

EMERGING CHALLENGES AND TECHNOLOGICAL IMPACT ON HUMAN RIGHTS INSTITUTIONS

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Abstract

The phenomenon of technological change has become one of the greatest forces influencing the global governance in the twenty first century, that essentially changes the manner, in which power, authority and accountability are exercised. In the economic, political, and social spheres, digital innovations have offered unparalleled possibilities of connectivity, efficiency and dissemination of information, allowing global institutions, civil society actors and states to work with increased speed and reach. But together with these advantages, the fast adoption of technology in governance systems has come with complicated issues especially in the field of human rights. The conventional international human rights organizations, which are set up in a state centric model with territorial limits and the enforcement mechanisms, are facing the realities of the digitally mediated world. The artificial intelligence, algorithmic decision making, big data analytics and advanced surveillance systems represent emerging tools that have redefined the structure of power and in most cases, authority has been taken out of the hands of state based or multilateral actors and placed in the hands of non-state actors, including technology corporations. Such development brings about loopholes in accountabilities, erosion of institutional legitimacy, as well as criminalizing the enforcement mechanisms, which were once depended on to secure fundamental rights. Additionally, the legal and normative oversight of technological obscurity and cross border data flows is complicated by the fact that the vulnerable populations are left vulnerable to the risks of discrimination, violation of privacy, and suppression of those that are digitally dissenting. This paper critically assesses the nexus of technology and human rights governance and how new digital systems undermine institutional power, open systemic weaknesses, and develop reformative changes that are adaptive. Through the risks and opportunities analysis of technological integration, the current research has offered a holistic perspective on the urgency of new frameworks in the face of technology that will guarantee safeguarding of human rights in a vast and more interdependent digital era.

1. Introduction

The modern international system is in the midst of a radical change due to the rapid technological change which has transformed the environment in which the human rights are conceptualized, safeguarded and challenged. The international

human rights institutions that were initially structured on a state centric design, are currently operating under a more digital infrastructures, algorithmic politics and transnational data flows. These trends are not only questioned in the efficacy of these institutions, but also on the

premises of these institutions in terms of sovereignty, accountability and enforcement (Ali, 2025).

Compliance with international human rights regimes has traditionally been pegged on legal principles, diplomatic coercion, and surveillance. The introduction of more sophisticated technologies has however broken these traditional modalities because it has brought in new players especially multinational technology corporations and also it has enabled the states to exert a kind of control over the population has never been experienced before. The surveillance tools, artificial intelligence, and big data analytics have transformed the limits of the state power, in many cases, exceeding the regulation abilities of international institutions.

Meanwhile, there are new possibilities in the protection of human rights due to technology. Digital tools are used to provide real time monitoring, global advocacy networks and platforms to marginalized voices. However, all these advantages are not evenly distributed and typically come with such risks as data exploitation, algorithmic discrimination, and digital repression (Ahmed and Ahammed, 2024). The two-sidedness of technology is therefore a complicated dilemma to international human rights bodies and they must find a way of walking the fine line between innovation and regulation.

This paper holds that technological transformation is not just a peripheral process that affects the governance of human rights but a structural process that has been redefining the authority, legitimacy, and functionality of the international human rights bodies. Technology and human rights are typified by asymmetric power, fragmentation of jurisdiction and normative ambiguity which together damage the conventional enforcement processes and at the same time demand institutional adjustment. Through the critical analysis of these dynamics, this paper aims at shedding light on the new challenges emerging and offer opportunities to reform an ever-digitized world order.

2. The Evolution of International Human Rights Institutions

International human rights institutions came into being after the end of the global conflict as a wider move towards creating a rules based international order based on the universal norms and legal accountability. The development of these institutions was based on the fact that the states are the main actors in the process of defending the rights of the people under their jurisdiction. As a result, mechanisms to control the actions of countries like treaties, monitoring bodies and international courts were created to ensure that companies could take redress in the event of violation (Matar and Murray, 2025).

The institutional structure of human rights governance increased tremendously over time. The treaty bodies came up with advanced reporting mechanisms, special rapporteurs were elected to examine certain concerns and regional systems came up with judicial enforcement devices. The success of these institutions has been limited in many cases by structural limitations although these developments were made. Most of the compliance is based on state consent, and the mechanisms of enforcement are often weak or indirect, often based on naming and shaming, and not through force (Hasan, 2025).

