Professor (Dr.) Nirmal Kanti Chakrabarti, *Law and the Justice System vs. 21st Century Technology: Are We Evolving?* 11(1) NLUJ L. REV. 158 (2025)

LAW AND THE JUSTICE SYSTEM VS. 21ST CENTURY TECHNOLOGY: ARE WE EVOLVING?

~ Professor (Dr.) Nirmal Kanti Chakrabarti[*]

ABSTRACT

Efforts to integrate modern technology in the Indian justice system have been initiated since the early 2000s, founded upon the holy-grail that is the "National Policy and Action Plan for Implementation of Information and Communication Technology in the Indian Judiciary". The first two phases of this project are already complete, with the third phase having been initiated in 2023. The end of the first two phases was marked by peak success, with the creation of a national database of pending and disposed cases, hardware and software support for digital connectivity across all courts in the nation, even the subordinate courts, and facilitating digital connectivity across courts and other relevant institutions such as jails. However, there remain glaring gaps, in terms of low adoption of such technologies by trial courts, lack of skilled manpower, and accessibility issues. Thus, at the juncture of Phase III, it is now time to learn from the earlier mistakes, and ensure that the available cutting-edge technology is incorporated and utilized to the fullest extent by the Indian justice system.

Keywords: *Technology and justice, digital courts, AI and law.*

[*] Professor (Dr.) Nirmal Kanti Chakrabarti is the Vice Chancellor, West Bengal National University of Juridical Sciences, Kolkata, West Bengal ("**WBNUJS**"). Research for this Article has been done by Kachan Yadav, Assistant Professor, WBNUJS.

TABLE OF CONTENTS

I. INTRODUCTION 160

II. THE FOUNDATION ERA 162

III. THE AUTOMATION WAVE 169

IV. PEERING AT THE FUTURE 173

A. TECHNOLOGICAL ADVANCEMENT AND HUMAN RIGHTS ISSUES 174

B. ARE WE EVOLVING TO DELIVER JUSTICE THROUGH TECHNOLOGY? 176

I. INTRODUCTION

In the last few decades, the growth of technology has been unimaginable and unpredicted. Modern day electronic gadgets such as smartphones work on more complex technology, than the computers used even for first the manned mission to the moon in 1969.[1] As scientific innovations and technology keep permeating across all arenas of life, they have brought tremendous changes in almost all disciplines, including the social sciences. The objective of this paper is to highlight the implications of these changes in the current law and justice system in India and consequently, the transformation or adaptation in accordance in response to the same.

It has been globally recognized that a paradigm shift towards digitization of the legal system is required to ensure and enhance its efficiency.[2] The significance of digital tools to improve justice sector efficiency, transparency and access to justice, has been identified by the United Nations.[3] To aid the nations in integrating digital components to their justice system at different development levels, the United Nations Development Programme ("**UNDP**") has published a toolkit titled *"E-*

---

[1] Graham Kendall, *Your Mobile Phone vs. Apollo 11's Guidance Computer,* REAL CLEAR SCIENCE (Jul. 2, 2019), https://www.realclearscience.com/articles/2019/07/02/your_mobile_phone_vs_apollo_11s_guidance_computer111026.html.

[2] Hafiz Gaffar, *Implications of Digitalization and AI in the Justice System: A Glance at the Socio-Legal Angle,* 10(3) INT'L J. OF L.: "LAW & WORLD" 154, 155 (2024).

[3] UNDP, *Digitalization and E-justice*, https://www.undp.org/rolhr/justice/digitalization-and-e-justice.

