

THE NATIONAL UNIVERSITY OF ADVANCED LEGAL STUDIES, KOCHI



DISSERTATION

Submitted in partial fulfilment of the requirement for award of degree in

MASTER OF LAW (LL.M)

(2023-24)

ON THE TOPIC

**Technology and its Impact on Gender Disparity: an Analysis with Special Reference
to Artificial Intelligence**

Under the Guidance and Supervision of

Dr. Athira PS.

The National University of Advanced Legal Studies, Kochi

Submitted by:

Debasrita Choudhury

Register No: LM0123005

LL.M (Constitutional and Administrative Law)

CERTIFICATE

This is to certify that **DEBASRITA CHOUDHURY** Reg. No. LM0123005 has submitted her dissertation titled, “**Technology and its Impact on Gender Disparity: an Analysis with Special Reference to Artificial Intelligence**”, in partial fulfilment of the requirement for the award of Degree of Master of Laws in Constitutional and Administrative Law to the National University of Advanced Legal Studies, Kochi under my guidance and supervision. It is also affirmed that, the dissertation submitted by her is original, bona-fide and genuine.

Date:

Dr. Athira P. S.

Place: Ernakulam

Guide and Supervisor

NUALS

DECLARATION

I declare that this dissertation titled, “**Technology and its Impact on Gender Disparity: an Analysis with Special Reference to Artificial Intelligence**”, researched and submitted by me to the National University of Advanced Legal Studies in partial fulfilment of the requirement for the award of Degree of Master of Laws in Constitutional and Administrative Law, under the guidance and supervision of Dr. Athira P. S. is an original, bona-fide and legitimate work and it has been pursued for an academic interest. This work or any type thereof has not been submitted by me or anyone else for the award of another degree of either this University or any other University.

Date:

Debasrita Choudhury

Place: Ernakulam

Reg. no: LM0123005

LL.M (Constitutional & Administrative Law)

NUALS

ACKNOWLEDGEMENT

It is my great pleasure to acknowledge my deepest thanks and gratitude to **Dr. Athira P. S.** for her valuable guidance and suggestions throughout my research. It was a great honour to work under her supervision.

I would like to extend my gratitude to the Vice-Chancellor **Hon'ble Justice (Retd.) S. Siri Jagan** for his constant encouragement and support. I express my sincere thanks to **Prof. (Dr.) Mini S**, Director of Centre for Post Graduate Legal Studies for her supports and encouragement extended during the course.

I would further extend my deep-felt gratitude to all the faculties of NUALS for their constant encouragement.

I would also like to thank the library staff for the support rendered in collecting and compiling material for this research.

DEBASRITA CHOUDHURY

CONTENTS

CHAPTER 1: Introduction	9
1.1 Objective of the Study	10
1.2 Research Questions	11
1.3 Hypothesis	11
1.4 Research Methodology	11
1.5 Review of Literature	11
1.6 Chapterisation	13
CHAPTER 2: Evolution of Feminist Jurisprudence and Indian Perspective	14
2.1 Feminist Jurisprudence	14
2.2 Indian Viewpoint on Women's Rights	17
CHAPTER 3: Changes in the Mode of Exercise of Expression by Digital Media: An Analysis	25
3.1 Different Ideas of Liberty	25
3.2 An analogy	26
3.3 Social media and Stalking	28
3.4 Natural Language Processing (NLP)	32
3.5 Deep Fakes	36
3.6 Pornography	42
CHAPTER 4: AI in Healthcare vis a vis Women's Rights	51
4.1 Adverse Effects of Unrestricted AI Inculcation in Healthcare	52
4.2 Possible Solutions for Mitigating these Issues	58
4.3 Legal Repercussions	60
CHAPTER 5: AI in the Workforce: Mixed Effects on Women's Employment	62
5.1 Opportunities and Merits of AI for women in workforce	64
5.2 Challenges faced by Women with the Application of AI at workforce	65
5.3 Aiming to Mitigate Challenges	68

5.4 Legal aspects	72
CHAPTER 6: India’s Legal Framework to Tackle the Issues: Comparison with Other Countries.....	77
6.1 GDPR.....	77
6.2 Artificial Intelligence Act (AIA), 2024	82
6.3 Legal Framework regarding Protection against Misuse of AI in the United States.....	85
6.4 Indian Legal Framework to tackle the Issue	88
CHAPTER 7: Conclusion.....	95
7.1 Findings	96
7.2 Suggestions and Recommendations.....	102
Bibliography.....	104
Appendix.....	115