That is the reason why the classical paradigm of human rights regulation is defined by the opposition between the normative aspiration and the pragmatic restraint. Although international institutions are voicing elaborate standards, the political will to implement the standards is still subject to political goodwill. Such limitation is especially strong in emerging technologies context, which are cross-border and include actors that are not regulated by state centric systems.

Besides, transformation of geopolitical dynamics has influenced the evolution of human rights institutions. The emergence of new forces, changing alliances and rival ideological systems have impacted the meaning of human rights norms and their application. In these regards, technological change can be seen as an accelerant and as increasing current tensions, as well as bringing in additional complications (Lee et al., 2025). The growing adoption of digital

technologies in the governance framework provokes the basic premises of the international human rights institutions, especially in terms of jurisdiction, accountability, and the seat of power.

3. Technology as a Double-Edged Force in Human Rights Governance

The concept of technological advancement has brought a paradox of human rights governance, as it plays the role of empowerment and at the same time a control mechanism. On the one hand, the digital technologies provide the international institutions and civil society actors with an added capability to monitor, document and act in response to the human rights infringement. Conversely, the same technologies allow states and corporations to have unparalleled surveillance and influence, which in many cases cannot be regulated using traditional set of measures.

The spread of digital surveillance technologies is one of the main changes in this respect. Governments are moving towards the implementation of advanced systems of surveillance of communications, movement, and behavioral pattern. These attributes increase power of states beyond traditional boundaries, which enable social control and preemptive intervention. Although these are quite reasonable in terms of security or order in the community, they will cast very deep roots into the issues of privacy, freedom of expression, and due process (Azgin and Kiralp, 2024). It is not easy to solve the problems with the help of international human rights institutions because the current legal frameworks are not properly prepared to control technologically mediated types of power.

Artificial intelligence adds to this scenery by bringing an automated decision making to the places that are traditionally under the control of human judgment. Algorithms are currently found in areas like law enforcement, immigration regulation and in social welfare allocation. These systems are said to be efficient and objective, but in most cases, they reproduce and further increase the already existing biases in data. The transparency and fairness of the processes are based on the principles of transparency and fairness in the human rights law, and therefore, it

is challenging to evaluate accountability in the case of algorithmic processes, which has a high level of obscurity (Ashraf, 2024).

Another aspect of technological change that has important consequences on human rights governance is that of big data analytics. Predictive governance is made possible by the capacity to amass and process large volumes of information to make decisions grounded on probabilistic evaluations and not on hard facts. This change is contrary to established ideas about justice and responsibility as people can be subject of observation or intervention on the basis of expected behavior, but not the actions.

Nevertheless, in spite of these obstacles, technology also presents the possibilities of enhancing the protection of human rights. Through digital means, global advocacy is able to occur, and the activists can mobilize, and spread information quickly. The process of documenting violations and holding the perpetrators accountable is the ability of international institutions that is boosted by satellite imagery, open source intelligence and the real time data collection. These tools, however, can only be effective depending on their availability, technical capacity, and political situations within a region, which are to differ greatly.

The bi-polar character of technology highlights the critical importance of a more sensitive approach to the rule of law in regard to human rights. Instead of perceiving technology as either bad or good it is necessary to see how technology is changing power relations and institutional dynamics (Dhiman, 2023). International human rights bodies should hence be able to respond to this shifting environment by coming up with new frameworks that will respond to both the opportunities and threats of the technological change.

4. Emerging Challenges to Human Rights Institutions

The meeting point of technological change and human rights regulation has produced a web of challenges that have produced a lasting disequilibrium of the operation and normative premises of international human rights institutions. These issues are not just technical

matters but they are profoundly questioning the changes in power, authority and control in the world system.

An increasing conflict between digital governance and state sovereignty is one of the most urgent issues. The conventional human rights models are based on the territorial grounded authority, where the states have jurisdiction over well-defined boundaries (Borenstein and Howard, 2021). Nevertheless, digital technologies can cross these borders and establish both global and fragmented governance spaces. The traffic of information between jurisdictions is not always conscious of national boundaries and actions taken by actors in one place may instantaneously impact other places. This compromises the capability of international institutions to allocate tasks and provide accountability because the violation is usually diffuse and decentralized.

This is complicated by jurisdictional ambiguity. In cyberspace, it is usually ambiguous who the law regime is to apply on an action. As an illustration, an infraction on the privacy of data can involve several jurisdictions namely the location of the user, the server, and the corporate organization in question. The international bodies dealing with human rights, whose practice is governed by clearly stated legal frameworks, find it difficult to cope with such cases (Almufarreh and Arshad, 2023). This fragmentation leaves loopholes in protection so that both states and corporate entities take advantage of protection discrepancies.

