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Theorizing "Design Thinking" on Human Rights

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Carr Center
Discussion Paper

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Theorizing “Design Thinking” on Human Rights

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ABSTRACT

The exacerbation of racial inequality through the design of technologies remains an understated way in which the evolution of digital technologies impacts our human rights. As we continue to consider the impacts of modern technology on our human rights in areas such as privacy, freedom of expression, etc., we must also increasingly consider the interaction between digital technologies and forms of racial inequality. We continue to see how people of certain races are subjected to prejudicial consequences and outcomes of the design and deployment of digital technologies. This makes it relevant to examine a racial (in)equality perspective of advancing a "human rights by design" agenda for digital technologies. The conversations about racial inequality and digital technologies have also not specifically centered the discourse from a dependence perspective. This gave cause for the paper which links the development of digital technologies to thoughts about dependence through examining the racial inequality and discrimination discourse that has emerged because of the development and deployment of digital technologies. Perhaps racial inequality is also exacerbated by dependence on digital technologies developed in settings and cultures that give little recognition to the need to include all races in the design and deployment of digital technologies. Thoughts about the obligation of tech companies to imply key human rights standards such as non-discrimination and equality in the design stages of digital technologies further provides a background for the elaboration of the idea that "design thinking" can promote tech designing in a manner that incorporates safeguards against racial discrimination based on human rights standards.

> **“The Internet is indeed a technology of freedom—but it can free the powerful to oppress the uninformed, it may lead to the exclusion of the devalued by the conquerors of value. In this general sense, society has not changed much.**
>
> Manuel Castells
> *The Internet Galaxy: Reflections on the Internet, Business, and Society*

I. Introduction

By the late 1970s after the New International Economic Order (NIEO) gave rise to the corollary demand for a New World Information and Communication Order (NWICO),[1] the then developing nations called for a broad and democratic restructuring of global information opportunities and for cooperation by the developed nations, and even transnational corporations, to support information and communication institutions in the developing countries. The NWICO essentially called for, inter alia, a right to communicate, a right to receive information, and a right to greater access to scientific and technological information.[2] Carlsson points out that the demand for a new international information order was an outgrowth of developing countries' resentment of the imbalances in international information and technology flows, the monopoly positions of transnational communication corporations which were perceived as a threat to developing countries' national independence, and the inequitable distribution of communication resources in the world.[3] To date, the dynamics of technology distribution have remained unchanged with Western epistemologies still dominating and defining the narratives.

From the perspective of racial discrimination and inequality, two challenges are at stake. On the one hand the very common exacerbation of racial prejudice through predictive policing, facial recognition systems, and selective biometric management systems. However, a dimension that is hardly discussed is the systemic discrimination of certain races in the design phase of technologies. It is proper to examine whether emergent technologies are re-conceptualizing subjects such as intent, obligation, and liability in relation to racial inequality. Internationally agreed laws, policies, and strategies which may provide a conceptually clear direction for a standard framework for human rights considerations in the design of digital technologies are unavailable to provide firm clarity. There are hardly government and internationally coordinated oversight and control mechanisms concerning the design of digital technologies in relation to enhancing racial equality. This gives cause for questions such as:

1. Are the extant business and human rights norms and framework adequate to address the business complexities in relation to technology and human rights?;

2. In our approach to govern digital technologies, is it important that tech companies are mandated to imply key human rights standards such as non-discrimination, equality, and dignity in the design stages of digital technologies?; and

3. Can digital technologies, products, and services be designed in ways that incorporate safeguards against racial discrimination and inequality?

[1] The New World Information and Communication Order (NWICO) arguably grew out of the New International Economic Order (NIEO) of 1974. From 1976-1978 the New World Information and Communication Order was generally called the New World Information Order or the New International Information Order and the start of the discussion of the NWICO was associated with the United Nations Education, Scientific and Cultural Organization (UNESCO), starting from the early 1970s. Gerald Sussman and John Lent, “Critical Perspectives on Communication and Third World Development,” in *Transnational Communities. Wiring the Third World*, ed. Gerald Sussman and John Lent. (California: Sage Publications, 1991), 11.

[2] See UNESCO Resolution 4/19 adopted by the Twenty-First Session of the UNESCO General Conference Belgrade 1980, UNESCO Records of the General Conference 1980 vol. 1, 68-71.http://unesdoc.unesco.org/images/0011/001140/114029E.pdf.

[3] Ulla Carlsson, “From NWICO to Global Governance of the Information Society,” in *Media and Global Change: Rethinking Communication for Development*, ed. Oscar Hemer and Thomas Tufte (Buenos Aires: CLACSO, 2007), 197-203; Ulla Carlsson, “The Rise and Fall of NWICO – And Then? From a Vision of International Regulation to a Reality of Multilevel Governance,” *Nordicom Review* 24(2) (2003): 31-67.

The debate of "human rights by design" has continued to gain relevance in the governance of digital technologies. It is also important to discuss racial discrimination occasioned by the design and deployment of digital technologies and examine how digital technologies are implicated in reproducing, reinforcing, and compounding inequalities that are based on race and ethnicity.

II. The Ideology of Techno-Racism

The term "tecno-racism" is becoming a common expression following complaints of the inherent racial bias attributed to the deployment of digital technologies, especially in the law enforcement and justice sectors.[4] It has become an easily relatable race-akin terminology amongst proponents of racial justice to describe technology as an actor perpetuating racial discrimination in diverse forms, albeit, through encoding racism into digital technologies.[5] The nature of technology penetration has given rise to questions about the design process, for example, whether such technologies are tested amongst people of every racial group or even communities of color before they are made available to end users.[6]

The United Nations Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance's report on "Racial Discrimination and Emerging Digital Technologies: A Human Rights Analysis"[7] provided an initial elaboration of racial discrimination in the design and use of digital technologies, including its structural and institutional dimensions. The report analyzed the human rights obligations of relevant stakeholders in affirming that international human rights principles of racial equality and non-discrimination are also applicable to digital technologies and, as such, will certainly extend to the duties and obligations of human rights actors in such spheres. This is specific in elaborating that racial inequality is certainly implicit in the development of digital technologies and can be addressed.

It has overly been expressed that techno-racism has taken two dimensions: direct and indirect racial prejudice. On the one hand, racial prejudice can be premeditated by an intent to be racially discriminative through the design process of digital technologies, whether by basically enabling technologies to enhance and promote racial injustice or by intently excluding people of certain color or ethnicity in the design process. On the other hand, racial prejudice may be merely resultant from unintended consequences. Research sometimes attributes this to data contaminated by inherent biases skewed to empower certain demographics while inadvertently disempowering other demographics, thereby producing problematic results such as discrimination, profiling, bias, and even exclusion.[8] This does not mean that there will never be an overlap of both dimensions.

