data", *Humanitarian Law and Policy Blog*, 9 February 2021, available at: https://blogs.icrc.org/law-and-policy/2021/02/09/mosaic-effect-revelation-risks/; Carol McInerney, "Data Environment Mapping to Assess the Mosaic Effect", *OCHA Centre for Humanitarian Data Blog*, 28 September 2020, available at: https://centre.humdata.org/data-environment-mapping-to-assess-the-mosaic-effect/.
106 K. B. Sandvik and N. Raymond, above note 10, p. 10; K. B. Sandvik, above note 36, p. 42.
107 Robert Gehi and Sean Lawson, "Chatbots Can Be Used to Create Manipulative Content – Understanding How this Works Can Help Address It", *The Conversation*, 27 June 2023, available at: https://theconversation.com/chatbots-can-be-used-to-create-manipulative-content-understanding-how-this-works-can-help-address-it-207187.

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"surveillance capitalism".[108] In conflict and other violent settings, it may expose vulnerable people or communities to a different set of risks and can lead to targeted killings, arrests, persecutions or disinformation and manipulation. As recalled by former US Central Intelligence Agency director General Michael Hayden, security agencies use seemingly innocuous metadata to kill people.[109] While is it virtually impossible to know if and when humanitarian data are used to target or persecute people, the absence of evidence should not be taken as evidence of absence, and the risk needs to be taken seriously.

The humanitarian sector has made enormous progress in recent years in acknowledging the importance of personal and humanitarian data protection,[110] and in minimizing the potential harms triggered by the sector's digital activities, in line with the so-called "do no digital harm" concept.[111] Most organizations have adopted data security policies and guidelines, hired experts and set up data protection offices. Yet, these tools are inspired by data protection rules and precepts – in particular the European Union (EU) General Data Protection Regulation (GDPR)[112] – created by and for countries with significant legal and technical means, and even in those countries, their implementation remains an enormous challenge.[113] In places affected by conflict and disasters, where institutional safeguards and control mechanisms (such as data protection legislations or controlling authorities) are often dysfunctional or non-existent,[114] implementing data protection standards becomes virtually impossible.

Ensuring effective data protection requires informing "data subjects" about why and how their data is being collected, used or shared. Humanitarian

108 Soshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, Profile Books, London, 2019.

109 Ryan Goodman, "Video Clip of Former Director of NSA and CIA: 'We Kill People Based on Metadata'", *Just Security*, 12 May 2014, available at: www.justsecurity.org/10318/video-clip-director-nsa-cia-we-kill-people-based-metadata/.

110 Christoph Kuner and Massimo Marelli (eds), *Handbook on Data Protection in Humanitarian Action*, 2nd ed., ICRC and Vrije Universiteit Brussels, May 2020, available at: www.icrc.org/en/data-protection-humanitarian-action-handbook; OCHA, *Data Responsibility Guidelines*, October 2021, available at: www.unocha.org/publications/report/world/data-responsibility-guidelines-october-2021.

111 ICRC, "Digital Trails Could Endanger People Receiving Humanitarian Aid", news release, 7 December 2018, available at: www.icrc.org/en/document/digital-trails-could-endanger-people-receiving-humanitarian-aid-icrc-and-privacy; ICRC and Privacy International, *The Humanitarian Metadata Problem: "Doing No Harm" in the Digital Era*, October 2018, available at: www.privacyinternational.org/report/2509/humanitarian-metadata-problem-doing-no-harm-digital-era.

112 EU, Regulation 2016/679 of the European Parliament and the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation – GDPR), *Official Journal of the European Union*, 4 May 2016, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679.

113 Jennifer Bryant, "Five Years In: Impressions on GDPR's Maturity", International Association of Privacy Advisors, 17 November 2023, available at: https://iapp.org/news/a/a-look-at-the-eu-gdpr-five-years-in/; Jayant Chakravarti, "GDPR Turns Four: Experts Lay Down the Challenges that Lie Ahead", Spiceworks, 25 May 2022, available at: www.spiceworks.com/it-security/data-security/articles/gdpr-turns-four-challenges-remain/.

114 R. Dette, above note 23, p. 14; Mark Duffield, "The Resilience of the Ruins: Towards a Critique of Digital Humanitarianism", *Resilience*, Vol. 4, No. 3, 2016, p. 156, available at: www.tandfonline.com/doi/full/10.1080/21693293.2016.1153772.

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organizations face significant transparency and accountability challenges with regard to their increasing data collection reliance and helping affected population understand the related trade-offs.[115] It requires time and effort to translate complex technical issues into a language that people understand; it also implies breaking the power imbalances that characterize aid provision and offering true alternatives to the data-for-aid bargain now so often implicitly embedded in digital humanitarian processes.[116] Yet, in the context of emergency humanitarian responses, these important requirements can sometimes be considered as burdensome obstacles to speed and scale, or disregarded based on certain assumptions.[117] As a result, informed consent becomes an afterthought, increasingly neglected[118] in favour of other data collection bases such as the "legitimate interests" of the organizations who collect the data – sometimes behind the shield of legal privileges and immunities, which are important safeguards that should not be misused.[119]

As most people have experienced, clicking on the "I agree" button to accept the lengthy and complex "terms and conditions" applying to digital services without understanding them is not exactly a satisfying experience of informed consent, control or agency.[120] There are valid concerns that the "informed consent" concept is no longer fit for purpose in a digitalized world controlled by asymmetrically powerful tech companies.[121] However, by neglecting informed consent in their practices, humanitarians are imposing risks on affected populations without having adequate means to be responsible or accountable for their potential consequences.[122] This effectively turns "data subjects" into "data objects"[123] and risks violating their agency, autonomy and dignity.[124] This is a fundamental design problem that is amplified as digital solutions proliferate.

Effective digital solutions also demand strong data and cyber security.[125] Despite investments in recent years, humanitarian organizations' growing "cyber perimeter" increasingly exposes them to data leaks and cyber security

115 Access Now, above note 20, pp. 57–58.
116 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 329; K. B. Sandvik, above note 36, pp. 10, 26; Access Now, above note 20, p. 54.
117 See the above section on "'Techno-Solutionism' and Utilitarian Approaches".
118 Fred Cate and Viktor Mayer-Schonberger, "Notice and Consent in a World of Big Data", *International Data Privacy Law*, Vol. 3, No. 2, 2013, available at: http://idpl.oxfordjournals.org/content/3/2/67.abstract; K. B. Sandvik and N. Raymond, above note 10, p. 21.
119 Access Now, above note 20, p. 44; Massimo Marelli, "The Law and Practice of International Organizations' Interactions with Personal Data Protection Domestic Regulation: At the Crossroads between the International and Domestic Legal Orders", *Computer Law and Security Review*, Vol. 50, 2023, available at: www.sciencedirect.com/science/article/pii/S0267364923000596.
120 Sabrina Rau, "Those Pop-Up 'I Agree' Boxes Aren't Just Annoying – They're Potentially Dangerous", *The Conversation*, 7 December 2018, available at: https://theconversation.com/those-pop-up-i-agree-boxes-arent-just-annoying-theyre-potentially-dangerous-106898.
121 Adam J. Andreotta, Nin Kirkham and Marco Rizzi, "AI, Big Data, and the Future of Consent", *AI and Society*, Vol. 37, 2022, available at: https://link.springer.com/article/10.1007/s00146-021-01262-5.
122 K. B. Sandvik, above note 36, pp. 3–4, 21.
123 *Ibid.*, p. 9.
124 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 328; Access Now, above note 20, p. 16.
125 K. B. Sandvik and N. Raymond, above note 10, p. 18.