LIST OF CASES

Amitabh Bachhan Vs Rajat Negi & Ors., 2022 SCC OnLine (Del) 4110
Anil Kapoor Vs Simply Life India & Ors., 2023 SCC OnLine Del 6914
Anthem Inc. Data Breach Litigation, 2015, 162 F. Supp. 3d 953 (N.D. Cal. 2016)
Aparna Bhat Vs State of Madhya Pradesh, AIR 2021 SC 1492
Bodhisattwa Gautam Vs Subhra Chakraborty, 1996 AIR 922
Consumer Education and Research Centre Vs Union of India, AIR 1995 SC 922
Government of Andhra Pradesh Vs PK Bijayakumar, AIR 1995 SC 164
Independent Thought Vs Union of India, AIR 2017 SC 4904
Inspector General of Police & Anr. Vs S. Samuthiram, AIR 2013 SC 14
Joseph Shine Vs Union of India, 2018 SC 1676
Kalandi Charan Lenka Vs State of Odisha, 2017 SCC OnLine Ori 52
KS Puttaswamy Vs Union of India, (2017) 10 SCC 1
Memoirs Vs Massachusetts, 383 US 413 (1966)
Miller Vs California, 413 US 15 (1973)
Mracek Vs Bryn Mawr Hospital, 610 F. Supp. 2d 401 (E.D. Pa. 2009)
Mrs. X Vs Union of India, Neutral Citation Number: 2023:DHC:2806
National Legal Services Authority Vs Union of India, 2014 INSC 275
Paris Adult Theatre Vs Slaton, 413 US 49 (1973)
Parmanand Katara Vs Union of India, AIR 1989 SC 2039
R Vs Butler, [1992] 1 SCR 452
R Vs Hicklin, England and Wales High Court of Justice, Queen's Bench Division, 11 Cox C.C. 19 (1868)
Ramphal Vs State of Haryana, (2021) 16 SCC 207
Re: Prajwala Letters case, (2018) 15 SCC 551
Roth Vs United States, 354 US 476 (1957)
Samira Kohli Vs Dr. Prabha Manchanda, AIR 2008 SC 1385
Sorrell Vs IMS Health Inc., 564 US 552
State of Madhya Pradesh Vs Madan Lal, (2015) 7 SCC 681
Suchita Srivastava Vs Chandigarh Administration, AIR 2010 SC 235
Suhas Katti Vs State of Tamil Nadu, CC No. 4680 of 2004
W. Kalyani Vs State Tr. Insp. Of Police & Anr. AIR 2012 SC 497
Yogesh Prabhu Vs State of Maharashtra, 2006 (3) MhLj 691

ABBREVIATIONS

AI: Artificial Intelligence

AIR: All India Reporter

Anr.: Another

CCPA: California Consumer Privacy Act

DPDP: Digital Personal Data Protection

Et al.: And others

EU: European Union

GDPR: General Data Protection Regulation

Ibid: Ibidem (Same)

IPC: Indian Penal Code

IT: Information Technology

MeitY: Ministry of Electronics and Information Technology

NCII: Non Consensual sharing of Intimate Images

NCMEC: National Centre for Missing and Exploited Children

NCRB: National Crime Records Bureau

NDGFP: National Data Governance Framework Policy

NITI Aayog: National Institution for Transforming India

NLP: Natural Language Processing

Ors.: Others

PIB: Press information Bureau

S. or Sec.: Section

SCC: Supreme Court Cases

SMI: Social Media Intermediaries

STEM: Science, Technology, Engineering and Math

U.N.: United Nations

UDHR: Universal Declaration of Human Rights

UNESCO: United Nations Educational, Scientific and Cultural Organisation

Vs: Versus

CHAPTER 1

INTRODUCTION

"Gender equality is not about making women strong. Women are already strong. It's about changing the way the world perceives that strength." - G.D. Anderson¹

Internet has ushered in a world of convenience. But the problem with individual convenience is that, too much of it has to be curtailed lest it creates obstruction in freedom exercised by others. While more and more women are entering the workforce and earning a livelihood for themselves, it is claimed² (mostly, in the urban context) that there is lesser inequality of opportunity as economic independence and emergence of pro-women legislations³ have mitigated the disparity to some extent.⁴ However, this narrative does not provide the complete picture. Rather it fosters a climate of hostility among their male counterparts.