Another dimension of concern is the emergence of the multinational technology companies. These institutions have enormous power in digital infrastructures, communication infrastructure, and data ecosystems and in many cases, can rival or even overpower states. However, they are mostly beyond the conventional confines of the international human rights law which is mostly state centric. This leaves a vacuum of governance whereby corporate practice may have far-reaching human rights consequences without any accountability system. The processes of content moderation, data collection and algorithmic decision making are often unknown, which

questions the issue of transparency, fairness and due process.

Algorithms bias and discrimination is a very pernicious issue. As the artificial intelligence systems enter the governance processes, they can replicate and enhance the existing social inequalities. Prejudices within the training information may promote discriminatory results in fields like policing, work, and service access. Such biases are hard to detect and correct due to the untransparency of algorithmic systems thus compromising the very core of the human rights principles like equality and non-discrimination. International institutions encounter enormous challenges in dealing with such problems because it demands expertise in technical matters together with a legal strategy that goes beyond the conventional legal systems (Cath, 2018).

The other serious threat is the decline of institutional power. This has cast into doubt the relevance and effectiveness of international human rights institutions as technological players start to take a center stage. States can bypass the more conventional means of action by implementing technological devices that allow them to exercise covert or deniable measures of repression. Meanwhile, the decentralized aspect of digital governance diminishes the power of the institutions to influence or create compliance. This loss of power is exacerbated by the shift in general geopolitical forces, the emergence of alternative forms of governing people, and politicization of the discourse of human rights.

Lastly, technological change makes the gap between innovation and regulation constant due to the swift rate of technological changes. The international human rights institutions are usually run by such deliberative processes that demand consensus and negotiation which may be slow and gradual. Technological developments, on the other hand, are at a much faster rate and previous structures are becoming obsolete or insufficient (Smuha, 2020). This time collision increases and complicates the current problems and reduces the capacity of the institutions to react efficiently to a specific threat.

5. Case Studies and Empirical Illustrations

The abstract contradictions between technological change and human rights regulating become even more understandable when analysed in terms of specific empirical examples. These case studies unveil the operational way of emerging technologies in the particular political circumstances revealing the structural limits of international human rights institutions. Instead of a few individual cases, these instances are the indicators of larger systemic tendencies where technology is reconfiguring hierarchies of power, frequently to the detriment of responsibility and the rights.

The enlargement of digital surveillance infrastructure in China is one of the most vivid examples. The state has built a wide surveillance infrastructure comprising of facial recognition, biometric information, and artificial intelligence-powered monitoring networks. These technologies are integrated into the governance systems like the Social Credit System that compiles all behavioral data to assess and control people. Even when it is represented as a process of promoting trust and order, this system allows state domination over the actions of individuals on a large scale (Ali, 2025). There has also been the increased surveillance of the minority groups especially in other parts of the country like the Xinjiang which has aroused a lot of concern in terms of privacy, the right of movement and the right to be arrested at any time. The international human rights institutions have made criticisms and reports but their effects are limited since the state does not want them to meddle in its internal matters and they are not binding since there are no effective systems.

Another yet equally important model is revealed in the United States whereby the problem is not the centralized state control but the intricate interaction between state agencies and the technology corporations. The activities of surveillance especially those disclosed in the intelligence programs explain how sophisticated data collection systems may work within the grey areas of the law. Furthermore, predictive policing implemented in a number of cities is based on the data on historical crime to distribute law

enforcement resources (Al Shuhoumi and Hamza, 2025). These systems have been found to be disproportionately targetizing the marginalized communities, which supports the racial and socio-economic inequality patterns. Despite judicial control and civil society advocacy culminating into a certain level of accountability, the international human rights bodies have a challenge of interacting with these matters, since they are entrenched in the national legal systems and they also have influential corporate players.