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incidents.[126] The January 2022 data breach that affected the International Committee of the Red Cross (ICRC) illustrated the "infinite vulnerability"[127] of humanitarian digital ecosystems to these growing threats[128] – and the chimeric nature of cyber security.[129] Other incidents[130] have highlighted how human errors and lack of digital security awareness remain the weakest cyber security link.[131] The emerging question is whether humanitarian organizations should continue increasing their reliance on digital tools and processes when they do not have the means to effectively control them or be accountable for them,[132] at serious costs for the safety and dignity of the populations that these organizations are meant to protect. As recently put by a cyber security expert,

> [i]f you're an NGO working in conflict zones with high-risk individuals and you're not managing their data right, you're putting the very people that you are trying to protect at risk of death. … If you're trying to protect people but you're doing more harm than good, then you shouldn't be doing the work in the first place.[133]

In his commentary on the humanity principle, Jean Pictet highlights that "restorative action … must be accompanied by preventive action".[134] Understanding that the digital transformation brings new dimensions of risks that demand more preventive efforts to avoid creating more suffering and protection needs has become urgent. In contemporary humanitarian settings, "doing no harm" means addressing the data and cyber security dimensions of human safety, security and dignity.[135] As the gap between policy and practice continues to grow,[136] humanitarians should pause and reflect on how to reduce it.

126 Massimo Marelli, "Hacking Humanitarians: Defining the Cyber Perimeter and Developing a Cyber Security Strategy for International Humanitarian Organizations in Digital Transformation", *International Review of the Red Cross*, Vol. 102, No. 913, 2020, available at: https://international-review.icrc.org/articles/hacking-humanitarians-cyber-security-strategy-international-humanitarian-organizations-913; Access Now, above note 20, p. 24.
127 K. B. Sandvik, above note 36, pp. 38–55.
128 Massimo Marelli, "The SolarWinds Hack: Lessons for International Humanitarian Organizations", *International Review of the Red Cross*, Vol. 104, No. 919, 2022, available at: https://international-review.icrc.org/articles/the-solarwinds-hack-lessons-for-international-humanitarian-organizations-919.
129 K. B. Sandvik, above note 36, pp. 38–55.
130 Stéphane Duguin, "Cyberattacks: A Real Threat to NGOs and Nonprofits", news release, Cyber Peace Institute, 22 February 2022, available at: https://reliefweb.int/report/world/cyberattacks-real-threat-ngos-and-nonprofits.
131 WEF, *Cybersecurity Futures 2030: New Foundations*, white paper, December 2023, p. 7, available at: www3.weforum.org/docs/WEF_Cybersecurity_Futures_2030_New_Foundations_2023.pdf; Robert Flummerfelt and Nick Turse, "Online Atrocity Database Exposed Thousands of Vulnerable People in Congo", *The Intercept*, 17 November 2023, available at: https://theintercept.com/2023/11/17/congo-hrw-nyu-security-data/; K. B. Sandvik, above note 36, p. 14.
132 K. B. Sandvik, above note 36, p. 41.
133 R. Flummerfelt and N. Turse, above note 131, p. 41.
134 J. Pictet, above note 76, p. 15.
135 R. Dette, above note 23, p. 21.
136 See, generally, N. Raymond and B. Card, above note 24.

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Impartiality in a world of digital exclusion and algorithmic biases

The principle of impartiality is a functional enabler for the principle of humanity. Inspired by considerations of equality and equity, it also transposes medical ethics considerations onto humanitarian action and is a critical tool for the triage and prioritization of needs. Impartiality requires humanitarians to prioritize "the most urgent cases" objectively, and to provide aid without any "discrimination as to nationality, race, religious beliefs, class or political opinions".[137] Despite being "self-evident", impartiality is "nevertheless difficult to apply fully in real life, where it encounters numerous obstacles".[138]

Putting impartiality into practice is hard for many reasons. The areas where those most in need are located can be difficult or impossible to reach because of security, logistical or administrative reasons. Active hostilities, impracticable roads or "no-go areas", and security blockades can prevent or limit access, further fuelling the "bunkerization" of humanitarian action.[139] Marginalized groups can become invisible, hiding out of fear, or hidden for political reasons by those in power. Sometimes, humanitarians lack the means or time to analyze their situation with sufficient detail or context – and even when they do, human biases can distort their analysis. In short, impartiality is as important as it is difficult to achieve, and practice has shown that it should never been taken for granted.[140]

When "big data" turns into "bad data"

Early on in the digital transformation, technological advancement seemed like a solution to the problems described above. In the 2000s, the concept of "big data" emerged as a powerful way to gather insights from a large variety of data sources and bridge the information gaps that jeopardized public action's relevance and effectiveness.[141] By leveraging and combining the multitude of data generated by digital technologies, the hope was that "big data analytics" would help "find unexpected connections and correlations", "make unusually accurate predictions"[142] and support better-informed decision-making and practices. Computerized and algorithmic management of an "overwhelming amount of information" could help to capture the data falling through the cracks of existing analogue processes.[143] While the use of data and analytics was not new to the administration of public

137 J. Pictet, above note 76, p. 24.
138 *Ibid.*, p. 28.
139 Harvard Humanitarian Initiative and Advanced Training Program in Humanitarian Action, *Protecting Humanitarian Action: Key Challenges and Lessons from the Field*, October 2016, available at: https://hhi.harvard.edu/publications/protecting-humanitarian-action-key-challenges-and-lessons-field.
140 Hugo Slim, "What's Wrong with Impartiality?", *The New Humanitarian*, 12 July 2021, available at: www.thenewhumanitarian.org/opinion/2021/7/12/three-challenges-for-humanitarian-impartiality.
141 K. B. Sandvik, above note 36, p. 41.
142 J. Lerman, above note 11, p. 57.
143 Keith Foote, "A Brief History of Big Data", *Dataversity*, 14 December 2017, available at: www.dataversity.net/brief-history-big-data/.

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action, the advancement of computing capacities that came with digital innovation made everything easier and faster.[144]

This information "management revolution"[145] was attractive for humanitarian operators struggling to make good use of the data collected through their activities, and to leverage external information to better understand the complex dynamics of their operating environments.[146] The United Nations (UN) and other international organizations rapidly committed to leveraging big data and placed it at the centre of their operational and development strategies.[147] This triggered a systemic shift in which data moved from the periphery to the centre of humanitarians' agenda and practices, including vis-à-vis donors and partners, who increasingly demanded access to the data and "evidence base" supporting strategic and programmatic choices.[148] Like in the private sector, data became "the new oil" and a key "value extraction" tool to support progress[149] and "boost humanitarian investments".[150] If the analogy between oil and data has been criticized for its limits,[151] it is nevertheless helpful to understand that like oil, data is a finite resource which can similarly contaminate and damage the environment.[152] This is also true in the humanitarian environment.

The 2014 international response to the Ebola pandemic in West Africa illustrates this problem.[153] As this example highlights, instead of supporting

144 Chris Wiggins and Matthew L. Jones, *How Data Happened: A History of Data from the Age of Reason to the Age of Algorithms*, W. W. Norton, New York, 2023, available at: https://wwnorton.com/books/how-data-happened.

145 Andrew McAfee and Erik Brynjolfsson, "Big Data: The Management Revolution", *Harvard Business Review*, October 2012, available at: https://hbr.org/2012/10/big-data-the-management-revolution; Access Now, above note 20, p. 49.

146 K. B. Sandvik, above note 36, p. 27.

147 Global Pulse, *Big Data for Development and Humanitarian Action: Towards Responsible Governance*, Global Pulse Privacy Advisory Group Meetings 2015–2016, 2016, available at: www.slideshare.net/unglobalpulse/big-data-for-development-and-humanitarian-action-towards-responsible-governance-report.

148 Larissa Fast, *Data Sharing between Humanitarian Organisations and Donors: Toward Understanding and Articulating Responsible Practice*, Norwegian Center for Humanitarian Studies, April 2022, available at: www.humanitarianstudies.no/resource/data-sharing-between-humanitarian-organisations-and-donors/; Marcella Vigneri, "Generating and Using Evidence during a Global Crisis: What Can We Learn from the Humanitarian Sector?", Center of Excellence for Development Impact and Learning, March 2021, available at: https://cedilprogramme.org/blog/generating-and-using-evidence-during-a-global-crisis-what-can-we-learn-from-the-humanitarian-sector/.

149 "The World's Most Valuable Resource is No Longer Oil, but Data", *The Economist*, 20 May 2017, available at: www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data.