Recently, a remark by Smt. Smriti Irani, Union Minister for Women and Child Development and minister for Minority Affairs has sparked controversy and debate in media spheres. She spoke about her disregard concerning menstrual leaves for women.⁵ Even though this is not a novel concept in world jurisprudence and several countries⁶ grant

¹ GD Anderson is the pseudonym for Geena Dunne, an Australian feminist writer and founder of the Australian Charity, the Cova Project

² The **World Economic Forum's Global Gender Gap Score** in 2023 stands at 68.4%, an improvement of 0.3% compared to the previous year.

The **World Bank's "Women, Business, and the Law 2019"** report acknowledged improvements in India's legal and regulatory framework to promote gender equality. The study highlighted India's progress in areas such as women's mobility, workplace sexual harassment laws, and parental leave.

Catalyst, a global nonprofit working for women's advancement, published a report on "**Women in Indian Information Technology (IT) - The Untold Story**" In 2018. The report highlighted the presence of women in the Indian IT industry and the efforts made by some companies to promote gender diversity.

³ The Protection of Women from Domestic Violence Act, 2005; The Maternity Benefit (Amendment) Act, 2017; The Medical Termination of Pregnancy (Amendment) Act, 2021; The Hindu Succession Act, 1956 Amended in 2005 including daughters as successors to ancestral property having equal rights as sons etc.

⁴ Ibid

⁵ "Menstruation not 'Handicap': Smriti Irani opposes Paid Leave Policy", Deccan Herald, 14 December, 2023

⁶ **Japan** has a long-standing tradition of menstrual leave, known as "**seiri kyūka**." Some companies provide paid leave for women experiencing menstrual pain or discomfort. **South Korea** allows women to take up to two days of paid menstrual leave per year. The purpose is to address health concerns related to menstruation. **Taiwan** passed a law in 2013 allowing female workers to take one day of menstrual leave per month. The leave is considered part of sick leave and is paid. **Indonesia** introduced menstrual leave for female civil servants in 2018. Women are entitled to two days of paid menstrual leave per month. **Zambia** introduced menstrual leave in 2019. Female employees are entitled to one day of menstrual leave per month, and it is considered part of sick leave.

paid leaves to female employees on account of menstrual discomfort, Smt. Irani has clearly stipulated that India has no need for it and it should not be implemented. In accordance with the remark, she stated reasons that firstly, it is not a handicap, secondly, it would cause further discrimination as employers would refuse to appoint female employees if they have to accommodate period leaves for them. Rather than addressing the societal constructs and facilitating the workforce to all strata of employees the minister has chosen to take a practical albeit outdated approach to tackle discrimination in the workplace.

Speech matters, especially if it comes from eminent personalities. So does speech in commercial spheres, advertisements, social media etc. The battle of combating gender disparity is far from over. The era of convenience in the digital age, the emergence of Artificial Intelligence has made the problem more multi-faceted. The change has to be made in how we view laws and inequality in the context of changing times.

Artificial intelligence has rapidly overtaken traditional means and methods of working, and ushered in both ease as well as complicated issues with it. In the sphere of *social media*, how women exercise their right of freedom of speech guaranteed to them by the Constitution is being hindered as discrimination has increased manifold.

In *healthcare*, since ages, clinical trials have never been conducted on female bodies. The research on how symptoms of illnesses manifest differently in women is being inculcated in medical research only since the past few decades. AI entering unhindered in healthcare is perpetuating bias and inadvertently disadvantaging women more.

AI is set to take over jobs in several *workplace sectors* that are menial in nature or could be easily automated. Women seem to draw the short straw in this regard as well. While possibility of equitable work environment, prevention of recruitment and promotion bias can be effectively implemented with AI, as of now, such progress is stunted and discriminatory language in algorithms is observed.

The existent legal framework seems to fall short and this regulatory gap needs to be addressed with specific legislations.

1.1 Objective of the Study

The objective of the study is-

- To understand changes in exercise of freedom of speech by women in the era of digital media and AI

- To review how gender disparity persists in health and employment sectors in view of AI developments
- To understand if India is equipped to deal with the issues, focusing on gender discrimination ushered in with the advent of AI

1.2 Research Questions

1. Is the widespread application of Artificial Intelligence exacerbating the gender divide in India?
2. Whether the rise of digital media is implicitly hindering the exercise of fundamental rights of women?
3. Whether women are affected comparatively more in healthcare and service sectors due to the unregulated infiltration of AI?
4. Is the existing legal framework adequate in mitigating these disparities?