The first aspect directly violates the human rights of non-discrimination and racial equality, while the second aspect, which is racial prejudice stemming from marginalisation, may indirectly violate the human rights of non-discrimination and racial equality but also directly violate other human rights, such as the right to development[9] or to right right to participate, enjoy, and share in scientific advancement and its benefits.[10] Indeed, digital technologies are often developed with intentions that are genuine to solve real-world problems. However, the pervasive evidence of the consequences of the

[4] Tom Perkins, "'It's Techno-Racism': Detroit Is Quietly Using Facial Recognition to Make Arrests," The Guardian, Aug. 17, 2019, https://www.theguardian.com/us-news/2019/aug/16/its-techno-racism-detroit-is-quietly-using-facial-recognition-to-make-arrests.

[5] Will Douglas Heaven, "Predictive Policing Algorithms Are Racist. They Need to Be Dismantled," *MIT Technology Review*, July 17, 2020, https://www.technologyreview.com/2020/07/17/1005396/predictive-policing-algorithms-racist-dismantled-machine-learning-bias-criminal-justice/.

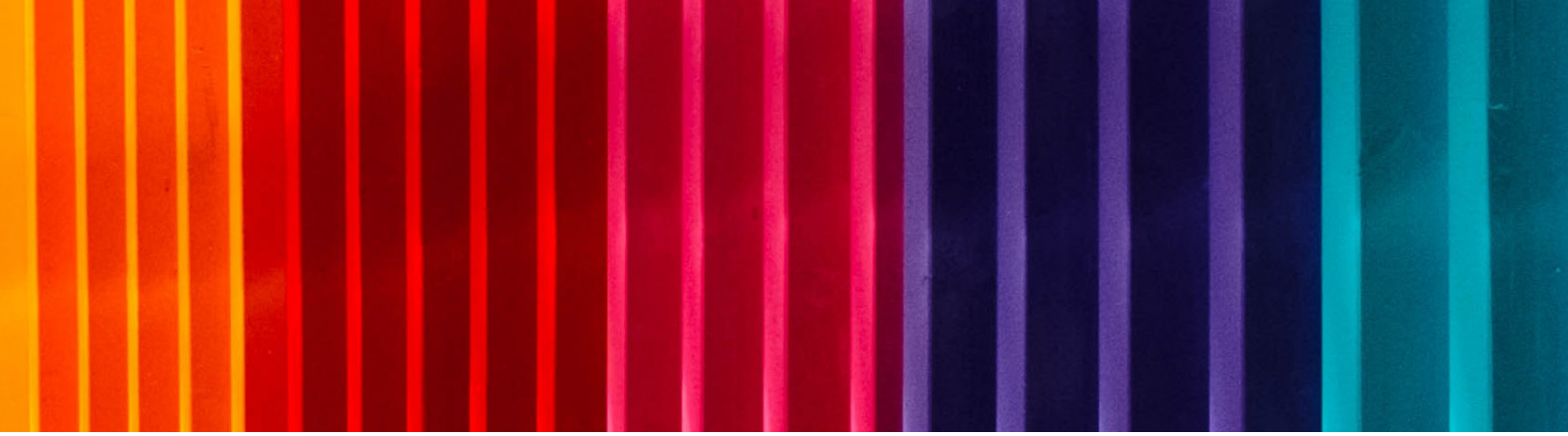
[6] Perkins, "It's Techno-Racism."

[7] E. Tendayi Achiume, , "Racial Discrimination and Emerging Digital Technologies: A Human Rights Analysis: Report of the Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance," *United Nations General Assembly*, June 18, 2020, https://documents-dds-ny.un.org/doc/UNDOC/GEN/G20/151/06/PDF/G2015106.pdf?OpenElement.

[8] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs-Hachette Book Group, 2019); David Leslie, "Understanding Bias in Facial Recognition Technologies: An Explainer," *The Alan Turing Institute* (2020): 1-50, https://www.turing.ac.uk/sites/default/files/2020-10/understanding_bias_in_facial_recognition_technology.pdf; Alex Najibi, "Racial Discrimination in Face Recognition Technology," *Harvard University*, October 24, 2020, https://sitn.hms.harvard.edu/flash/2020/racial-discrimination-in-face-recognition-technology/; United Nations "Bias, Racism and Lies: Facing Up to the Unwanted Consequences of AI," *UN News*, December 30, 2020, https://news.un.org/en/story/2020/12/1080192.

[9] United Nations General Assembly, Declaration on the Right to Development, UNGA Res 41/128 (1986).

[10] United Nations General Assembly, Universal Declaration of Human Rights, Article 27, GA RES/217/A/III (1948).



development, design, and use of digital technologies to racial equality[11] would mean that the development and design of digital technologies should address the reality that these tools may facilitate prejudice, discrimination, and other human rights abuses against racial or ethnic groups.

In many ways, the second explanation may *prima facie* seem more likely to occur, but a theoretical interpretation of the notion of design-thinking may mean otherwise and imply that resultant racial discrimination in the deployment of digital technologies may be premeditated in all instances, especially where digital dependence is the basis of such analysis. Global inequalities expand inequalities in other aspects as society evolves. Inherent human biases will always sprout in the lived experiences of people, whether for gender, race, religion, or sexual orientation. As a result, we move from seeing cases of governments and law enforcement officers intentionally imposing digital measures targeted at people of certain racial groups,[12] to tech companies pursuing corporate interests with a general lack of respect and consideration for some racial groups, as well as to situations where digital technologies inherently support racism, such as by providing platforms for online racial hatred or xenophobia.

There are a further two dimensions to this conversation. The first is "in-country" racial discrimination, which is often experienced by people of other races in particular countries, e.g. in America, where there have been discussions of how people of certain races or ethnicities are treated as inferior with respect to digital technologies, such as through the use of surveillance methods, AI-powered tools that segregate people, and data gathering tools on persons of particular racial groups, in the same country.[13] A conclusion in the study of the National Institute of Standards and Technology (NIST) notes that "…many facial recognition algorithms falsely identified African-American and Asian faces 10 to 100 times more often than Caucasian faces."[14] Based on the study, "African-American females are more likely to be misidentified in "one-to-many" matching, which can be used for identification of a person of interest in a criminal investigation."[15]

The second dimension stems from the reality of exclusion and marginalization of people of some races in parts of the world. This is further an issue as certain races are not originators of the helmsmen tech companies, even if those tech companies have operations in the geographical regions of such races or ethnicities. This also implies a continuous Global North technology design supremacy agenda with states in the Global South forced into a dependence relationship where they contend with private tech companies and their governments.

In Castells's words, the differentiation between the information communication technology (ICT)-haves and have-nots "adds a fundamental cleavage to existing sources of inequality and social exclusion in a complex interaction that appears to increase the gap between the promise of the information age and its bleak reality for many people around the world."[16] According to Castells, the digital age is not blind to human col-

[11] Olivera Marjanovic, Dubravka Cecez-Kecmanovic, and Richard Vidgen, "Theorising Algorithmic Justice," *European Journal of Information Systems* 36, no. 4 (2021): 391-408.