Justice: Digital Transformation to Close the Justice Gap".[4] The move towards a digitized justice system hastened during the pandemic, as it restricted access to justice for the people. The World Bank recorded that during 2020 and 2021, several nations ranging from high-income to low-income levels, had adopted reforms to facilitate a digitized justice system.[5]

Technological innovations have revolutionised almost every aspect of the legal discipline, from legal research to communication. Particularly in the Indian context, the integration of technology into the justice system is well on the way to revamp the system overall. The development of this phenomenon can be broadly divided into two eras. The two decades between 2000-2019 mostly saw developments with respect to infrastructure and digitization of case records and judgements etc., while from 2020 onwards; the focus has shifted towards connectivity and automation.[6]

Against this backdrop, this paper analyses the integration of the Indian justice system with modern technology and its impacts. The first section highlights the progress made during 2000-2019, and how that paved the way for future development and integration. The second section explores the exponential changes brought about to the system by the 2020's technological innovations, and the future pathway. Ultimately,

---

[4] UNDP, *E-Justice: Digital Transformation to Close the Justice Gap*, (2022), https://www.undp.org/publications/e-justice-digital-transformation-close-justice-gap.
[5] Raman Maroz, Oleksandra Popova & Santiago Satizábal Acosta, *Digitizing Court Systems: Benefits and Limitations*, (World Bank, Global Indicators Briefs No. 25., 2024).
[6] Akshat Khetan, *Digital Courts: Future of The Indian Legal System*, LIVE LAW (Oct. 17, 2023), https://www.livelaw.in/law-firms/law-firm-articles-/virtual-hearing-e-courts-project-digital-preservation-standard-operating-procedure-internet-and-mobile-association-of-india-240329.

the paper explores the gap areas where the existing technology is not utilised to its full potential, thereby creating accessibility and efficiency issues even in the current system. It concludes by providing recommendations and ways forward to cure the issues identified.

II. THE FOUNDATION ERA

Taking cue from its global peers, India has not remained far behind in the race for a digital justice system. In fact, the wheels have been turning since long back, as the 'National Policy and Action Plan for Implementation of Information and Communication Technology' ("**Action Plan**") in the Indian Judiciary was enacted as early as 2005,[7] which helped contextualise the E-Courts Mission Mode Project ("**Project**").[8] It can be considered as the first formal step by the Indian government and judiciary to mark the beginning of the digitalisation revolution, even though initiatives regarding computerisation have been in place since the 1990s. This early stage of digitization included efforts to have case and court data accessible online, including statute laws and cases, to be used by advocates, officers and the public.[9] Measures were also undertaken to maintain a digital court archive for each court, and to establish digital and interconnected legal libraries.

---

[7] E-Committee, *National Policy and Action Plan for Implementation of Information and Communication Technology (**"ICT"**) in the Indian Judiciary*, SUPREME COURT OF INDIA (Aug. 1, 2005), https://cdnbbsr.s3waas.gov.in/s388ef51f0bf911e452e8dbb1d807a81ab/uploads/2020/05/2020053162.pdf.

[8] E-Committee, *Brief Overview of E-Courts Project*, SUPREME COURT OF INDIA, https://ecommitteesci.gov.in/project/brief-overview-of-e-courts-project/.

[9] *Id.*

The Project was segregated into three distinct phases. In Phase I *(2007-2015)*, infrastructural support actions would be undertaken, such as ensuring adequate hardware and software support for courts and judges. Phase II, sought to ensure cohesion and coordination among the courts and other stakeholders through modes such as interconnectivity, video conferencing, and connected legal libraries. Phase III would witness digitisation of filing, execution, and other such administrative activities in all existing and newly established courts.[10] The entire process is mostly overseen by the E-Committee, which is the apex body constituted by the Government of India to formulate and implement the Action Plan.[11]

While the Action Plan did not provide any dedicated timeline for implementation of these phases beyond Phase I, which was supposed to be completed within two years after it began in 2007, there has been slow but steady progress in this regard. Phase I involved the computerization of district and taluka courts as well as training of the officers and staff to ensure a citizen-centric model of the judicial system.[12] Till March 2014, Phase I had almost achieved the target set for it previously, by facilitating 13,227 district and lower courts with computerisation infrastructure, while the target was of 14,249.[13] At this stage, there was also an increased

---

[10] *Id.*

[11] E-Committee, *E-Courts Mission Mode Project*, SUPREME COURT OF INDIA, https://ecommitteesci.gov.in/project/brief-overview-of-e-courts-project/ (last visited Oct 23, 2024)..