150 Katherine Garett-Cox and Helen Alderson Reat Noch, "How Improved Data Could Boost Humanitarian Investment", WEF, 2 March 2021, available at: www.weforum.org/agenda/2021/03/improved-data-boost-humanitarian-investment/.

151 Adama Schlosser, "You May Have Heard Data Is the New Oil. It's Not", WEF, 10 January 2018, available at: www.weforum.org/agenda/2018/01/data-is-not-the-new-oil/; Antonio Garcia Martinez, "No, Data Is Not the New Oil", *Wired*, 26 February 2019, available at: www.wired.com/story/no-data-is-not-the-new-oil/.

152 Tom Kackson and Ian Hodgkinson, "'Dark Data' Is Killing the Planet – We Need Digital Decarbonisation", *The Conversation*, 29 September 2022, available at: https://theconversation.com/dark-data-is-killing-the-planet-we-need-digital-decarbonisation-190423.

153 Sean Martin McDonald, *Ebola: A Big Data Disaster*, CIS Papers 2016.01, March 2016, available at: https://cis-india.org/papers/ebola-a-big-data-disaster.

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better-informed decisions, the multiplication of data flows "invites the problems of digital systems into the most fragile and vulnerable environments in the world",[154] outpacing the capacity of disaster responders to make sense of them[155] and adding significant layers of complexity to coordination.[156] Instead of supporting prevention and preparedness, big data can create an overload of not-so-relevant information that can obscure the ability of responders to see, interpret and respond to factual realities.[157] The inherent limitations of data, which are often at best incomplete and at worst inaccurate, are necessarily amplified through the magnifying effect of big data analytics. This can lead to ineffective or counterproductive interpretations, turning "big data" into "bad data"[158] and reinforcing existing inequalities or creating new forms of discrimination.[159]

It is now commonly agreed that AI systems have an intrinsic and significant bias problem.[160] This well-documented issue originates from the datasets feeding algorithmic and machine learning systems, which reflect the systemic discrimination and inequalities embedded in the societal realities they aim to capture.[161] This is particularly true for race[162] and gender[163] discriminations that are so deeply entrenched in societies and so well reflected in generative AI systems.[164] The problem with these algorithmic biases is that, unlike their human counterparts, they are projected at scale and are often more difficult to identify, explain and rectify.[165] The internal functioning of algorithms is most often a "black box" commercial secret, carefully protected by the private companies who own these systems.[166] Even the engineers and scientists who create the algorithms can have difficulties deconstructing their opacity and explaining how they transform inputs into outputs.[167]

154 *Ibid.*
155 Kavlev Leeratu, "Why Big Data Missed the Early Warning Signs of Ebola", *Foreign Policy*, 26 September 2014, available at: https://foreignpolicy.com/2014/09/26/why-big-data-missed-the-early-warning-signs-of-ebola/.
156 S. M. McDonald, above note 153, pp. 2–3.
157 *Ibid.*
158 Georgina Sturge, *Bad Data: How Governments, Politicians and the Rest of Us Get Misled by Numbers*, Little Brown, London, 2022.
159 J. Lerman, above note 11, p. 60.
160 David Danks and John London, "Algorithmic Bias in Autonomous Systems", *Proceedings of the 26th International Joint Conference on Artificial Intelligence*, 2017, available at: www.cmu.edu/dietrich/philosophy/docs/london/IJCAI17-AlgorithmicBias-Distrib.pdf.
161 Emily Bender, Timnit Gebru, Angelina McMillan-Major and Margaret Mitchell, "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?", *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, March 2021, available at: https://doi.org/10.1145/3442188.3445922.
162 Andrew Guthrie Ferguson, *The Rise of Big Data Policing: Surveillance, Race, and the Future of Law Enforcement*, New York University Press, New York, 2017.
163 Caroline Criado-Perez, *Invisible Women: Exposing Data Bias in a World Designed for Men*, Chatto and Windus, London, 2019.
164 Leonardo Nicoletti and Nina Bass, "Humans are Biased, Generative AI is Even Worse", *Bloomberg*, November 2023, available at: www.bloomberg.com/graphics/2023-generative-ai-bias/.
165 Frank Pasquale, *The Black Box Society*, Harvard University Press, Cambridge, MA, 2015.
166 *Ibid.*, pp. 140–189.
167 Chloe Xiang, "Scientists Increasingly Can't Explain How AI Works", *Vice*, 1 November 2022, available at: www.vice.com/en/article/y3pezm/scientists-increasingly-cant-explain-how-ai-works.

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These transparency and explicability issues are particularly problematic in the humanitarian domain because they limit humanitarians' ability to explain the causal relationships between needs and responses, and to demonstrate the objectivity of the assessments they rely on.[168] To demonstrate their impartiality, humanitarians must be in a position to explain the proportionality of their response to existing needs – in particular why some are addressed and others are not. When data and algorithmic biases are unidentifiable, they can hide and spread, contaminating needs assessment models, obstructing the ability to explain how proportionality was evaluated and threatening the impartiality of responses. In practice, they risk defeating humanitarians' efforts to be more accountable for the use of the precious resources they have, and towards the populations they serve.[169] The proliferation of AI systems in humanitarian action can therefore bring more, not less, opacity and problems for impartiality, accelerating "the divide between the haves and the have nots".[170]

Digital divides and exclusions

The second tension that increasing digitalization introduces to humanitarian impartiality consists in the "digital divides" and exclusions resulting from the digital transformation. In 2023, an estimated 2.7 billion people, roughly a third of the global population, remained without access to digital connectivity.[171] These divides are unequally distributed across the globe, and are more present in Africa, the Middle East and Asia, where a large share of global humanitarian needs and operations are also concentrated.[172] Digital divides disproportionately affect people living in rural and hard-to-reach areas, who also constitute a significant share of people in need of humanitarian assistance.[173] These quantitative divides are compounded by qualitative ones. Women and girls,[174] people with disabilities[175] and people with low levels of education[176] tend to be more

168 Giulio Coppi, Rebeca Moreno Jimenez and Sofia Kyriazi, "Explicability of Humanitarian AI: A Matter of Principles", *Journal of International Humanitarian Action*, Vol. 6, No. 19, 2021, available at: https://doi.org/10.1186/s41018-021-00096-6.

169 *Ibid.*

170 WEF, above note 131, p. 9.

171 International Telecommunication Union (ITU), "Internet Surge Slows, Leaving 2.7 Billion People Offline in 2022", news release, 16 September 2022, available at: www.itu.int/en/mediacentre/Pages/PR-2022-09-16-Internet-surge-slows.aspx.

172 OCHA, "Global Humanitarian Overview 2022", 2022, available at: https://2022.gho.unocha.org/.

173 *Ibid.*

174 World Bank, "Closing the Digital Gender Gap: Why Now Should Have Been Yesterday", 9 June 2020, available at: www.worldbank.org/en/news/feature/2020/06/09/closing-the-digital-gender-gap-why-now-should-have-been-yesterday.

175 Andrew Perrin and Sarah Atske, "How Can We Ensure that More People with Disabilities Have Access to Digital Devices?", WEF, 16 September 2021, available at: www.weforum.org/agenda/2021/09/disability-barrier-to-digital-device-ownership/.

176 Thomas McElroy, "Addressing the Digital Divide in Education: Technology and Internet Access for Students in Underserved Communities", *Forbes*, 3 December 2021, available at: www.forbes.com/sites/forbestechcouncil/2021/12/03/addressing-the-digital-divide-in-education-technology-and-internet-access-for-students-in-underserved-communities/.