[12] Didier Bigo, Engin Isin, and Evelyn Ruppert, eds, *Data Politics: Worlds, Subjects, Rights* (London, Routledge: 2019).

[13] Salvatore T. March, "Alexa, Are You Watching Me? A Response to Clarke, 'Risks Inherent in The Digital Surveillance Economy: A Research Agenda,'" *Journal of Information Technology* 34, no. 1 (2009): 87-92, https://doi.org/10.1177/0268396218815561.

[14] Jan Wolfe and Jeffery Dastin, "U.S. Government Study Finds Racial Bias in Facial Recognition Systems," VentureBeat, Dec. 20, 2019, https://venturebeat.com/business/u-s-government-study-finds-racial-bias-in-facial-recognition-systems/.

[15] Wolfe and Dastin, "US Government Study."

[16] Manuel Castells, *The Internet Galaxy: Reflections on the Internet, Business, and Society* (Oxford University Press, 2001), 247.

or and affects people racially.[17] Tapscott agreed that the most widely feared prediction surrounding the digital revolution is that it will splinter society into racial spheres, holding the promise of improving the lives of citizens but also the threat of further dividing us.[18] It is clear why the lauding of the potential of digital technologies as a means of liberation always comes hand-in-hand with the denunciation of its impacts.

The global permeation of digital technologies further forces a consideration of whether racial inequality now also stems from the need to participate and be included in the digital revolution, and whether people of certain races become dependent on cultures in which they have little chance of finding their own path or cultural identity in, because identity has been pre-determined by the owners and designers of such technologies.[19] In other words, is tech dependence another reason for racial inequality and prejudice occasioned by the deployment of digital technologies? Whatever the answer, there is a need to consider that many technologies are not built in the Global South, especially in places like Africa, which may imply that the idea behind the design mechanism for digital technologies are laced with mainly Western interests, and as such, bears important relevance in the discourse of technology and racial inequality.

III. Dependence and Agency in Tech Development

The idea that technological artefact is not neutral, but inherently political and has important societal implications, insofar as it might support certain political structures or facilitate certain actions and behaviours over others, is not new.[20] What is new is how the nuances of obligation and responsibility are developing in that sphere. Paré suggests that it is important to recognize that the impacts of digital technologies are not at all revolutionary but incremental, and closely tied to broader social, cultural, political, and economic factors.[21] The UN Security Council's analysis at their first debate on emerging technologies further reinstates the fact that digital inequalities mean that in reality, there a few countries which are actually setting the digital agenda for the rest of the world.[22]

> "Digital inequalities mean that in reality, there are a few countries which are actually setting the digital agenda for the rest of the world."

According to Buchanan, although the NWICO movement died in the 1990's, lack of inclusion and marginalisation still prevent many from participating in "the new order."[23] Digital technologies are not infallible. This fallibility can lead to discrimination, oppression, systemic marginalisation, and creating new inequalities and amplifying old ones. Undeniably, real-world biases percolate into the design of digital technologies and there is a tendency for racial discrimination because of the prejudice, politics, unquestioned assumptions, and subjective theories which may be implicated in the design of these technologies.[24] Crawford and Paglen acknowledge this in stating unequivocally that some of "these unquestioned assumptions account for how AI systems work…"[25]

[17] Castells, *Internet Galaxy*, 247.

[18] Don Tapscott, Growing Up Digital. *The Rise of the Net Generation* (New York: McGraw Hill, 1998), 255.

[19] Castells, *Internet Galaxy*, 254.

[20] As far back as 1980, through his theory of "technological politics," Winner had proposed technology as a political actor capable of embodying political ideas such as authority and power. Langdon Winner, "Do Artifacts Have Politics?" *Daedalus* 109, no. 1 (1980): 121–36, http://www.jstor.org/stable/20024652.

[21] Daniel Paré, "The Digital Divide: Why the 'The' Is Misleading," in *Human Rights in the Digital Age,* ed. Mathias Klang and Andrew Murray (London: Cavendish Publishing, 2005), 85.

[22] Megan M. Roberts, "The UN Security Council Tackles Emerging Technologies," *Council on Foreign Relations*, May 28, 2021, https://www.cfr.org/blog/un-security-council-tackles-emerging-technologies.

[23] Carrie Buchanan, "Revisiting the UNESCO Debate on a New World Information and Communication Order: Has the NWICO Been Achieved by Other Means?," *Telematics and Informatics* 32, no. 2 (2015): 391-399, https://doi.org/10.1016/j.tele.2014.05.007.

[24] Kate Crawford and Trevor Paglen, "Excavating AI: The Politics of Images in Machine Learning Training Sets," *AI & Society* 36 (2021): 1105-1116, https://doi.org/10.1007/s00146-021-01162-8.

[25] Crawford and Paglen, "Excavating AI."

The penetration of digital technologies has changed societal divides in unexpected ways. There have always been social divisions in the world in terms of certain races and other races, the rich and the poor, the free and the controlled. This discussion has equivalence on national and international levels. Presently, large parts of Africa, Asia, and South America still have not emerged properly into the digital revolution. Yet, a general part of the Global North have moved on in undergoing the digital revolution, leaving parts of the Global South behind.[26] These divisions and marginalization further extend to political power, economic value, and the social and cultural realities needed for active participation in a world continuously defined by digital technologies.[27]

"Technology capabilities for most of the Global South are largely driven by powerful foreign tech companies. The powerful nature of many of these companies has meant that the deployment of digital technologies in these regions happens with minimal wider discussion on whether such technologies take into account racial interests."

One of the significant challenges with technology and racial inequality is the dominance of Northern epistemologies in the politics of the development of digital technologies. The continued impact of resource constraints and reality of the history of colonial exploitation for parts of the Global South must be acknowledged. Supremacy in global policymaking for the governance of digital technologies is also important for analysing human agency in the role that digital technologies continue to play in exacerbating racial inequality by overlooking the need to center geographical, domestic, and cultural realities in such policies.[28] Moreover, technology capabilities for most of the Global South are largely driven by powerful foreign tech companies. The powerful nature of many of these companies has meant that the deployment of digital technologies in these regions happens with minimal wider discussion on whether such technologies take into account racial interests.

Debates about ownership and shareholder structures, are equally important in the thinking of how governments in these regions may lack the ability or power to exercise any oversight in the designing and deployment of digital technologies in their territories. The need to consider material interests must be underscored. The fact that many technologies are not built locally in many Global South countries often means that they are laden with Global North interests and the ripple effect also means that people who are in the Global North but racially originate from the vast ethnic populations in the Global South will also experience such marginalisation even when living in parts of the Global North.

The reiteration here is that technology is not neutral and bears vital relevance to the role that human agency may realistically be assumed to play in the design process of digital technologies. Racial discrimination is increasingly the status quo, and so it is important to map the way forward for overcoming inequality in the context of digital technologies through the lens of human agency.