[12] *Id.*; Urvashi Aneja, *Review of the E-Courts Project*, ASHANK DESAI CENTRE FOR POLICY STUDIES, IIT BOMBAY (2022), https://www.cps.iitb.ac.in/review-of-the-e-courts-project/ (last visited Oct 23, 2024).

[13] *Evaluation Study of eCourts Integrated Mission Mode Project*, NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH(2015), https://www.ncaer.org/wp-

awareness spread within the judicial system about the same and other associated activities. However, the infrastructure set up was not consistent across different courts, and even in courtrooms with 99% available infrastructure, there was a lack of operational efficiency due to connectivity issues and non-availability of skilled and trained officers.[14]

Phase I was extended till and completed in 2015, post which, Phase II was launched.[15] During Phase II, by virtue of innovation and easy access to more robust technology, there had been exponential progress. The idea was that the hardware and infrastructure procured in Phase I, would be amalgamated with adequate software and put to operation in Phase II. The aim was to bring to surface the computerisation and connectivity to the court rooms, out of the bounds of the dedicated computer rooms. At this stage, the problems in Phase I, such as unreliable electricity and internet connectivity were recognized and sought to be remedied by modes such as Uninterrupted Power Supply ("**UPS**"), proper electrical wiring and cabling, and internet connectivity from two different service providers. The importance of training for staff and officers was also emphasized,[16] to reduce the inefficiencies in handling and maintaining the system.

---

content/uploads/2022/09/1460107526Report-of-Evaluation-eCourts-1.pdf; Ministry of Law and Justice, *E-Courts Project for online hearing*, PRESS INFORMATION BUREAU ("**PIB**") (Mar. 16, 2023), https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1907546 (last visited Dec 13, 2024).

[14] *Id.*

[15] *Id.*

[16] E-Committee, *supra* note 7.

In furtherance of the goal of fostering connectivity during Phase II, all the court complexes, jails, and other similar institutions were targeted to be connected via video conferencing for better evidence management and fast and efficient disposal of sensitive cases.[17] During this phase, atleast one video conferencing equipment was supplied across all district and subordinate courts. Video conferencing was reported to be enabled at 3240 courts and 1272 jails.[18] This technology saw a massive upsurge during the pandemic, as more than 2 crore cases were heard by the district and subordinate courts, 78 lakh by the High Courts, and nearly 5 lakh by the Supreme Court.[19] To ensure transparency, live-streaming of the cases involving Constitutional matters and issues of national importance was allowed by the Supreme Court in 2018, a practice which has become the norm since then.[20]

During this period, centralised storage and access of data on cloud-based servers was also introduced.[21] This led to digitization of records. Even though digitization was not initially considered as a part of the objectives of Phase II, as the need arose, a Digital Preservation Standard Operating Procedure ("**SOP**") was published by the e-

---

[17] Centre for Research and Planning, *State of the Judiciary: A Report on Infrastructure, Budgeting, Human Resources, and ICT,* SUPREME COURT OF INDIA 136 (Nov. 2023) https://cdnbbsr.s3waas.gov.in/s3ec0490f1f4972d133619a60c30f3559e/documents/misc/state_of_the_judiciary.pdf.

[18] Ministry of Law and Justice, *Digitization of Courts*, PIB (Mar. 2, 2023), https://www.pib.gov.in/PressReleasePage.aspx?PRID=1896034.

[19] Department of Justice, *Video Conferencing*, MINISTRY OF LAW AND JUSTICE, https://doj.gov.in/video-conferencing/.

[20] Swapnil Tripathi v. Supreme Court of India, (2018) 10 SCC 639.