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excluded from digital connectivity. Many others do not have access to "meaningful" and reliable connectivity,[177] expanding the nature and impact of digital exclusion to a large share of connected people who access the internet through unsafe digital devices or infrastructures.[178]

These compounded divides leave billions of people "who do not routinely engage in activities that big data and advanced analytics are designed to capture" on the digital periphery.[179] In addition to the algorithmic errors discussed above, these "big data exclusions" result in "another type of error that can infect datasets …: the systemic omission of people who live on big data's margins, whether due to poverty, geography, or lifestyle, and whose lives are less 'datafied'[,] … distorting datasets and, consequently, skewing the analysis" on which humanitarians increasingly depend to assess needs and prioritize their responses accordingly.[180] These exclusions create a "new kind of voicelessness" and have profound impacts on already marginalized people and communities in terms of representation and inclusion, potentially jeopardizing their access to impartial humanitarian assistance.[181]

In response, the international community has engaged in a new effort to achieve universal and meaningful connectivity by 2030.[182] The UN High Commissioner for Human Rights recently called for a new right to access the internet,[183] and an increasing number of civil society organizations are demanding better legal recognition of the fundamental role that digital connectivity can play in enabling access to health care, education, work[184] and other services essential to people's survival and well-being in humanitarian situations.[185] They are, unsurprisingly, supported by tech companies,[186] which are already providing "free" connectivity in developing[187] or conflict-affected

177 ITU, above note 171.
178 *Ibid.*
179 J. Lerman, above note 11, p. 55.
180 *Ibid.*, p. 57.
181 *Ibid.*, p. 59.
182 ITU, "New UN Targets Chart Path to Universal Meaningful Connectivity", 19 April 2022, available at: https://www.itu.int/hub/2022/04/new-un-targets-chart-path-to-universal-meaningful-connectivity/.
183 Office of the UN High Commissioner for Human Rights, "It May be Time to Reinforce Universal Access to the Internet as a Human Right, Not Just a Privilege, High Commissioner Tells Human Rights Council", news release, 10 March 2023, available at: www.ohchr.org/en/news/2023/03/it-may-be-time-reinforce-universal-access-internet-human-right-not-just-privilege-high.
184 Laura O'Brien, Peter Micek, Carolina Goncalves Berenger and Eric Null, "More than 3.5 Billion Left in the Dark: Why We're Still Fighting to Reach U.N. Targets for Internet Access", Access Now, 5 November 2020, available at: www.accessnow.org/internet-access/; Anne-Marie Grey, "The Case for Connectivity, the New Human Right", *UN Chronicle*, 10 December 2020, available at: www.un.org/en/un-chronicle/case-connectivity-new-human-right.
185 KeepItOn Coalition, "Preserving Freedom in Crisis: Ethiopia's Internet Shutdowns Must Not Become the Norm", September 2023, available at: www.accessnow.org/press-release/open-statement-internet-shutdown-amhara/.
186 Maeve Shearlow, "Mark Zuckerberg Says Connectivity Is a Basic Human Right – Do You Agree?", *The Guardian*, 3 January 2014, available at: www.theguardian.com/global-development/poverty-matters/2014/jan/03/mark-zuckerberg-connectivity-basic-human-right.
187 Toussaint Nothias, "Access Granted: Facebook's Free Basics in Africa", *Media, Culture and Society*, Vol. 42, No. 3, 2020, available at: https://doi.org/10.1177/0163443719890530; Emma Roth, "Facebook's Plan to Offer Free Internet in Developing Countries Ended Up Costing Users, WSJ Reports", *The Verge*, 25

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countries.[188] Humanitarian organizations are joining the effort, developing "connectivity as aid" delivery capacities, despite the significant operational and ethical dilemmas implied.[189] Yet, in parallel, others are calling for a "right to not use the internet", observing that the digital transformation has turned connectivity "into a *de facto* obligation for anyone" who wants to exercise their fundamental rights.[190] While many are demanding more of it, others are asking to be able to opt out from connectivity[191] because it "helps reproduce … inequality and external control rather than ameliorate such conditions".[192] Acknowledging these people's perspective and respecting their choice is an increasingly relevant consideration in the difficult exercise of ensuring humanitarian action's impartiality in the digital era. In other words, digital connectivity should be a genuine choice – available for those who want it, and not required for those who do not. Humanitarian aid should be adapted to both, so that their needs, voices and perspectives are equally taken into account in the difficult proportionality assessment exercise that is required by the principle of impartiality.

Neutrality and independence in a fragmented digital world

The debates and nuances discussed so far also serve to highlight how digital connectivity and the tools that come with it have become contested political issues that humanitarians need to understand and treat as such in order to preserve their commitment to the humanitarian principles of neutrality and independence. Neutrality and independence are political concepts often discussed in the context of international relations and how States and other political entities relate to one another. In the humanitarian domain, they have a similar meaning – i.e., avoiding political or ideological affiliations – but also specific operational and practical dimensions.

Neutrality is a strategic and tactical tool enabling humanitarians "to enjoy the confidence of all"[193] – parties to armed conflict, affected populations and donors, and other humanitarian crisis stakeholders. It requires humanitarian

January 2022, available at: www.theverge.com/2022/1/25/22900924/facebooks-free-internet-less-developed-costing-users-wsj.

188 Emily Rose and Baranjot Kaur, "Musk Says Starlink Will Provide Gaza Connectivity for Aid Groups", *Reuters*, 28 October 2023, available at: www.reuters.com/world/middle-east/musk-says-starlink-provide-connectivity-gaza-through-aid-organizations-2023-10-28/.

189 Rakesh Barania and Mark Silverman, "Protective by Design: Safely Delivering Connectivity as Aid", *Humanitarian Law and Policy Blog*, 8 July 2021, available at: https://blogs.icrc.org/law-and-policy/2021/07/08/protective-by-design-connectivity-as-aid/; Access Now, above note 20, p. 19.

190 Dariusz Kloza, "The Right Not to Use the Internet", *Computer Law and Security Review*, Vol. 52, April 2024, available at: www.sciencedirect.com/science/article/abs/pii/S0267364923001176.

191 Lee Rainie and Jana Anderson, "More People Will Be Connected and More Will Withdraw or Refuse to Participate", Pew Research Center, 6 June 2017, available at: www.pewresearch.org/internet/2017/06/06/theme-4-more-people-will-be-connected-and-more-will-withdraw-or-refuse-to-participate/

192 M. Duffield, above note 114, p. 148.

193 J. Pictet, above note 76, p. 34.

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actors to "not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature"[194] but is often misunderstood or criticized as an excuse for silence or inaction.[195] In fact, neutrality is what allows humanitarians (at least those who have chosen to abide by this principle, which is not a requirement for all forms of humanitarian action[196]) to operate in polarized and insecure environments, and across front lines. It helps preserve the credibility and weight of their voice when they speak out on humanitarian issues and take the side of the victims of violations of international humanitarian and human rights law.[197] Neutrality is a means to achieving humanitarian ends, requiring difficult choices and putting aside personal preferences and opinions in order to be able to help those in need. It is not a choice of convenience, but a contextual requirement for action.

The principle of independence is directly related to neutrality. It requires humanitarian organizations to remain detached from political, military, economic or religious powers and from the strategies that are associated with them.[198] It is a practical way to demonstrate neutrality. In a globalized world of interconnectedness and interdependencies,[199] the principle of independence needs to be implemented in context. It is often about effectively managing the dependencies that humanitarians cannot avoid (access depends on parties to conflict, funding depends on donors, acceptance depends on populations, etc.) and striving to preserve a sufficient level of operational autonomy to act with impartiality and to be perceived as neutral.

Throughout history, humanitarian actors have always had to navigate turbulent political waters to maintain their neutrality and independence, with a constant need to circumvent the "if you are not with us, you are against us" framework of the times. This binary approach regularly flares up as non-international conflicts continue to internationalize, and as international conflicts between States re-emerge,[200] leaving humanitarian organizations stuck between a

194 *Ibid.*

195 Fiona Terry, "Taking Action, Not Sides: The Benefits of Humanitarian Neutrality in War", *Humanitarian Law and Policy Blog*, 21 June 2022, available at: https://blogs.icrc.org/law-and-policy/2022/06/21/taking-action-not-sides-humanitarian-neutrality/.