The unequal pace of the development of digital technologies between the Global North and the Global South, where the countries in the former region are both the producers and beneficiaries of digital technologies, will continue to increase inequalities and thus necessitates attention.[29] Pricing and monopolistic markets, and the dominant economic challenges in many countries in the Global South continues to mean that certain races are hindered from determining their tech future in racially equal terms. Chadwick explained that countries with high penetration of digital technologies are likely to

[26] Kyle S. Herman, "Green Growth and Innovation in the Global South: A Systematic Literature Review," *Innovation and Development* 13, no. 1 (2023): 43-69, https://doi.org/10.1080/2157930X.2021.1909821.

[27] Christian Fuchs, *Internet and Society. Social Theory in the Information Age* (New York: Routledge, 2008), 216.

[28] Olumide Abimbola, Faten Aggad, and Bhaso Ndzendze, "What is Africa's Digital Agenda?," *Africa Policy and Research Institute,* Sept. 23, 2021, https://afripoli.org/what-is-africas-digital-agenda.

[29] Nnenna Ifeanyi-Ajufo, "Human Rights and Access to Information and Communications Technology," *International Journal of Advanced Legal Studies and Governance* 4, no. 2 (2013): 47-64.

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> Carr Center Technology & Human Rights Fellow

be wealthy and economically advantaged, which will continue to impact tech dominance and higher participation.[30] The dynamics of development also make it a challenge for people of racial groups in the Global South to leapfrog and begin tech development on equal basis like the Global North. For regions like Africa, access to and diffusion of digital technologies is also hampered by lack of access to other amenities, such as reliable availability and sources of electricity.[31] Costanza-Chock alludes to the reality of dependence and the powerlessness of some communities to determine a digital agenda for themselves in noting explicitly that, after all, "everyone designs, but only certain kinds of design work are acknowledged, valorized, remunerated, and credited."[32] In that sense, certain races may remain powerless in forging a distinctive tech future.

Tamale peculiarly draws attention to the growing digital "scramble for Africa" in the guise of solving African problems but through digital colonialism initiatives by tech companies solely aimed at appropriating benefits and profit in the emergent digital era.[33] Tamale explains that tech companies are reinventing capitalism in Africa, and drawing from her analysis, if the design of digital technologies is not decolonized, then places like Africa in the Global South will continue to remain unequal in the politics of tech development and deployment. In general, the design process must question the motives of design based on the "who, why, and where" of the design process towards ensuring that the design process is not about merely promoting the benefits of digitalisation for only certain peoples while suppressing benefits for others.

IV. Theorising Design Thinking in a Human Rights Context

The theory of design thinking alludes to the creative process through which designers create the values that embed the design of products.[34] Tjendra's analysis of the origins of design thinking argues that the concept was created because of the desire of big corporations for creativity in the creation of new products and services that are desired to "meet the unmet needs of their customers."[35] He argues that previously, the majority of corporations operated solely with analytical thinking which meant that they were constantly being disrupted by changing trends and consumer values, thereby rendering their business obsolete in the absence of design thinking.[36] Based on the growing acceptance of the notion that design thinking brings positive results and makes creativity logical and responsible, it has gained acknowledgement as an imperative for enhancing human-centered innovations through five stages of design process.[37]

Design, in itself, is nothing new but the concept of design thinking is a relatively new concept which is further propagated because of the emergence and advancement of digital technologies, and the desire of businesses to focus more on people rather than the technologies in the design process.[38] Therefore, it has been argued that humans are at the center of design thinking and that a people-centered approach to design thinking results in remarkable and beneficial products, services, and processes. Dam proposes that the underlying theory in design thinking is that it is user/human-centered,

[30] Andrew Chadwick, *Internet Politics: States, Citizens, and New Communication Technologies* (Oxford: Oxford University Press, 2006), 65.

[31] Nnenna Ifeanyi-Ajufo, "Cyber Governance in Africa: At the Crossroads of Politics, Sovereignty and Cooperation," *Policy Design and Practice* 6, no. 2 (2023): 146-159, https://doi.org/10.1080/25741292.2023.2199960.

[32] Sasha Costanza-Chock, *Design Justice: Community-Led Practices to Build the Worlds We Need* (Cambridge: MIT Press, 2020), 14.

[33] Sylvia Tamale, *Decolonisation and Afro-Feminism* (Ottawa: Daraja Press, 2020), 385.

[34] Tim Brown, *Change by Design, Revised and Updated: How Design Thinking Transforms Organizations and Inspires Innovation* (HarperCollins Publishers, 2019).

[35] Jeffrey Tjendra, "The Origins of Design Thinking," *Wired*, accessed May 8, 2023, https://www.wired.com/insights/2014/04/origins-design-thinking/.

[36] Tjendra, "Origins of Design Thinking."

[37] Rikke Friis Dam, "The 5 Stages in the Design Thinking Process," *Interaction Design Foundation*, accessed June 12, 2023, https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process.

[38] Mary Foster, "Design Thinking: A Creative Approach to Problem Solving," *Management Teaching Review*, 6, no. 2 (2021): 123–140, https://doi.org/10.1177/2379298119871468.

consequently begins with humans, and is inclusive.[39] Countries have also begun to focus on design thinking for development strategies[40] and public organisations are also adopting design thinking to enhance innovation and improve public services.[41]

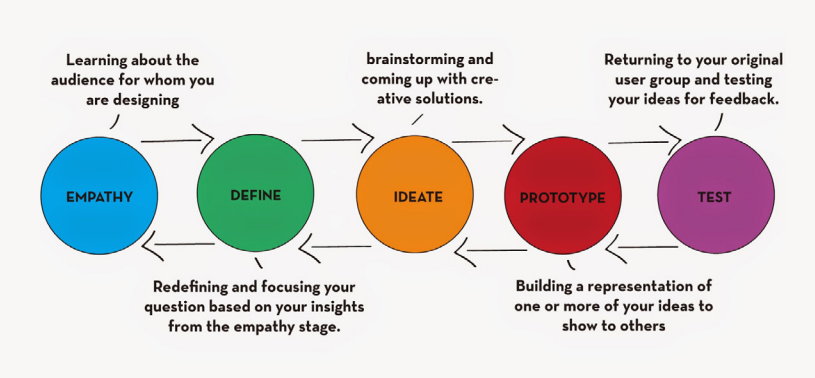

Image Credit: Thinking of Design [50]

According to Oreoluwa, design thinking implies tech companies put themselves in the shoes of users, and this can be done by tech companies simply empathizing with the expected users by putting themselves in a similar position or scenario a user is likely to face and reacting and responding how the end users would objectively do.[42] In the words of Brown, design thinking is "a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."[43]

Konrad's Design Thinking Guide 2023[44] posits that the design thinking process aims at achieving designed products that are "desirable, feasible and viable," which they also refer to as the "Three Lenses of Human-Centered Design."[45] Unfortunately, although design thinking may be couched in human and people centric terms, it is mostly used to increased sales and profit and may not necessarily imbibe human-centered values.[46] It is rather a concept that is focused on achieving competitive advantage and improving profitability.[47] That way, tech design results are primarily aimed at creativity and not rationality in whatever contexts they are to be deployed.[48]

The steps for design thinking have generally included empathy, defining the process based on insights from the empathy stage, deciding on approaches to applying creativity, developing a sample, and testing the product (see image below). The five-stage design thinking model was proposed by the Hasso Plattner Institute of Design at Stanford University and has been reinstated severally bty various writers and publications.[49]

If empathy is indeed the first rule, then it must directly link to the expected end users and be the source of the result at the

[39] Dam, "Stages of Design Thinking."