Another aspect of technological governance can be seen in terms of the Aadhaar system of legislation of large scale biometric identification in India. The system gathers a lot of personal information on more than a billion people and is designed to simplify distribution of welfare and enhance the efficiency of the administrative provisions. Although it has helped with access to services to many, it has created major concerns in terms of data security, exclusion, and surveillance. Absences of cases of people who find themselves at the receiving end without necessary services as a result of authentication failures point out the dangers of excessive dependence on technological systems (Ekram, 2025). Moreover, lack of effective data protection models especially at the initial stages of implementation revealed the vulnerability, which the international human rights institutions were not quick enough to mitigate indicating the discrepancy in the technology uptake and the readiness to regulate it. The European scenario, especially in European Union is of a different nature, of regulation intervention. The General Data Protection Regulation, GDPR, is one of the most extensive attempts to cover the data privacy and corporate responsibility. It creates a unified set of principles concerning consent, data minimization, and user rights and provides severe penalties in case of noncompliance. Although this framework has informed the global standards, its application does not lack challenges observed. The implementation is different in member states, and giant technology firms still find loopholes in regulations. In addition, because digital platforms are extraterritorial, jurisdictional authority is complicated, and even a powerful regulatory

regime cannot guarantee total compliance (Hasan, 2025).

The growth of digital governance and surveillance abilities in Pakistan is indicative of the general issues that developing nations confront. Programs like biometric authentication and online surveillance systems are gradually being implemented into the system of governance, usually on the pretext of improving security and efficiency in the administration. Nevertheless, such developments are done in a situation where there are weak legal protection and institutional ability. The issues about the misuse of the data, the absence of transparency, and possible political manipulation demonstrate the vulnerability of the citizens in the conditions when effective regulatory frameworks do not exist. The international human rights institutions have had very little activity in such situations of which the domestic limitations and geopolitical factors confine the external influence.

The other case, which is also crucial is Russia, where digital technologies are being used to consolidate political control and control dissent. Online regulation laws, as well as the need to ensure surveillance and data localization, allow the state to have a much greater impact on digital space. The platforms are forced to obey the national regulations or are constrained and in effect, this goes further granting the state powers to the digital space (Donnelly and Whelan, 2018). The model illustrates the application of technology to enhance sovereignty in the globalizing information space, disputing the applicability of the universal human rights standards and restricting the efficiency of global control.

In such instances, there is a similar trend, technological systems are highly institutionalized and embedded within political contexts influencing the human rights. They make it possible to practice new forms of governance that is usually faster than the regulating abilities of international institutions. In addition, the variety of strategies since the centralized control approach to the market driven approaches highlight the challenge of setting universal standards.

These empirical examples indicate that the difficulty is not technical in nature but structural in character. The international human rights organizations are faced with a diffused environment where power is decentralized, and where there are weak accountability structures. The failure to control state and non-state actors in the online world indicates a larger crisis of governance, in which existing structures become less and less relevant to the modern reality. To meet these issues, technical solutions are not the only solution but it is also essential to reconfigure institutional mandates and principles to suit the world of digitally mediations.

6. Institutional Adaptation and Reform

To deal with these issues, international human rights institutions are also in a state of a process of re-aligning their structures to the realities of a technologically mediated world. This is a process that entails normative innovation as well as institutional reform since actors are trying to come up with new ways of governing themselves in order to deal with the emerging risks effectively.

The evolution of normative frameworks stating the human rights implication of digital technologies is one of the areas of development. Digital rights, data protection, and algorithmic accountability are some of the concepts that are becoming part of the international discourse. These advances are an indication of the move to extrapolate principles under the current human rights to new spheres so as to maintain the fundamental rights in the digital era. But the translation of these norms into enforceable standards is a serious challenge (Rodrigues, 2020). Innovation in the law is also reflected in the creation of regulatory frameworks aimed at regulating technological players. The attempts to develop principles of corporate responsibility such as due diligence and transparency conditions are the movements towards more inclusive concept of human rights governance. This is based on the acknowledgment of the influence of the non-state actors and the effort to bring them to account of their influence on human rights. However, the success of such measures will rely on the goodwill of states and companies to adhere and on the

ability of the institutions to regulate and implement standards.

In this regard, multilateral cooperation is very important because the transnational character of technology requires collaborative solutions. There is the increasing cooperation between international organizations, regional bodies and civil society networks to deal with problems like data governance, cybersecurity and digital surveillance. These are done in order to achieve harmonization of standards and lessening of regulatory fragmentation, which would make the protection of human rights more effective (Bakiner, 2023). Nevertheless, reaching an agreement within a varied and usually polarized international system is still a stiff challenge.

7. Power, Legitimacy, and Future Trajectories

A critical examination of the interaction between technology and human rights institutions reveals a fundamental reconfiguration of power within the global system. Authority is increasingly dispersed across a network of actors that includes states, corporations, and technological systems themselves. This diffusion of power challenges the legitimacy of traditional institutions, which are often perceived as ill equipped to address contemporary realities.