[21] E-Committee, *supra* note 11; Brief overview of E-courts project, *supra* note 8.

Committee in 2022.[22] The SOP provided detailed guidelines for digitization of court records as well as methods for scanning and storage for easy access and retrieval. The SOP identified that at that point, among the documents available across 21 High Courts in India, only 5.9% had been digitized, and thus, were readily accessible.[23] It also computed the rather extensive storage requirements for this data, as well as modalities of making it available across the nation via cloud-based mechanisms.

The e-Courts National Portal, ecourts.gov.in ("**Portal**"), was established as a platform to enable the courts to provide case-related information such as case status, cause lists, and case documents electronically. It was launched towards the end of Phase I and was brought to fruition during Phase II.[24] This centralized portal has dedicated sections for different levels of the judiciary, including *taluka*, district, High Courts and the Supreme Court. The aim is to update the data in real-time, to ensure that accurate information reaches the stakeholders. Currently, the portal houses data for more than 7 Crore pending and disposed cases.[25] The portal integrated disabled-friendly technology and also made information available in local languages. This was done with the intent to facilitate ease of access to the platform for the lawyers and the litigants.

---

[22] E-Committee, *Digital Preservation Standard Operating Procedure*, SUPREME COURT OF INDIA (Sept. 24, 2022), https://cdnbbsr.s3waas.gov.in/s3ec020afa92fc0f8a9cf051bf2961b06a/uploads/2023/04/2023040932.pdf.

[23] *Id.*

[24] Ministry of Law and Justice, *E-Courts Mission Project*, PIB (Aug. 5, 2022), https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1848737.

[25] Brief Overview of E-courts Project, *supra* note 8.

However, in spite of the seemingly tremendous success of Phase II, there remain some faults. While for Phase I, the problem was localized to a lack of connectivity or training, this time, it was multifaceted. Even though most courts were enabled with the infrastructure required for digitization, during the process, it was often found that crucial data such as statute names, case type, and final orders were not available.[26] To add to this, different courts were practising different methods for numbering and categorizing cases, which resulted in further discrepancies in records. A 2020 study by the National Institute of Public Finance and Policy cautioned that blind reliance on the data available on the portal may lead to false pictures and misguided politics.[27]

Apart from inconsistencies in recording data, the second crucial issue in Phase II is the inaccessibility of information for people with disability.[28] To ensure the utility of the portal and other platforms, the digitally available documents must be practically accessible lawyers, litigants, and officials with special needs. For example, a person with hearing or speech difficulties has no support of sign language interpretation or closed captioning for virtual courtrooms. The judiciary has already recognized such practical barriers and has been vocal against the same. The Delhi High Court had previously ordered case-related documents to be made available in braille to a litigant who was visually

---

[26] Aneja, *supra* note 11.

[27] Devendra Damle & Tushar Anand, *Problems with the E-Courts Data*, (7 NIPFP Working Paper No. 314/2020, 2020), https://www.nipfp.org.in/media/medialibrary/2020/07/WP_314__2020.pdf.

[28] *The Whole Legal System is not yet Available to Blind Lawyers, Litigants,* INDIA LEGAL (Dec. 31, 2020), https://indialegallive.com/special-story/legal-system-blind-lawyers-interview-santosh-kumar-rungta/.

impaired.[29] The incumbent Chief Justice of India back then, Justice DY Chandrachud, had imparted strict orders to the High Courts to create accessible digital infrastructure to ensure convenience and equal participation for the lawyers and litigants with disabilities.[30] It was also instructed that there must be an institutionalised system that would allow filings to be translated to accessible formats, which would include audio captchas and tagging of digital documents.[31] To facilitate accessibility in the Supreme Court, further, the Chief Justice of India at the time also enlisted the assistance of Senior Advocate SK Rungta, the first visually challenged lawyer to be designated as a senior.[32] Moreover, the e-Committee has also published a Standard Operating Procedure for Preparing Accessible Court Documents in 2022.[33] However, all of these measures are yet to be implemented in most courts and digital platforms.