196 Hugo Slim, "Solidarity, Not Neutrality, Will Characterize Western Aid to Ukraine", *Ethics and International Affairs Online*, 3 October 2022, available at: www.ethicsandinternationalaffairs.org/online-exclusives/solidarity-not-neutrality-will-characterize-western-aid-to-ukraine; Hugo Slim, "You Don't Have to Be Neutral to Be a Good Humanitarian", *The New Humanitarian*, 27 August 2020, available at: www.thenewhumanitarian.org/opinion/2020/08/27/humanitarian-principles-neutrality.

197 Jacob Kellenberger, "Speaking Out or Remaining Silent in Humanitarian Work", *International Review of the Red Cross*, Vol. 86, No. 855, 2004, available at: https://www.icrc.org/en/doc/assets/files/other/irrc_855_kellenberger.pdf; K. B. Sandvik and N. Raymond, above note 10, p. 14.

198 J. Pictet, above note 76, p. 40.

199 Henry Farrell and Abraham L. Newman, "Weaponized Interdependence: How Global Economic Networks Shape State Coercion", *International Security*, Vol. 44, No. 1, 2019, available at: https://direct.mit.edu/isec/article/44/1/42/12237/Weaponized-Interdependence-How-Global-Economic.

200 Richard Gowan, "Trends in Armed Conflicts", *SIPRI Yearbook 2023*, SIPRI, 2023, available at: www.sipri.org/yearbook/2023/02.

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rock and a hard place, at the mercy of polarizing information ecosystems and disinformation campaigns against them on social media.[201]

Humanitarians and the geopolitical digital chessboard

Digitalization is making humanitarian neutrality and independence more difficult. It is indeed often not enough for humanitarian actors to *be* neutral and independent – they must also be *perceived* as such. In the current competitive and polarized environment, the decision to use a particular technological tool is likely to be increasingly perceived as a political choice, and one associated with those behind the tool.[202] Choosing a US-based tech provider is not the same as choosing a Chinese or European one, because each provider abides by a different legal and political framework representing the preferences of its associated State. Indeed, in the increasingly competitive international environment described by Eric Schmidt at the beginning of this article, tech is about power, and therefore politics.[203] States and private actors are racing to control digital technologies and the supply chains behind them – from the rare-earth materials from which microchips are made[204] to the skills and machines required to build those chips, and all the way to the infrastructures and data that are needed to make them function[205] – and are building coalitions to increase their commercial and political influence at the global level.[206] While this competition is not new, the stakes are increasing, as is the impact on the humanitarian sector.[207]

When donors, host States or partners are promoting or demanding the use of specific technologies or brands in the context of humanitarian action, this reduces the choice that humanitarian organizations can make to select the tools that best fit their needs and operational constraints, thus *de facto* challenging their operational autonomy and independence. When those technologies or brands also happen to be used for military or security purposes by parties to conflict or entities associated with them, there is a risk that such a choice will be perceived as a political one, thereby impacting the perception of humanitarian organizations' independence from those parties and entities and jeopardizing the perception of their neutrality. As the

201 ICRC, "Misinformation, Disinformation and Hate Speech – Questions and Answers", 17 February 2023, available at: www.icrc.org/en/document/general-misinformation-disinformation-and-hate-speech-questions-and-answers.
202 I. Vonèche Cardia *et al.*, above note 27.
203 E. Schmidt, above note 1.
204 Jane Nakano, "The Geopolitics of Critical Minerals Supply Chains", Center for Strategic and International Studies, 11 March 2021, available at: www.csis.org/analysis/geopolitics-critical-minerals-supply-chains.
205 "Huawei Accused of Building Secret Microchip Factories to Beat US Sanctions", *The Guardian*, 23 August 2023, available at: www.theguardian.com/technology/2023/aug/23/huawei-accused-building-secret-microchip-semiconductor-factories-us-sanctions.
206 Alex Botting, "Embracing Ad Hoc International Coalitions May Be the Best Approach for the Biden Administration, But It's Not Without Challenges", Wilson Center, 2 June 2023, available at: www.wilsoncenter.org/article/embracing-ad-hoc-international-coalitions-may-be-best-approach-biden-administration-its-not.
207 See, generally, Access Now, above note 20; M. Marelli, above note 128.

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current debates on sanctions against certain Chinese companies and technologies demonstrate,[208] States are using sanctions and other restrictive measures to influence who can use what technologies. Just as sanctions in other domains contain exceptions to exempt humanitarian actors from their scope[209] so as to preserve the perception of their independence and neutrality from political decisions, it seems increasingly relevant to also preserve such actors from undue political interference or cooptation through the choice of technology used for humanitarian purposes. Indeed, humanitarians' growing reliance on digital technologies is an interesting vector for expanding the geo-strategic digital battle into new territories, and humanitarian organizations risk becoming *de facto* tactical pawns on the international chessboard for digital hegemony.[210] Understanding the digital dimensions of neutrality and independence can help them find a way out of a game they are not meant to play. This starts by understanding the digital transformation's political economy[211] and discerning the roles that its key actors play in order to better delineate the parameters through which humanitarians should relate to those actors in their efforts to best protect the perception of their neutrality and independence.

First, the origin of most truly innovative digital technologies over recent decades can be traced back to the research and development (R&D) activities of the main actors of conflicts: States' armed and security forces. The internet[212] was created in the laboratories of the US Department of Defense's Advanced Research Projects Agency (ARPA).[213] Drones were born on the battlefield to support air warfare capabilities.[214] The machine learning tools that power commercial AI applications are often inspired by innovations geared for military purposes, and the "Turing test" that defines their level of "intelligence" was invented in a military context.[215] Today, facial recognition and biometrics are mostly used for security purposes, from identifying potential "terrorists" to

208 Agathe Desmarais, "How the U.S.–Chinese Technology War Is Changing the World", *Foreign Policy*, November 2022, available at: https://foreignpolicy.com/2022/11/19/demarais-backfire-sanctions-us-china-technology-war-semiconductors-export-controls-biden/.

209 Emanuela-Chiara Gillard, "Humanitarian Exceptions: A Turning Point in UN Sanctions", Chatham House, December 2022, available at: www.chathamhouse.org/2022/12/humanitarian-exceptions-turning-point-un-sanctions.

210 Anne-Marie Slaughter, *The Chessboard and the Web: Strategies of Connection in a Networked World*, Yale University Press, New Haven, CT, 2017.

211 K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 324; M. Duffield, above note 114, pp. 153, 156.

212 John Naughton, "The Evolution of the Internet: From Military Experiment to General Purpose Technology", *Journal of Cyber Policy*, Vol. 1, No. 1, 2016, available at: www.tandfonline.com/doi/full/10.1080/23738871.2016.1157619.

213 ARPA has since been renamed the Defense Advanced Research Projects Agency (DARPA). See the DARPA website, available at: www.darpa.mil/.

214 Rashida Beal, "Complete History of Drones: From 1849 to 2023", *DroneSourced*, 3 September 2023, available at: https://dronesourced.com/guides/history-of-drones/.

215 Oppy Graham and David Dowe, "The Turing Test", in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy Archive*, Winter 2021 Edition, 2021, available at: https://plato.stanford.edu/archives/win2021/entries/turing-test/.

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managing border security and migration flows.[216] In short, if many digital technologies are "dual-use" (i.e., both military and civilian) in nature, it is important to remember that they were often initially created and designed for military and security purposes, and that they are increasingly central to States' agendas and strategies in these domains. When humanitarian actors choose to use the same technologies or tools as political and military actors, they should take into account that affected people and parties to conflict may perceive such a decision as an affiliation by association with those actors – even though in practice, they often have no choice considering the ubiquity of those technologies or brands and the absence of any truly adequate alternative choices.