[40] Lateeka Sabharwal, "How Is Singapore Reshaping Using Design Thinking?," *Great Learning*, updated Oct. 31, 2022, https://www.mygreatlearning.com/blog/how-is-singapore-reshaping-using-design-thinking/.

[41] Geert Brinkman, et al., "Making Way for Design Thinking in the Public Sector: A Taxonomy of Strategies," *Policy Design and Practice* (2023), https://doi.org/10.1080/25741292.2023.2199958.

[42] Abisuga Oreoluwa, "What Is Design Thinking?," *Medium,* Feb. 19, 2021, https://medium.com/design-thinking-by-oreoluwa-abisuga/what-is-design-thinking-47d83bdeadaa.

[43] Tim Brown, "Design Thinking Defined," *IDEO*, accessed May 25, 2023, https://designthinking.ideo.com/.

[44] "Konrad Design Thinking Guide 2023: The Complete Design Thinking Process," *Konrad*, accessed 23 May, 2023, https://www.konrad.com/research/design-thinking-process.

[45] Is this solution desirable from a user perspective?; Is this solution viable from a financial perspective?; Is this solution feasible from a capabilities perspective?

[46] "Using Design Thinking to Increase Sales," *Essemy*, accessed May 9, 2023, https://essemy.com.au/design-thinking-to-increase-sales/.

[47] Modicum, "Design Thinking: Your Next Competitive Advantage," *Forbes*, June 17, 2017, https://www.forbes.com/sites/propointgraphics/2017/06/17/design-thinking-your-next-competitive-advantage/?sh=42b2570830b4.

[48] Jenny M. Lewis, Michael McGann, and Emma Blomkamp, "When Design Meets Power: Design Thinking, Public Sector Innovation and the Politics of Policymaking." *Policy & Politics* 48, no. 1 (2020): 111–130, https://doi.org/10.1332/030557319X15579230420081.

[49] "Shape the Future with Design Thinking," *Hasso Plattner Institute School of Design Thinking*, accessed May 2, 2023, https://hpi.de/en/school-of-design-thinking/design-thinking.html

end of the design process. This implies a correlation between "empathy" and "test," which can be interpreted as "People = Result." This can thereby link empathy as well as the result to people by also centering all end users in the define, ideate, prototype, and test phases. Result will objectively be determined by what audience is considered in the empathy phase.

Key steps in the design thinking diagram explain that, at the beginning of the process, a key function of design thinking is to learn about the audience for whom you are designing and, importantly, at the end of the process, returning to your original user group and testing your ideas for feedback. These are pertinent considerations and the considerations in between the beginning and end of the design process are equally relevant. Are people of certain races ever considered during the empathy phase of design thinking? Does this also mean that in the defining, ideating, prototyping, and importantly, testing phases, people of certain races are generally not considered?

From an analogy of the design thinking concept, the following arguments are valid:

A. Design thinking purports to underscore humans as the basis of design consideration;

B. Demographics unarguably play an important role in the design of digital technologies;

C. The origin of most tech companies and markets will no doubt be prioritized, and so geo-politics is also important for tech corporations and not only for States;

D. Tech dependence can also account for how digital technologies exacerbate already existing inequalities and systemic racial prejudices and biases.

During the demand in the 1970s for the NIEO in May 1974, by a United Nations General Assembly Resolution, the Declaration on the Establishment of a New International Economic Order was adopted.[50] It is worthy of mention that the Declaration, as far back as then, noted that "[t]he benefits of technological progress are not shared equitably by all members of the international community."[51] The Declaration further mentioned that one of the principles on which the Declaration is founded is the necessity of "giving to the developing countries access to the achievements of modern science and technology, and promoting the transfer of technology and the creation of indigenous technology for the benefit of the developing countries in forms and in accordance with procedures which are suited to their economies."[52]

The challenges presented by digital dependence and racial inequality can be further related to the phenomenon of "sociology of absence" proposed by Mutung'u, which in the context of this discussion, could also be related to the exclusion of some racial groups in the design process of digital technologies.[53] The phenomenon relates to the continuous design of digital technologies in particular social settings and thereafter being transplanted and adopted in different social settings that were never considered at the point of designing, thereby creating new social problems in situations where they are ordinarily meant to solve problems.[54] Such phenomenon of exclusion results in the subjection of people of certain races to tech discrimination.[55]

It has also been posited that the principles of design thinking must be human centered, inclusive, holistic, experimental, and focus on betterment of people.[56] The problem with "human centered" technologies is reflected in the approach to voluntary mandates and independent due diligence approaches.[57] There is no clear definition to what "human centered" embodies. The only thinking that may give superior clarity to the concept of "human centered" is human rights. Human rights thrive when we ensure the respect and protection

[50] United Nations General Assembly, "Declaration on the Establishment of a New International Economic Order," A/RES/S-6/3201, Resolution Adopted by the General Assembly May 1, 1974.

[51] United Nations General Assembly, "Declaration on the Establishment of a New International Economic Order," Article 1.

[52] United Nations General Assembly, "Declaration on the Establishment of a New International Economic Order," Article 4(p).

[53] Grace Mutung'u, "The United Nations Guiding Principles on Business and Human Rights, Women and Digital ID in Kenya: A Decolonial Perspective," *Business and Human Rights Journal* 7, no. 1 (2022): 117–33, https://doi.org/10.1017/bhj.2021.60.

[54] Mutung'u, "The United Nations Guiding Principles on Business and Human Rights, Women and Digital ID in Kenya: A Decolonial Perspective."

[55] Mutung'u, "The United Nations Guiding Principles on Business and Human Rights, Women and Digital ID in Kenya: A Decolonial Perspective."

[56] "An Overview of Design Thinking," *ToughNickel*, Sept. 3, 2022, https://toughnickel.com/business/An-Overview-of-Design-Thinking.

[57] "What Is Human-Centered Technology – & Is it the Key to Our Post-Pandemic Happiness?," *Victoria University, Melbourne Australia*, accessed May 25, 2023, https://www.vu.edu.au/about-vu/news-events/study-space/what-is-human-centered-technology-is-it-the-key-to-our-post-pandemic-happiness.

of rights, and this comes from enshrining obligations. However, the protection of human rights has not necessarily been central to the efforts to ensure responsibility in the designing of digital technologies. This is another reason why it is important to acknowledge the broader power asymmetries and existing inequalities in societies in which digital technologies are deployed.