At the same time, the integration of t A critical assessment of the technological revolution of human rights governance does not display merely a complex of operation challenges, but a reorganization of power in an international system on a structural level. Technology is not a neutral tool that can be well fitted into the existing institutional structures. Instead, it de-centralizes power through a complicated web of actors, such as states, multinational companies and algorithms, and therefore, it disrupts the classic state centric base, on which the international human rights institutions were built.

The main aspect of this change is the shift of a juridical power to an infrastructural power. Classical human rights bodies find their legitimacy in the legal norms, treaties and formal accountability mechanisms. By comparison, technological actors achieve power by controlling infrastructures of digital processes, data flows, and

algorithmic processes. This kind of power is less visible and more diffuse and in many cases is insulated against traditional scrutiny (Volodenkov and Fedorchenko, 2022). This has led international human rights institutions to struggle to govern systems they have no epistemic and institutional access to. The result, rather than an enforcement gap, is a more fundamental crisis of relevance in which the institutions are increasingly unable to exercise authority in areas that are more of a technical than a legal logic.

Legitimacy is another issue that is brought up by this transformation. The international human rights institutions have traditionally legitimized their power by asserting that they are universal, impartial and normative. The lack of uniformity of technological capacity of states and regions invalidates these assertions, though. The sectors that have advanced economies, especially the ones with high technological bases have more control with the evolution and control of digital systems. This establishes imbalances of power and norm production with selected actors determining the rules of the digital order and others being outcasts (Stovpets et al., 2023). Therefore, the universalist ideals of human rights rule are confronted by the fact that technological inequality and geopolitical rivalry are the new reality.

In addition, the growing dependency on the algorithmic decision making entails a fundamental tension between efficiency and accountability. The algorithmic systems are frequently defended due to their supposed objectivity, accuracy, however, they are run in lack of transparent mechanisms that cannot be questioned or challenged. This lack of transparency is a threat to fundamental human rights values such as transparency, due process and the right to an effective remedy. The issue of responsibility is highly unclear when algorithms are used to make or mediate decisions to individuals. Is there any responsibility on the side of the state implementing the system, the corporation implementing it or the algorithm itself as an independent legal person? International human rights institutions have no conceptual and legal means to combat this spread of responsibility and a major lack of accountability

must therefore be noted (Land and Aronson, 2020).

The other aspect of this crisis is the temporal disconnect between the institutional adaptation and technological innovation. Technological systems are changing at a very fast rate as the market forces and competition force them to change, and international institutions have a deliberate approach that puts more emphasis on consensus and stability. This deviation causes a constant delay in regulatory reaction, and harmful practices become institutionalized before they are seriously monitored (Ali, 2025). The consequence is a reactive and not proactive form of governance whereby institutions are always playing catch up to the developments that have already taken their toll on the landscape.

Moreover, depoliticization of human rights is also through integration of technology in the governance processes. The issues that previously were the subject of political discussion and ethical deliberation are being presented as technical problems needing to be solved with the help of data processing and algorithmic optimization. This transition clouds normative aspects of governance, and sets contested decisions as the outcome of computational processes as neutral. By so doing, it limits the arena of democracy and undermines the importance of human rights institutions as a place of normative deliberation (Poblet and Kolieb, 2018). Such a violation of rights is not only dangerous but also that language in which such violations are stipulated is eroded. More fundamentally, the technologicalisation of governance is indicative of a particular reconstitution of sovereignty. States have lost their exclusive or even leading place of authority in most spheres, especially with the ones connected with digital infrastructures and information flows. Rather, sovereignty is being shared, challenged and mediated via networks that go across territorial borders. Such reconfiguration questions the very premises of the international human rights law that is based on the premise of well-delimited jurisdiction and easily recognizable duty bearers. The standard model of accountability is becoming more and more untenable, in a world where power has multiple

and mutually dependent systems. Technology into governance processes raises important questions about accountability and democratic oversight (Ruggiu, 2018). As decision making becomes more automated and data driven, the locus of control shifts away from transparent and participatory mechanisms. This transformation risks undermining the normative foundations of human rights, which are rooted in principles of dignity, equality, and justice.

8. Conclusion

The concept of technological change has brought with it the opportunities as well as challenges on international human rights institutions, and this has essentially changed their environment in which they operate. Even though online tools make monitoring and advocacy more effective, they create new ways to control people and create disparities. To manage these dynamics, it is necessary to adjust to institutions, use normative innovation, and a long-term cooperation between nations to make human rights safe in an ever more complex and interconnected world.

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