---

[29] Shivam Soni v. State (NCT of Delhi), (2022) 2 HCC (Del) 403, para. 11; *Give court papers in Braille to visually impaired: Delhi HC*, THE TIMES OF INDIA, (Apr. 10, 2022), https://timesofindia.indiatimes.com/city/delhi/give-court-papers-in-braille-to-visually-impaired-delhi-hc/articleshow/90757444.cms.; *Provide Court Documents in Braille to Visually Impaired Litigants: HC*, THE HINDU (Apr. 11), https://www.thehindu.com/news/cities/Delhi/provide-court-documentsin-brailleto-visually-impaired-litigants-hc/article65308826.ece.

[30] *E-Courts Must Be Accessible to Specially Abled: Justice Chandrachud Tells Chief Justices of High Courts*, LIVE LAW (Jan. 23, 2021), https://www.livelaw.in/top-stories/ecourts-accessible-to-specially-abled-disabled-justice-chandrachud-high-courts-chief-justices-167555..

[31] *Need to Create Accessible Infrastructure for Lawyers, Litigants with Disabilities: Justice DY Chandrachud to High Courts*, THE NEW INDIAN EXPRESS, (Dec. 23, 2020), https://www.newindianexpress.com/nation/2020/Dec/23/need-to-create-accessible-infrastructure-for-lawyers-litigants-with-disabilities-justice-dy-chandr-2240070.html.

[32] Utkarsh Anand, *CJI Enlists Aid of Visually Impaired Lawyer to Boost Inclusivity in Court*, HINDUSTAN TIMES, (Nov. 24, 2022), https://www.hindustantimes.com/india-news/cji-enlists-aid-of-visually-impaired-lawyer-to-boost-inclusivity-in-court-101669313975542.html.

[33] E-Committee, Working Group on Digital Preservation, *Standard Operating Procedure for Preparing Accessible Court Documents*, Supreme Court of India (Nov. 29, 2022),

III. THE AUTOMATION WAVE

The Law Commission of India had submitted its 268th Report wherein they had recommended, *inter-alia*, the need for introducing a new technology in the nature of a central intelligence database and electronic tagging.[34] This would enable all information from the FIRs and the like, to all details about an offender, to remain available in the technical architecture of the *"Crime and Criminal Tracking Network and Systems"* ("**CCTNS**") scheme. It can further also be improved and adapted for better utilization of existing crime as well as criminal history. The report has recommended the use of electronic tagging, electronic monitoring, improvisation and adaptation of the CCTNS.[35]

Currently, India does not have facilities like intelligent databases and electronic tagging, thereby ushering in the role of private companies and start-ups with the said know-how. In an instance, Staqu, a tech-start up, assisted the Rajasthan police in resolving more than 1100 cases using such data and artificial intelligence.[36] Such models are already in use in other countries like New Zealand.[37]

---

https://cdnbbsr.s3waas.gov.in/s388ef51f0bf911e452e8dbb1d807a81ab/uploads/2022/1/2022112949.pdf.

[34] Law Commission of India, *Amendments to Criminal Procedure Code, 1973 – Provisions Relating to Bail, Report No. 268,* MINISTRY OF LAW AND JUSTICE (May 2017), https://cdnbbsr.s3waas.gov.in/s3ca0daec69b5adc880fb464895726dbdf/uploads/2022/08/2022081637-1.pdf.

[35] *Id.*

[36] *Staqu turns profitable after 1100 police cases*, BUSINESS INSIDER INDIA(June 20, 2019), https://www.businessinsider.in/staqu-turns-profitable-after-1100-police-cases-and-one-funding-round/articleshow/69871636.cms.

[37] Law Commission, *supra* note 34, at 99; *Courts and Pre-Sentencing*, N.Z. DEP'T OF CORR. (2017), http://www.corrections.govt.nz.