Over the years – and despite significant increases in States' defense budgets across the world[217] – the R&D capacities of States have often been outpaced by those of tech companies, which have thus become critical strategic partners in the innovation race. These relationships have grown closer – and more blurred. In China, Russia, the United States, Europe and elsewhere, States have always been important investors for tech companies, but the digital transformation has brought their symbiotic relationship to a new level.[218] Tech companies' investment and governance structures are evolving accordingly, causing some to describe the traditional distinction between the public and private sectors in the tech domain as a "myth".[219] The "revolving door" between tech companies and governments, which are alternatively managed or advised by the same individuals, illustrates the growing difficulty – including for humanitarian actors in search of neutrality and independence – of distinguishing between political and commercial actors and delineating their respective agendas.[220]

This blurring of the lines is also reflected in tech companies' growing influence in conflict and humanitarian settings.[221] From supplying connectivity to the deployment of digital means of warfare,[222] to providing technical advice and support for cyber defence,[223] to complying with government requests for data or

216 Russell Brandom, "Most US Government Agencies Are Using Facial Recognition", *The Verge*, 25 August 201, available at: www.theverge.com/2021/8/25/22641216/facial-recognition-gao-report-agency-dhs-cbp-fbi.

217 SIPRI, "World Military Expenditure Passes $2 Trillion for First Time", news release, 25 April 202, available at: www.sipri.org/media/press-release/2022/world-military-expenditure-passes-2-trillion-first-time.

218 Mariana Mazzucato, *The Entrepreneurial State*, Anthem Press, London, 2013.

219 *Ibid.*

220 Tech Transparency Project, "Google's US Revolving Door", 26 April 2016, available at: www.techtransparencyproject.org/articles/googles-revolving-door-us; Jamie Doward, "Google: New Concerns Raised about Political Influence by Senior 'Revolving Door' Jobs", *The Guardian*, 4 June 2016, available at: www.theguardian.com/technology/2016/jun/04/google-influence-hiring-government-officials.

221 Kubo Mačák and Mauro Vignati, "Civilianization of Digital Operations: A Risky Trend", *Lawfare*, 5 April 2023, available at: www.lawfaremedia.org/article/civilianization-digital-operations-risky-trend. See also, generally, Access Now, above note 20.

222 Kurt Vinion, "How Elon Musk's Starlink Became Invaluable to Ukraine's War Effort", *Radio Free Europe/Radio Liberty*, 20 October 2022, available at: www.rferl.org/a/starlink-elon-musk-ukraine-war-russia-funding/32091045.html; Access Now, above note 20, pp. 23–25.

223 Brad Smith, "Defending Ukraine: Early Lessons from the Cyber War", *Microsoft Blog*, 22 June 2022, available at: https://blogs.microsoft.com/on-the-issues/2022/06/22/defending-ukraine-early-lessons-from-the-cyber-war/.

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"takedowns" of information content on their platforms,[224] tech companies increasingly find themselves in the middle of the battlefield.[225] Sometimes this is largely involuntary and due to the dependencies attached to commercial partnerships with States, or to ownership of digital infrastructures.[226] In other situations this alignment is triggered by a strategic decision to support parties to a conflict,[227] in line with the tech company's interests or values.[228] In recent years, tech companies have proactively invested in their capacity to influence the global political agenda, including its security dimensions.[229] Tech companies' founders and CEOs – and a growing number of lobbyists working on their behalf in places of power[230] – are leveraging the space left by the erosion of traditional multilateralism in order to advance their own agendas,[231] and are becoming increasingly political actors from which humanitarian organizations should maintain as much independence as possible.

Tech companies' objectives are multiple and diverse, sometimes overlapping with and sometimes diverging from States' – and humanitarian – objectives. This complexifies the traditional independence principle. In some cases, tech companies' objectives (which have included moving people to Mars[232] or acquiring guns and a safe refuge in case AI drives humanity to its extinction[233]) can overlap, or create tensions, with humanitarian objectives. For instance, the "effective altruism"[234] or "long-termism"[235] allegedly driving the use of digital technologies for social good[236]

224 Thomas Brewster, "Israel Has Asked Meta and TikTok to Remove 8,000 Posts Related to Hamas War", *Forbes*, 14 November 2023, available at: www.forbes.com/sites/thomasbrewster/2023/11/13/meta-and-tiktok-told-to-remove-8000-pro-hamas-posts-by-israel/.

225 Jonathan Horowitz, "When Might Digital Tech Companies Become Targetable in War?", *Tech Policy Press*, 13 October 2023, available at: www.techpolicy.press/when-might-digital-tech-companies-become-targetable-in-war/.

226 James Ball, *The System: Who Owns the Internet, and How It Owns Us*, Bloomsbury, London, 2020, pp. 39–59.

227 David E. Sanger, Julian E. Barnes and Kate Conger, "As Tanks Rolled Into Ukraine, So Did Malware. Then Microsoft Entered the War", *New York Times*, 28 February 2022, available at: www.nytimes.com/2022/02/28/us/politics/ukraine-russia-microsoft.html; Brad Smith, "Extending Our Vital Technology Support for Ukraine", *Microsoft Blog*, 3 November 2022, available at: https://blogs.microsoft.com/on-the-issues/2022/11/03/our-tech-support-ukraine/.

228 Access Now, above note 20, pp. 2–3.

229 Mung Chiang, "The Era of 'Tech Diplomacy' Is Here", *Forbes*, 7 July 2021, available at: www.forbes.com/sites/mungchiang/2021/07/07/the-era-of-tech-diplomacy-is-here/.

230 Emily Birnbaum, "Tech Spent Big on Lobbying Last Year", *Politico*, 24 January 2022, available at: www.politico.com/newsletters/morning-tech/2022/01/24/tech-spent-big-on-lobbying-last-year-00001144.

231 M. Madianou, above note 19, p. 5.

232 Andrew Coates, "Elon Musk Releases Details of Plan to Colonise Mars – Here's What a Planetary Expert Thinks", *The Conversation*, 21 June 2017, available at: https://theconversation.com/elon-musk-releases-details-of-plan-to-colonise-mars-heres-what-a-planetary-expert-thinks-79733.

233 Tad Friend, "Sam Altman's Manifest Destiny", *The New Yorker*, 3 October 2016, available at: www.newyorker.com/magazine/2016/10/10/sam-altmans-manifest-destiny.

234 Rebecca Ackerman, "Inside Effective Altruism, Where the Far Future Counts a Lot More than the Present", *MIT Technology Review*, 17 October 2022, available at: https://www.technologyreview.com/2022/10/17/1060967/effective-altruism-growth/.

235 John Naughton, "Longtermism: How Good Intentions and the Rich Created a Dangerous Creed", *The Guardian*, 4 December 2022, available at: www.theguardian.com/technology/commentisfree/2022/dec/04/longtermism-rich-effective-altruism-tech-dangerous.

236 K. B. Sandvik, above note 36, p. 14.

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seem generally aligned with humanitarian ambitions, but in practice, the methodologies employed in such projects raise significant questions about their short-term impact and the negative consequences they are already having.[237] Some of these projects, involving the collection of iris scans from populations with limited income in exchange for digital identities and currencies,[238] have raised data protection alarms[239] and concerns regarding data extractivism.[240] The humanitarian marketing veil used to promote these private sector initiatives feeds "hybridization" concerns[241] because such projects can create a dangerous confusion with purely humanitarian endeavours, in particular when they are carried out through partnerships with the tech companies behind the systems involved.[242]

The evolution of tech companies' political posture and ambitions changes their identity and perception, and this impacts their relationships with humanitarian organizations, with potentially negative consequences for the perception of the latter's neutrality and independence from associated political and strategic objectives. Tech companies' dominance over the digital transformation amplifies the asymmetries of power that characterize their partnerships. It also increases the risks of "aidwashing", through practices that "involve the use of corporate social responsibility initiatives and … partnership with aid actors to burnish surveillance firms' reputations and distract the public from corporate misbehaviour, ethical misdeeds, and dubious data practices".[243] The problem of "dual loyalty" that can deflect humanitarians' "primary loyalty to … those affected by crises" towards the third-party digital service providers on which they rely has "real implications for the rights and needs of affected people".[244] While the trade-offs attached to these partnerships can be positive in terms of efficiency and scale, they can also negatively impact the perception of humanitarians' independence and the attendant trust of the populations they serve.[245]

While humanitarian organizations battle to reconcile their history with renewed and legitimate questions about colonialism,[246] their contribution to the expansion of the digital transformation of fragile countries is fuelling concerns

237 Timnit Gebru, "Effective Altruism Is Pushing a Dangerous Brand of 'AI Safety'", *Wired*, 30 November 2022, available at: www.wired.com/story/effective-altruism-artificial-intelligence-sam-bankman-fried/.