Costanza-Chock's book *Design Justice* emphasises the need to prioritize the marginalized in design processes and include all communities at the inception of the design process.[58] By faulting the reality that design approaches falsely universalize inclusion, rather than explicitly acknowledging and distinguishing the potential for exclusion and harm amongst communities, the book argues that such universalistic design approaches have created more problems for society through marginalization of some communities when tech designers pretend to erase differences with design approaches that attempt to universalize.[59] Design justice rethinks the design processes and agrees that design approaches must be people-centric and focused on those who will be directly impacted by the outcomes of the design process through collaborative approaches that particularly include people who are normally marginalized. This means to rather understate the benefits and gains of tech companies but prioritize marginalized communities.[60] It is only then that we can agree that the development of digital technologies is truly aimed at solving society's problems and empowering people.

"Design approaches must be people-centric and focused on those who will be directly impacted by the outcomes of the design process through collaborative approaches that particularly include people who are normally marginalized."

Design must be about inclusive thinking aimed at all groups, identities, and communities which will be impacted by the outcomes of any digital product or services. The 2019 Council of Europe Commissioner for Human Rights' recommendations contained in "Unboxing AI: 10 steps to protect Human Rights"[61] provide guidance to member states on the main principles that should be followed to prevent or mitigate the negative impacts of AI systems on human rights. The recommendations also highlight key areas which include: the need to conduct human rights impact assessments before the acquisition, development, and deployment of AI systems; the observance of human rights standards; transparency; meaningful public consultations; independent oversight; and effective remedies. Without necessarily enshrining a normative framework that dictates mandatory obligations, the above steps are very practical and can be embedded in the design thinking steps in a way that underscores human rights, and in a manner that key steps such as human rights impact assessments, public consultation, and transparency considers people from all racial backgrounds and regions.

In moving towards a more effective adoption of racial equality standards in the design and deployment of digital technologies, the starting point should be the human rights and non-discrimination framework therefore necessitating a human rights-based approach. Design thinking can be contextualized on human rights if it is truly about people. Because all people are involved, design thinking must therefore be approached through a holistic method that combines the expertise of designers with human rights thinking and by transferring patterns of thought and procedural models which imbibe equality, non-discrimination, and participation. The goal must be to better understand the context and needs of all peoples and societies who interact with digital technologies, and to create innovations based on this knowledge.[62]

V. Voluntary or Normative Racial Equality Mandates?

Whether obligations are mandatory or voluntary will be immaterial if the goal of human right protection is not achieved in the material situation or occasion. Clearly, at the time voluntary obligations for businesses were conceptualised, the ubiquitous nature of technologies was yet to be utterly elaborated. Human

[58] Costanza-Chock, *Design Justice*, 230.

[59] Costanza-Chock, *Design Justice*, 230.

[60] Costanza-Chock, *Design Justice*, 3, 6, 15.

[61] Commissioner for Human Rights, "Recommendation on Artificial Intelligence and Human Rights 'Unboxing Artificial Intelligence: 10 Steps to Protect Human Rights,'" *Council of Europe*, May 2019, https://rm.coe.int/unboxing-artificial-intelligence-10-steps-to-protect-human-rights-reco/1680946e64.

[62] Herman Tavani, *Ethics and Technology: Ethical Issues in an Age of Information and Communication Technology* (Hoboken, NJ: Wiley, 2007), 302.

rights generally enshrine non-static norms, which evolve in response to global developments and political reality.[63] According to Sen, what is primary, is that there is a threshold of relevance in the right that is being sought, as well as a possibility of influencing the achievement of such right.[64]

The nature of digital technologies calls for an advanced nature of obligation on all subjects involved, and this implies a consideration of moving from voluntary obligations to normative mandates. However, responses to such a proposition have ranged from the belief that it is rather preferable to develop and embed ethics and norms around decision-making, and emphasize accountability into organisational practice, because even if legislation is a solution, it may not necessarily be the best approach in relation to tech companies.[65]

As part of their human rights obligations, states must also ensure that human rights are protected in the realm of non-state actors.[66] International standards such as the United Nations Guiding Principles on Business and Human Rights (UNGPs)[67] and the Organisation for Economic Co-operation and Development's (OECD) Guidance on Due Diligence[68] have served as a basis for mandating due diligence and accountability for human rights in business conduct, albeit unarguably inadequate to garner accountability from tech companies in matters of technology and human rights.

Recent UN Resolutions have also sought to provide guidance on ensuring appropriate safeguards and human rights oversight on the conception, design, use, development, deployment, and impact assessments of digital technologies with respect to promoting human rights.[69] Further efforts have included requesting the Office of the High Commissioner to convene expert consultations to discuss the relationship between human rights and technical standard-setting processes for digital technologies, and the practical application of the Guiding Principles on Business and Human Rights to the activities of technology companies.[70]

Perhaps the United States's proposed Algorithmic Accountability Act,[71] which would require institutions to identify and mitigate the social, ethical, discriminatory, and legal risks that automated decision systems may result in, or contribute to for consumers, could provide clarity for moving towards a more normative obligatory approach. Similarly, the EU's Artificial Intelligence Act[72] is also aimed at promoting ethics and responsibility for automated decision systems.[73] While there is no mention of racial considerations, the Council of Europe's draft Convention on Artificial Intelligence (AI), Human Rights, Democracy, and the Rule of Law,[74] which will set out the first regional human rights standards on AI, may firmly establish human rights principles for the design and deployment of AI, and by extension, digital technologies

[63] Rhona Smith, *Textbook on International Human Rights* (Oxford: Oxford University Press, 2016), 346.

[64] Amartya Sen, *The Idea of Justice* (Cambridge: Harvard University Press, 2009), 367 (emphasis added).

[65] Faine Greenwood, "Data Colonialism, Surveillance Capitalism and Drones," in *Mapping Crisis: Participation, Datafication and Humanitarianism in the Age of Digital Mapping*, ed. Doug Specht (London: University of London Press, 2020), http://www.jstor.org/stable/j.ctv14rms6g.12.

[66] Antal Berkes, *International Human Rights Law Beyond State Territorial Control* (Cambridge: Cambridge University Press, 2021), 93.

[67] United Nations Office of the High Commissioner for Human Rights, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework," *United Nations*, June 16, 2011, https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf.

[68] Organisation for Economic Co-Operation and Development, "Due Diligence Guidance for Responsible Business Conduct," May 31, 2018, https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm.

[69] United Nations General Assembly, "New and Emerging Digital Technologies and Human Rights- Resolution," adopted by the Human Rights Council on 13 July 2021, https://documents-dds-ny.un.org/doc/UNDOC/LTD/G19/208/64/PDF/G1920864.pdf?OpenElement.

[70] United Nations General Assembly, "New and Emerging Digital Technologies."

[71] United Sates Algorithmic Accountability Act (2022); United States Algorithmic Accountability Act (2019).

[72] European Commission, "Proposal For a Regulation of The European Parliament and of The Council Laying Down Harmonised Rules On Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts," EUR-Lex, April 4, 2021, https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0001.02/DOC_1&format=PDF.