We are now at a crossroad, wherein we can devise a definitive legal framework and harness this technology to not only give a greater chance of reformation to the accused but also minimize overcrowding in scarce jails. With all its ups and downs, the Indian justice system has moved through the first two phases and is now at the beginning of Phase III. The start of Phase III of the project was officially approved by the Union Cabinet in 2023, with an initial timeline of four years.[38] The Action Plan had initially proposed facilities such as a digital inventory of files, digital signature, computerised filing, etc. under this phase.[39] However, the exponential progress of technology had enabled all such measures to be already integrated under Phase II; which means that Phase III must move beyond what was originally proposed.

The vision document of Phase III has identified it as a 'digital court's project', which identifies the move from digital documentation and filing to a holistic digital justice system.[40] The idea is not to "*merely digitise paper-based processes*", but to "*transform processes for a digital environment*".[41] In this way, it goes beyond simple access to information and documents, but rather, towards transforming the overall justice system. The new era of the legal system seeks to enable effective pleading and fair adjudication by inculcating technology, including video and audio mechanisms.[42] It also focuses towards a 'smart system', where automated data-driven decisions

---

[38] Department of Justice, *Phase-III*, MINISTRY OF LAW AND JUSTICE, https://doj.gov.in/Phase-iii/ (last visited Oct 23, 2024).
[39] E-Committee, *supra* note 7.
[40] E-Committee, *Digital Courts Vision & Roadmap: E-Courts Project Phase III*, SUPREME COURT OF INDIA (2022).
[41] *Id.*
[42] *Id.*

would be made for scheduling and prioritisation of cases, as according to the capacity of judges and other stakeholders.

In this vision document, it has been recognized that the primary issue for Phase I and Phase II was caused by separate and scattered initiatives, and for Phase III to be successful, a holistic ecosystem approach must be adopted. Instead of trying to devise solutions to the existing problems, Phase III seeks to create an environment of inclusivity of both public and private stakeholders for creating solutions. Considering, the range of different needs of the citizens and other entities, along with the over-arching technological evolution, the document emphasized that dispute resolution must "*not just remain as a sovereign function, but evolve as a service*".[43] The services to be implemented during this Phase have been identified as digital repositories, disability friendly documentation, intelligent scheduling, and digital case management systems, e-filing; live streaming of courtrooms, transcriptions, helpdesk services, connected and interoperable criminal justice system, and virtual courts.[44] By the end of this phase, litigants and lawyers should be able to file, plead, and reach the resolution of a case without once stepping foot inside the courtroom.

Quite a few of these measures have already been implemented. The websites and mobile applications see millions of daily users. Automated emails and SMSs regarding important case-related information are in place for several courts. In order to support various kinds of

[43] *Id.*
[44] *Id.*

payments in the justice system, the e-Pay portal has been created as a consolidated access point. The e-Filing system, also widely implemented, provides support for drafting and submission of pleadings, recording oaths, and e-signatures. The e-courts portal is regularly updated in almost near-time manner regarding case status and documentation.[45]

It is true that Phase III aims to counter the root causes behind the problems faced in Phases I and II. It is still in nascent stages, and it is too early to speak of its successes and failures. However, what stands-out, is the absence of focus on the need to integrate Artificial Intelligence ("**AI**") into the system or the lack of faith in AI in the justice process. Though the plan for Phase III mentions implementing a smart system for scheduling cases, we know that modern AI is capable of much more. A great example of this would be the Correctional Offender Management Profiling for Alternative Solutions ("**COMPAS**") which helps the judges in the United States of America suggest rehabilitation mechanisms based on the criminal history, social and economic background, and mental health of the offender.[46]

The potential of AI has been recognized by the former Chief Justice of India, Justice S.A. Bobde, who proposed the introduction of AI in the justice system to reduce pendency of cases.[47] Some AI tools are

---

[45] E-Committee, , *E-Courts: Digital Transformation in Indian Judiciary*, SUPREME COURT OF INDIA, (Nov. 28, 2023), https://ecourts.gov.in/ebook/mobile/index.html.