238 Eileeen Guo and Adi Reinaldi, "Deception, Exploited Workers, and Cash Handouts: How Worldcoin Recruited Its First Half a Million Test Users", *MIT Technology Review*, 6 April 2022, available at: www.technologyreview.com/2022/04/06/1048981/worldcoin-cryptocurrency-biometrics-web3/.

239 Dan Milmo, "Kenya Halts Worldcoin Data Collection over Privacy and Security Concerns", *The Guardian*, 3August 2023, available at: www.theguardian.com/technology/2023/aug/03/kenya-halts-worldcoin-data-collection-over-privacy-and-security-concerns.

240 E. Guo and A. Reinaldi, above note 238.

241 Access Now, above note 20, pp. 47–48.

242 *Ibid.*, pp. 2–3.

243 Aaron Martin, "Aidwashing Surveillance: Critiquing the Corporate Exploitation of Humanitarian Crises", *Surveillance and Society*, Vol. 21, No. 1, 2023, available at: https://ojs.library.queensu.ca/index.php/surveillance-and-society/article/download/16266/10615/40977.

244 N. Raymond and B. Card, above note 24.

245 I. Vonèche Cardia *et al.*, above note 27; R. Dette, above note 23, p. 22.

246 Saman Rejali, "Race, Equity, and Neo-Colonial Legacies: Identifying Paths Forward for Principled Humanitarian Action", *Humanitarian Law and Policy Blog*, 16 July 2020, available at: https://blogs.icrc.org/law-and-policy/2020/07/16/race-equity-neo-colonial-legacies-humanitarian/.

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about their independence.[247] The growing debates around the role of humanitarians in "techno-colonialism"[248] and "digital extractivism"[249] highlight the concerns that the historical intersections between colonialism and humanitarianism are repeating along the same routes and power asymmetries.[250] Instead of natural resources and workforce, "techno-colonialism" aims at extracting data from the "digital bodies"[251] of people and communities of the global South in order to fuel the "fiefdoms"[252] and data-hungry surveillance business models of multinational tech companies. While these concerns are debatable, they call for serious examination by humanitarian organizations that have placed "localization" high on their agendas[253] but are technologically moving away from it.[254]

Anecdotal examples of how digitalization is impacting the perception of humanitarian actors' neutrality and independence are multiplying. The example of the UN World Food Program (WFP) partnership with the data analytics firm Palantir[255] – a key partner of many security agencies across the world[256] – illustrated the growing concerns around "surveillance humanitarianism".[257] There is indeed a "significant but little understood" risk that these partnerships are used by the military and surveillance tech industry to gain access to strategic information, new markets and data streams,[258] notably through national security-based legislation enabling possible "backdoors" or data access requests.[259] In conflict settings, that risk has already been identified by authorities who allegedly stopped WFP's assistance programmes due to concerns about the further use of their biometrics registration data.[260]

Humanitarians are familiar with accusations of spying and partiality, which are common in polarized conflict settings. Regrettably, such accusations can become more difficult to reject when humanitarian actors rely on the same tech suppliers as

247 Access Now, above note 20, p. 2.
248 M. Madianou, above note 19; WEF, above note 131, p. 8.
249 K. B. Sandvik, above note 36.
250 M. Madianou, above note 19; K. B. Sandvik, K. L. Jacobsen and S. M. McDonald, above note 8, p. 326.
251 K. B. Sandvik, above note 36, pp. 20–37.
252 Yanis Varoufakis, *Technofeudalism: What Killed Capitalism*, Penguin Books, Leicester, 2023.
253 Sabina C. Robillard, Teddy Atim and Daniel Maxwell, *Localization: A "Landscape" Report*, Tuft University and USAID, December 2021, available at: https://fic.tufts.edu/publication-item/localization-a-landscape-report/.
254 Access Now, above note 20, p. 49.
255 Responsible Data *et al.*, "Open Letter to WFP re: Palantir Agreement", 8 February 2019, available at: https://responsibledata.io/2019/02/08/open-letter-to-wfp-re-palantir-agreement/; Access Now, above note 20, pp. 45–46.
256 M. Madianou, above note 19, p. 2.
257 M. Latonero, above note 18.
258 Glen Greenwald, "How the U.S. Spies on Medical Nonprofits and Health Defenses Worldwide", *The Intercept*, 10 August 2016, available at: https://theintercept.com/2016/08/10/how-the-u-s-spies-on-medical-nonprofits-and-health-defenses-worldwide/; K. B. Sandvik *et al.*, above note 14, p. 17.
259 Belkis Wille, "The Data of the Most Vulnerable People Is the Least Protected", Human Rights Watch, July 2023, available at: www.hrw.org/news/2023/07/11/data-most-vulnerable-people-least-protected.
260 Aziz El Yaakoubi and Lisa Barrington, "Yemen's Houthis and WFP Dispute Aid Control as Millions Starve", *Reuters*, 4 June 2019, available at: www.reuters.com/article/us-yemen-security-wfp-idUSKCN1T51YO/.

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conflict parties for data storage or connectivity.[261] This suspicion grows when they partner with tech companies engaged in military activities.[262] When tech partners proactively become involved in conflict-related issues, humanitarian organizations become *de facto* hostages of those relationships, impacting their independence and the perception of it.[263]

Digital dependencies and the "splinternet"

The growing dependencies[264] that come with the digitalization of humanitarian action also trigger certain operational challenges. First, dependency on proprietary hardware and software to run operations creates a "vendor lock-in effect" that decreases the ability to choose alternative tools or providers – for instance due to perception concerns – without substantial switching costs.[265] Digitalization comes with a "ratchet effect"[266] that makes it difficult to stop using digital tools once they are integrated into operational structures; for example, cloud data storage is now often required to support digital services platforms at scale. This is particularly true for digital solutions that have been put in place for exceptional circumstances (such as temporary lack of access due to insecurity or pandemics): they tend to stay when those circumstances disappear, often because the investments behind them have significant amortization costs. In practice, such solutions have also eroded the operational resilience of humanitarian organizations, which have often disinvested in analogue alternatives – everyone uses a smartphone to coordinate field activities, but many do not know how to use a VHF radio, which may be life-saving when connectivity is down. In a world where internet shutdowns and connectivity denials are on the rise,[267] humanitarians should not over-invest in digital technologies at the cost of the ability to operate in low- or no-connectivity settings.[268]

Another threat for operational independence is the fragmentation affecting the digital transformation backbone.[269] Once celebrated as a globalized level playing field, the internet has become a divided and contested space where States battle to

261 R. Dette, above note 23, p. 21; Access Now, above note 20, p. 31.
262 K. B. Sandvik *et al.*, above note 14, p. 238; Access Now, above note 20, pp. 31, 37.
263 Access Now, above note 20, p. 31.
264 R. Dette, above note 23, p. 21; WEF, "Digital Dependencies and Cyber Vulnerabilities", in *Global Risks Report 2022*, 11 January 2022, available at: www.weforum.org/publications/global-risks-report-2022/in-full/chapter-3-digital-dependencies-and-cyber-vulnerabilities/.
265 Access Now, above note 20, p. 37.
266 Xavier Freixas, Roger Guesnerie and Jean Tirole, "Planning under Incomplete Information and the Ratchet Effect", *Review of Economic Studies*, Vol. 52, No. 2, April 1985, pp. 173–191, available at: https://doi.org/10.2307/2297615; Christopher Coyne, Abigail Hall and Matthew Owens, *The Ratchet Effect*, GMU Working Paper in Economics No. 22-34, George Mason University, 13 June 2022, available at: http://dx.doi.org/10.2139/ssrn.4135816.
267 Zach Rosson, Felicia Anthonio and Carolyn Tackett, *Weapons of Control, Shields of Impunity: Internet Shutdowns in 2022*, Access Now, 28 February 2023, available at: www.accessnow.org/internet-shutdowns-2022/.
268 R. Dette, above note 23, p. 23.
269 WEF, above note 131, p. 8.