[73] Jakob Mökander, et al., "The US Algorithmic Accountability Act of 2022 vs. The EU Artificial Intelligence Act: What Can They Learn from Each Other?," *Minds and Machines* 32 (2022): 751–758. https://doi.org/10.1007/s11023-022-09612-y.

[74] Committee on Artificial Intelligence (CAI), "Revised Zero Draft: Convention on Artificial Intelligence, Human Rights, Democracy and The Rule of Law," *Council of Europe*, Jan. 6, 2023, https://rm.coe.int/cai-2023-01-revised-zero-draft-framework-convention-public/1680aa193f.

> “Design thinking can be contextualized on human rights if it is truly about people.... The goal must be to better understand the context and needs of all peoples and societies who interact with digital technologies.”

—

Nnenna Ifeanyi-Ajufo
Carr Center Technology & Human Rights Fellow

broadly. The Convention is proposed to contain fundamental principles of protection of human dignity and the respect for human rights, democracy, and the rule of law necessary for the development, design, and application of AI systems and follows a risk-based approach classifying AI systems into different categories.

There have been no comments or debates on whether the First Additional Protocol to the Convention on Cybercrime, concerning the criminalization of acts of a racist and xenophobic nature committed through computer systems (ETS No. 189), which is a binding Treaty,[75] could serve as basis for exploring liability of tech companies for racial discrimination caused through digital technologies. While the main objective of the Convention on Cybercrime is to establish a liability regime for cybercrimes, it imposes liability for individuals (natural persons) and corporations (corporate liability),[76] with an additional protocol that now extends the jurisdiction of the Convention to acts of racist nature committed through computer systems, there should also be questions of how to distribute liability for tech companies that provide and enable digital platforms that permeate racial discrimination and prejudice.

> **"There has been an overwhelming focus on how digital technologies are impacting the rights to privacy and freedom of opinion and expression. Very little is said of racial equality."**

A challenge in determining mandatory obligations for tech companies to apply racial equality standards in the design process based on inclusion and non-discrimination may arise from the categorization of such an obligation within the debates of the dichotomy between civil and political rights obligations and those of social and economic rights. Social and economic rights tend to speak more to matters of inclusion and participation and there are the arguments that such obligations are not immediate and are non-justiciable.[77] For example, the provision of Article 27 of the Universal Declaration of Human Rights,[78] which provides a right to inclusion and participation in scientific advancements and its benefits, will lean towards social and economic rights obligations. However, such an argument will still be immaterial because all rights are regarded as universal, indivisible, interdependent, and interrelated, thereby forming a harmonized and unified body of rights which must all be treated as equal and protected on an equal footing.[79]

It is a seeming degradation of the entire value for human rights that priority is given to some rights over others in examining how digital technologies are impacting our human rights. There has been an overwhelming focus on how digital technologies are impacting the rights to privacy and freedom of opinion and expression. Very little is said of racial equality. It is important to refrain from subjecting human rights to hierarchical protection as it concerns digital technologies. We must be careful not to approach the discourse of technology and human rights from a basis of a hierarchy of rights, with the thinking that some rights are more important, and their protection more urgent, than others in the digital age.

Another challenge will be the continuous assumption that the issue of racial discrimination in tech design processes is a matter of social injustice rather than a human rights violation. Racial equality and non-discrimination are founded on the international human rights framework, they are regarded as rights within the body of human rights, and are enforceable when violated. The ideal of achieving the protection and promotion of human rights in every context, including racial equality, can only be possible when conditions are created whereby everyone and every individual can enjoy their economic, social, and cultural rights, as well as their civil and political rights.[80] The design of digital technologies must provide social and economic benefits and at the same time imbibe the value of our civil and political rights. This also means ensuring inclusion of all anticipated users without detriment, immaterial of race and ethnicity.

[75] Council of Europe, Convention on Cybercrime (Budapest Convention), (2001).

[76] Council of Europe, Convention on Cybercrime, Art. 12.

[77] Manisuli Ssenyonjo, *Economic, Social and Cultural Rights in International Law* (Oxford: Hart Publishing, 2016), 32.

[78] United Nations, Universal Declaration of Human Rights.

[79] Vienna Declaration and Programme of Action, World Conference on Human Rights, (June 14-25, 1993), UN Doc A/CONF157/24 (Part I), 20, para. 5; United Nations, Declaration on the Right to Development (1986), Art. 6.

[80] Ssenyonjo, *Economic, Social and Cultural Rights*, 14-15.

When it comes to fulfilling obligations, the steps to be taken should include all appropriate means, including the adoption of normative measures.[81] While international law should work towards clarifying the normative approach for the accountability of tech companies in the design of digital technologies in a manner that underscores human rights standards, normative approaches would need to still provide considerable flexibility in decision-making for tech companies. This is because the determination of the best practices for the response to design thinking in the discourse of racial equality will be based on two types of factors: technological and regulatory. Sen rightly states that "the ways and means of advancing the ethics of human rights need not be confined only to making new laws."[82] This is also reminiscent of Hildebrandt's argument that simply enacting legal norms or making mandatory laws for tech companies will be futile if the defaults of the technical and organizational architecture of digital technologies are contradictory to the practicality of the norms and, hence, make it difficult to ensure compliance to the expected normative obligations.[83]

VI. Conclusion: Towards Racial Equality in Tech Designing

At the same time, Facebook unintentionally under-moderated hate and terror content on various occasions. This over and under moderation were both caused by the poorly designed AI classifiers. They were both a result of mistakes and errors by the AI and the absence of sufficient motivation to improve the models and training data. Consequently, bad actors took advantage of this and were able to evolve their strategies online to evade the AI moderation and spread hate content on the platform.

Whatever the approach, an unwavering reality is that:

> "business enterprises have the responsibility to respect human rights wherever they operate and whatever their size or industry. This responsibility means companies must know their actual or potential impacts, prevent and mitigate abuses, and address adverse impacts with which they are involved. In other words, companies must know—and show—that they respect human rights in all their operations."[84]

Arguments and suggestions that tech companies have no binding obligation of racial equality in the design of digital technologies, and that there is no binding norm to promote such an ideology should not serve as a deterrent to the efforts to push the narrative of obligations. There can also be alternative measures towards addressing racial inequality in the deployment of digital technologies that can be contextualized to design thinking. This discussion has shown that, besides developing normative obligations which call tech companies to action on the basis of human rights standards, tech companies can intentionally determine how to allocate benefits and harms through the design process of digital technologies.[85] There are several non-legislative measures that are regarded as appropriate means to achieve rights.[86] Sen also emphasized that there are various ways of safeguarding and promoting human rights ethics other than treaties or legislation.[87]

The importance of embedding racial equality in design of technologies also lies in public-value, not merely in legislation or laws.[88] Castells argues that the extreme unevenness of the deployment of technology is linked to the networking logic and the global reach of the economy on the basis that everyone and everything that is a source of value can be easily connected and easily disconnected.[89] In the same way that Dworkin argued that codes of conduct merely benefit the

[81] United Nations, *International Covenant on Economic, Social and Cultural Rights* (ICESCR) (1966), Art. 2(1).