[46] Tim Brennan & William Dieterich, *Correctional Offender Management Profiles for Alternative Sanctions (COMPAS)*, *in* HANDBOOK OF RECIDIVISM RISK/NEEDS ASSESSMENT TOOLS 49 (2017).

[47] Promila Dhar, *India: Role of Artificial Intelligence in Justice Delivery System*, WARWICK LEGAL NETWORK (Sep. 6, 2023), https://www.warwicklegal.com/news/627/india-role-of-artificial-intelligence-in-justice-delivery-system.

already being used in India, examples being: *Supreme Court Vidhik Anuvaad Software* ("**SUVAS**") for translating legal documents, Supreme Court Portal for Assistance in Court Efficiency ("**SUPACE**") for legal research, etc.[48] At such a juncture, the silence of the Phase III vision document on AI is somewhat concerning.

IV. PEERING AT THE FUTURE

India's journey of integrating modern technology into its judicial system has been a long one, made even more difficult by the diverse needs of its courtrooms and stakeholders at different levels and regions. The continuous development of technology has, at the same time, made this task both easier and more difficult. While the goals previously set have become more easily achievable due to such innovations, the ultimate goal has moved further and further. Initially, Phase III of the plan involved simpler measures such as information availability and digital signatures the target is now to create virtual courts across the nation.[49]

Learning from the mistakes of Phases I and II, it is time to look beyond conventional measures and explore all that modern technology has to offer and implement the same in Phase III. Innovations such as AI would be crucial in dealing with the efficiency and pendency-related issues of the judiciary. The recorded data for 2024 showcases that around 84,000 cases are pending before the Supreme Court, 60 lakh cases before the

---

[48] Ministry of Law and Justice, *Lok Sabha Starred Question No 147*, DIGITAL SANSAD (Dec. 16, 2022), https://sansad.in/getFile/loksabhaquestions/annex/1710/AS147.pdf?source=pqals.

[49] E-Committee, *supra* note 7; E-Committee, *supra* note 30.

High Courts, and 4.5 crore cases before subordinate courts.[50] These staggering figures of pendency before the judiciary highlight the extent and urgency of the problem.

The idea here is not to replace human judgment with AI but to facilitate and enhance human action. As discussed before, AI tools such as SUPACE and SUVAS are already in use in the Supreme Court for tasks such as legal research or translation.[51] The next logical step in this regard would be predictive justice,[52] where AI models would analyse historical case data, background information of the litigants, and support the judges' decision-making regarding case outcomes. By this amalgamation of human and artificial intelligence, it is possible to bring a new era of revolution in the Indian justice system.

A. TECHNOLOGICAL ADVANCEMENT AND HUMAN RIGHTS ISSUES

The Universal Declaration of Human Rights recognised the inherent dignity and equal rights of all human beings.[53] Given the affirmation of the 'Digital Computer' by the General Assembly in 1939, we may assume this as the beginning of the Digital Era. This affirmation also propounded upon the idea that those rights held by people offline, must also be simultaneously protected for people online along with

---

[50] National Council of Applied Economic Research, *supra* note 12.
[51] Ministry of Law and Justice, *supra* note 38.
[52] Bhisma Khanna, *Predictive Justice: Using AI for Justice*, CENTRE FOR PUBLIC POLICY RESEARCH (May 2021), https://www.cppr.in/wp-content/uploads/2021/05/PREDICTIVE-JUSTICE-USING-AI-FOR-JUSTICE-2.pdf.
[53] G.A. Res 217 (III) A, The Universal Declaration of Human Rights (Dec. 10, 1948).

respect the rights of privacy along with other rights in digital communications. Thus, the question may be raised, *"Does the notion of 'normative equivalence,' between 'offline' and the 'online' afford effective protection of human rights in the digital age?"* For example - Do the advantages of E-courts and video-conference in e-courts give opportunities to all to watch or experience technological advancement? Is there any extraordinary social impact on the interest of the human condition? Is it resulting into a new violation of the right to access to justice by the people online *vis-à-vis* offline?