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assert their "digital sovereignty".[270] While States struggle to align at the international level, they advance their respective strategies through massive investment campaigns (such as the Chinese Digital Silk Road initiative),[271] protectionist measures (such as US import/export controls and sanctions)[272] or regulatory action (such as the extraterritorial "Brussels effect" of the European Union GDPR or Digital Services Act).[273]

The internet is turning into what some refer to as a "splinternet"[274] – i.e., a fragmenting digital and cyber space. This is making the internet increasingly difficult to navigate for humanitarians. One can imagine the practical challenges of running digital solutions in Africa, where the digital infrastructures are more likely to be Chinese, with technological tools often provided by US tech companies,[275] and data protection or sanction requirements from European donors. The absence of harmonized regulatory standards and interoperable technologies could become a real obstacle to the continuity and effectiveness of digital solutions.[276] To preserve the perception of their independence, it has become essential that humanitarian organizations anticipate these developments and prepare accordingly. An increasingly digital future requires them to upscale their ability to do so.

Charting the way forward: Towards principled digital humanitarianism

It is critical that humanitarians avoid the trap of tech dystopia and the fearmongering around it. The potential of new technologies to increase the effectiveness of humanitarian action is too significant to be missed. Excessive caution should not become an excuse to prevent the development of innovative humanitarian solutions that can make a positive difference in the lives of people affected by conflict, violence and disasters.[277]

270 Benjamin Cedric Larsen, "The Geopolitics of AI and the Rise of Digital Sovereignty", Brookings Institution, 8 January 2022, available at: www.brookings.edu/articles/the-geopolitics-of-ai-and-the-rise-of-digital-sovereignty/; Aaron Martin et al., "Digitisation and Sovereignty in Humanitarian Space: Technologies, Territories and Tensions", *Geopolitics*, Vol. 28, No. 3, 2023, available at: www.tandfonline.com/doi/full/10.1080/14650045.2022.2047468.

271 Charles Dunst, "'How China Is Winning the Battle for Digital Sovereignty': A Review", Council on Foreign Relations, 16 November 2022, available at: www.cfr.org/blog/how-china-winning-battle-digital-sovereignty-review.

272 Agathe Desmarais, "How the U.S.-Chinese Technology War Is Changing the World", *Foreign Policy*, 19 November 2022, available at: https://foreignpolicy.com/2022/11/19/demarais-backfire-sanctions-us-china-technology-war-semiconductors-export-controls-biden/.

273 Justin Hendrix, "Digital Empires: A Conversation with Anu Bradford", *Tech Policy Press*, 8 October 2023, available at: www.techpolicy.press/digital-empires-a-conversation-with-anu-bradford/.

274 Internet Society, "How to Protect the Internet from Becoming the Splinternet", 12 May 2022, available at: www.internetsociety.org/resources/doc/2022/how-to-protect-the-internet-from-becoming-the-splinternet/.

275 Access Now, above note 20, pp. 49–50.

276 WEF, above note 131, p. 8.

277 M. Latonero and Z. Gold, above note 13, p. 6.

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It is however also fundamental that humanitarians resist the temptation to jump onto the techno-solutionist innovation hype train without fully understanding where it is going. The current naive[278] competition-driven approach to digital innovation is not adequate to manage the dilemmas that the digital transformation creates for principled humanitarian action.[279] The absence of a comprehensive conversation about the digital transformation of humanitarianism[280] – and the expanded responsibilities that should come with it[281] – has become a serious liability, with negative consequences for affected populations and principled humanitarian action.

Humanitarians must explicitly acknowledge the political dimension of the digital transformation and the risks of overly utilitarian approaches to it. They must better manage the fascination and confirmation biases that often characterize their relationship with digital technologies, and the partnerships that come with them. The humanitarian principles are a useful compass to guide a responsible approach centred on protecting affected people's rights and dignity, and on preserving the core elements of the humanitarian mantra that are so essential to the humanitarian mission. The principles are not justifications to shy away from digital risks, but a useful tool to mitigate them. They can become the common grammar that is missing to build constructive conversations between humanitarians and tech companies.[282] It has become urgent to better leverage the principles' potential and effectively integrate them into the decision-making processes that define digital humanitarian strategies and operations, from innovation and procurement to partnerships and programmatic responses.

More specifically, the principle of humanity can help maintain the human-centred, rights- and needs-based approach that defines the humanitarian methodology. A precautionary attitude to the digital transformation would help better sync humanitarian innovation with needs and crisis settings, and the ethical tempo that such settings require. Understanding the digital dimensions of "doing no harm" and the significant role of data protection and cyber security for human security[283] implies serious investment, including gradually turning digital literacy into a professional requirement for all humanitarians.[284]

Articulating the risks that data and AI-based solutions bring for impartiality is essential to ensure that human biases are not replaced by unmanageable algorithmic ones. Investing in human interactions and proximity, leveraging social sciences such as anthropology and sociology, can help preserve the essential ingredients of humanitarian action. Understanding that human intelligence (despite its flaws) is the most effective safeguard against the risks that

278 K. B. Sandvik and N. Raymond, above note 10, pp. 15–16.
279 Katja Lindskov Jacobsen, *The Politics of Humanitarian Technology: Good Intentions, Unintended Consequences and Insecurity*, Routledge, Abingdon, 2015.
280 K. B. Sandvik, above note 36, p. 6.
281 Access Now, above note 20, pp. 48, 58–61.
282 I. Vonèche Cardia *et al.*, above note 27; M. Latonero and Z. Gold, above note 13, p. 2.
283 K. B. Sandvik and N. Raymond, above note 10, p. 10.
284 WEF, above note 131, pp. 9, 12.

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AI creates is essential. Efforts to minimize data collection, operationalize data protection and security, and establish effective mechanisms to engage affected people on the relevance, use and risks of digital solutions will be required to break the current disconnect and hypocrisy around accountability towards affected people.

Maintaining neutrality and independence in an increasingly polarized and fragmented digital world demands a critical review of the humanitarian sector's current approach to digitalization. Ensuring smart, sustainable and impact-driven digital investments can help enhance protective outcomes, operational autonomy and resilience. Making the right technological choices[285] (including *not* using innovative technologies, when appropriate) – and being transparent about them – can help improve the perception of and trust in humanitarian neutrality and independence. This implies favouring relationships with non-profit academic and public actors driven by shared objectives, and exploring the relevance, potential and safety of free and open-source solutions.[286] It also implies exploring the possibility of developing autonomous R&D[287] for humanitarian technologies that better align, by design, with humanitarian objectives and requirements.

Humanitarians must explicitly acknowledge tech companies' growing political and conflict role. This implies going beyond supply and partnership relationships, and reconfiguring relationships to ensure the possibility of engaging with these companies in a dialogue that addresses their impact on conflict dynamics, the protection of people affected by conflict and violence, and principled humanitarian action. Developing humanitarian "tech-plomacy"[288] capabilities can help anticipate geopolitical transformations and create a space for diplomatic conversations that better integrate the need to define what humanitarian neutrality and independence should look like in the digital sphere.

Humanitarians can and should do more to address these issues. States, donors and tech companies must support their efforts and respect and protect their commitment to humanity, impartiality, neutrality and independence. Now is the time to act to ensure that the promises of the digital transformation deliver positive outcomes for populations affected by conflict and disasters.

285 *Ibid*.
286 R. Dette, above note 23, p. 22.
287 Massimo Marelli, "Opening an ICRC Delegation for Cyberspace", *EJIL: Talk!*, 9 February 2023, available at: www.ejiltalk.org/opening-an-icrc-delegation-for-cyberspace/; WEF, above note 131, p. 12.
288 Philippe Stoll, "The Brave New World of 'Tech-plomacy'", *Red Cross Red Crescent Magazine*, 24 July 2023, available at: www.rcrcmagazine.org/2023/07/podcast-the-brave-new-world-of-tech-plomacy/.

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