[82] Sen, *Idea of Justice*, 364.

[83] Mireille Hilderbrandt, *Law for Computer Scientists and Other Folk* (Oxford: Oxford University Press, 2020), 154.

[84] The UN Working Group on Business and Human Rights, "The UN Guiding Principles on Business and Human Rights. An Introduction," *United Nations*, accessed May 2, 2023, https://www.ohchr.org/sites/default/files/Documents/Issues/Business/Intro_Guiding_PrinciplesBusinessHR.pdf.

[85] Costanza-Chock, *Design Justice*, 230.

[86] Ssenyonjo, *Economic, Social and Cultural Rights*, 283-400.

[87] Sen, *The Idea of Justice*, 366.

[88] Evgeni Aizenberg and Jeroen van den Hoven, "Designing for Human Rights in AI," Big Data & Society 7, no. 2 (2020), https://doi.org/10.1177/2053951720949566.

[89] Castells, *The Internet Galaxy*, 266.

State from the compliance of others rather than having any value in codes,[90] in this context, while the codes of conduct mentioned above are necessary to ensure that duty holders meet their obligations, those laws, codes, and principles may not necessarily have an essential value in themselves.

There have been various people-centered approaches which have been considered as necessary concepts to achieve rights related objectives. These include the need-based approach, the participatory-based approach, and the human rights-based approach. The need-based approach implies that if design occurs within an accountable regime, the market economy would be focused on justice, and in this instance, racial justice.[91] The fundamental objective of the approach is human dignity, which therefore assumes that people have valid social needs that should not be dismissed and that people should not be denied the means to satisfy their basic needs,[92] including the need for access to digital technologies. Participation is very relevant to the discourse of this paper. In the context of this approach, participation will mean that individuals are enabled by digital technologies, immaterial of racial origin, to participate in society in a manner that allows them to develop for themselves a vision for a better life and better developed society through the benefits of digital transformation.[93] A participatory approach in design-thinking will afford opportunities to the usually excluded by placing a demand that tech companies display a commitment to inclusion by consistently prioritizing people of all races in the design process, thereby dismantling systematic inequalities and eradicating disadvantage.[94]

Largely, the human rights-based approach has been used in the business and human rights domain to determine the approach of businesses to due diligence in the protection of human rights and to ensure that business practices follow human rights standards. The human rights-based approach is based on international human rights standards, is operationally directed to promoting and protecting human rights, and includes the following elements: accountability, empowerment, participation, non-discrimination, and attention to vulnerable groups.[95] Sengupta defines a rights-based approach as "a manner that follows the procedures and norms of human rights laws, and which is transparent, accountable, participatory, and non-discriminatory, with equity in decision-making…"[96]

The obligations of tech companies in this regard will need to be based on normative mandates, but also on the understanding that design-thinking can follow a human rights based-approach. In Rawls' A Theory of Justice, he suggested examples of a natural duty to the promotion of human rights. One example was "the duty to help another when he is in need or jeopardy, provided that one can do so without excessive risk or loss to oneself."[97] He posits that such duties are binding because fairness is equivalent to justice and fairness demands and allows for such principles in fulfilling what he termed "natural duties," irrespective of voluntary acts.[98]

In following "design-thinking," this means that tech designers and companies must embed key principles in the design process which requires the identification of the category of people who hold rights and others who have the obligation to fulfil those rights, an assessment of whether the duty holders have fulfilled or are fulfilling their obligations, and whether the procedures being followed to fulfil such obligations are

[90] Ronald Dworkin, *Taking Rights Seriously* (London: Gerald Duckworth & Co Ltd, 1977), 173.

[91] Peter Muchlinski, "'Basic Needs' Theory and Development Law" in *International Law of Development*, ed. Francis Snyder and Peter Slinn (Abingdon, England: Professional Books, 1987), 240.

[92] Wiktor Osiatynski, "Needs-Based Approach to Social and Economic Rights" in *Economic Rights: Conceptual, Measurement, and Policy Issues*, ed. Shareen Hertel and Lanse Minkler (Cambridge: Cambridge University Press, 2007), 63.

[93] Aizenberg and van den Hoven, "Designing for Human Rights."

[94] Bod Hepple, *Equality: The Legal Framework* (London: Hart Publishing, 2014), 22.

[95] United Nations Sustainable Development Group, "Human Rights Based Approach," *United Nations*, accessed June 21, 2023, https://unsdg.un.org/2030-agenda/universal-values/human-rights-based-approach.

[96] Arjun Sengupta, "Implementing the Right to Development" in *International Law and Sustainable Development: Principles and Practices*, ed. Nico Schrijver and Friedl Weiss (Leiden: Martinus Nijhoff, 2004) 344.

[97] John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971), 98.

[98] Rawls, *A Theory of Justice*, 98.

consistent with established human rights principles.[99] The obligation of non-discrimination must be acknowledged as immediate in this context because the principles of equality and inclusion are fundamental to the achievement of every right. A failure to ensure equality in the enjoyment of a right constitutes a violation of that right,[100] and, in this case, a right of access to and use of digital technologies in a manner that is rights respecting and safe for all persons irrespective of racial origin. In the same way that user-friendly platforms are created, racially inclusive and non-discriminating platforms, products, and interfaces can also be designed and developed.

Unless implementable policies replace the rampant short-sighted activities by tech companies, very little will change. The preferred policy approach, unquestionably, must include an element of normative mandates. Where legal or regulatory frameworks are introduced, tech companies should be required to be transparent about their compliance to them.[101]

Such frameworks should also stipulate measures that support accountability, perhaps through assessments of design performance. This could also include reporting and complaints mechanisms on the basis of extant human rights frameworks. Poor safeguards and oversight within a constantly advancing sector will clearly allow racial prejudice and discrimination. We need more dialogues about obligations towards racial equality in ensuring human rights standards, and the need to promote "human rights by design" with an approach that gives due regard to race and color. This is why a human rights-based approach to design thinking is key. Possibly, we may finally see a time when tech companies can fully integrate racial equality considerations in the design of products and services. ■

[99] Morten Broberg and Hans-Otto Sano, "Strengths and Weaknesses in a Human Rights-Based Approach to International Development – An Analysis of a Rights-Based Approach to Development Assistance Based on Practical Experiences," *The International Journal of Human Rights* 22, no. 5 (2018): 664-680, https://doi.org/10.1080/13642987.2017.1408591.

[100] Anna Cecilia Rapp and Anabel Corral-Granados, "Understanding Inclusive Education – A Theoretical Contribution from System Theory and the Constructionist Perspective," *International Journal of Inclusive Education* (2021), https://doi.org/10.1080/13603116.2021.1946725.

101 Costanza-Chock, *Design Justice*, 15.

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