Thus, three generations of digital human rights are developing which go beyond the normative equivalency paradigm. The first generation of digital human rights involves reinterpreting existing human rights to align with the evolving conditions of the digital age. An example of first-generation digital human rights is the right to privacy. Traditionally, this meant protection from physical intrusion or unwarranted searches. In the digital age, it extends to safeguarding personal data online, such as ensuring social media platforms or governments don't misuse users' data without consent. The second generation entails the development of new digital rights in the cyberspace, protecting online needs and interests which were not covered in traditional human rights. The third generation of human rights involves attempts to designate new right holders and duty holders. The concept of digital personality directly places appropriate legal obligations on private technological companies.

B. ARE WE EVOLVING TO DELIVER JUSTICE THROUGH TECHNOLOGY?

Globally, it is widely accepted that algorithms should not be applied in the criminal justice system due to concerns about their use and the automated decision-making systems in sensitive areas such as policing, sentencing, bail decisions, and parole evaluations. The Wisconsin Supreme Court, in *State v. Looms (2016)*[54], the court held that judges may refer to an algorithmic recidivism assessment program, but it should serve as only one factor in their final decision. Algorithm assessment must not replace the judge's discretion. Even the European Union, under Article 22 of the General Data Protection Regulation ("**GDPR**") in 2016[55], provides that individuals should not be subject to decisions based solely on automated processing. However, in matters of administration of justice, especially correctional administration, all the developed countries already adopted technology in the probation system and rehabilitation of prisoners. The Union Law Minister launched the 'Mission Mode Programme for Reduction of Pendency of Arrears in Courts' ("**Programme**") in 2011.[56] The programme sought to resolve 40% of the cases currently pending in subordinate courts nationwide within the next six months. Technology had also been adopted for more than a decade to reduce the huge pendency of cases in at all levels of Courts. Despite these efforts, as of 30th September 2010, a total of 2.8 crore cases were pending in

[54] *State v. Loomis*, 881 N.W.2d 749 (Wis. 2016.).
[55] The EU GDPR, EU 2016/679, Apr. 27, 2016, art. 22.
[56] Press Trust of India, *Minister Launches Mission Mode in State*, THE INDIAN EXPRESS, (July 3, 2011), https://indianexpress.com/article/cities/ahmedabad/minister-launches-mission-mode-in-state/.

subordinate courts and 42 lakhs in High Courts.[57] Over the past decade pendency has risen by 148% in the Supreme Court, 53% in High Courts and 36% in subordinate courts.[58] In 2024, the total number of pending cases across all levels in India exceeded 51 million, with more than 87% of these cases still pending in the District Courts. Approximately 9% of these cases have been pending for over a decade, while an additional 24% have been pending for more than 5 years.[59]

The pendency of cases across Indian courts has increased by 38% in the last decade. The 'Access to Justice Reports' of UNDP & Ministry of Justice Project Report, revealed that in India less than 1% of the population approaches the court for litigation every year. Therefore, our constitutional promise of 'social justice' is still far away. In spite of the adoption of technology in the justice system question remains: Who benefits? Are we progressing? Are we evolving? Or circling back to the observation made hundred years ago by the novelist, who wrote 'Bande Mataram', and described the courts as a place for rich people's mockery.[60]

---

[57] PRS Legislative Research, *Vital Stats: Pendency of Cases in the Judiciary*, PRS (July 25, 2018), https://prsindia.org/billtrack/prs-products/vital-stats-on-pendency-of-cases-in-the-judiciary.
[58] *Id.*
[59] *Id.*
[60] BANKIM CHANDRA CHATTOPADHYAYA, ANANDAMATHA (1882).