1.3 Hypothesis

Fundamental rights of equality, freedom of speech and prohibition of discrimination against women in the digital era are infringed with the unrestrained application of Artificial Intelligence and the current laws in force are inefficient to mitigate it.

1.4 Research Methodology

It is a purely doctrinal form of research. Primary sources include the Constitution of India, 1950, the Information Technology Act, 2000, the Digital Personal Data Protection Act, 2023, other statutes, court cases, statistics from National Crimes Bureau, other government websites

Secondary sources are books, journals, reports by several authorities, online articles, newspapers.

1.5 Review of Literature

- ✚ Safiya Umoja Noble, “Algorithms of Oppression: How Search Engines reinforce Racism”, NYU Press, 1st Edition, 2018, ISBN- [978-1-4798-4994-9](#)

The author in this book portrays how search engines, especially google perpetrate bias and reinforce discrimination against black people, especially black women. An intersectional feminist approach is taken to look at discrimination being perpetuated which the author calls 'algorithmic oppression'. The book ends on a plea for 'regulating decency', stating how 'big data' is inadvertently harmful to minorities, and historically oppressed classes.

🚩 Caroline Criado Perez, "Invisible Women: Data Bias in a World Designed for Men", Abrams Press, New York, 2019

The author demonstrates how women are often left out of data and algorithms, producing skewed and perhaps harmful results. The book covers a wide range of topics, including social media and technology. It offers a thorough analysis of the ways that gender bias in algorithm design and data gathering may harm women, particularly on social media platforms.

🚩 Sahar Takshi, "Unexpected Inequality: Disparate-Impact from Artificial Intelligence in Healthcare Decisions", 34 J.L. & HEALTH 215, 2021.

This Article attests to the fact that systemic discrimination in healthcare plagues marginalised groups. It is critical that authorities address healthcare discrimination as the healthcare sector uses AI and algorithm-informed technologies. Hospitals, doctors, and insurance companies are using AI technologies more often to make clinical and administrative decisions, but there isn't a framework that specifically gives AI users responsibility to refrain from discrimination.

🚩 Elana Zeide, "The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity", 91 UMKC L. REV. 403, 2022.

This is a very comprehensive article which asserts that algorithmic assessments are largely responsible for success in the field of employment. Bias in algorithm reinforces the glass ceiling hindering career growth and access to opportunities for women. AI may have exacerbated the pre-existent gender disparity in employment.

🚩 Pauline T. Kim & Matthew T. Bodie, "Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy", 35 A.B.A. J. LAB. & EMP. L. 289, 2021

Challenges faced by women on account of Artificial Intelligence in the workplace are majorly classified into two kinds, discrimination due to algorithmic bias and data security, privacy concerns. This article elaborates on the need for a comprehensive regulatory

framework to curb the challenges caused due to unrestrained use of Artificial Intelligence in the workplace.

1.6 Chapterisation

The First chapter is the introduction which gives an overview of areas to be covered in this dissertation. It contains objective, research questions, hypothesis and research methodology adopted in this study.

The second chapter is titled “Evolution of Feminist Jurisprudence and Indian perspective”. This chapter provides a theoretical understanding of feminist theories and how it has been applied in India through the decades. India has by and large been a welfare country, mindful of equal rights of women, however some social inequalities still persist

The third chapter is “Changes in the Mode of Exercise of Expression by the Digital Media: An Analysis”. This chapter goes in depth in the discrimination and crimes faced by women through social media, deep fakes, pornography etc. John Stuart Mill’s harm principle is quoted to justify the limitations of liberty.

The fourth chapter is “AI in Healthcare vis a vis Women’s Rights”. This includes the adverse effects of AI in healthcare that seem to affect women comparatively more than men. Issues of privacy, reproductive choice, patient-doctor relationships in the age of AI are discussed.

The fifth chapter is “AI in the Workforce: Mixed effects on Women’s Employment”. Different studies have found mixed results regarding AI affecting women in employment. While some suggest alleviating recruitment and workplace bias, others have assessed that women, mostly employed in specific kinds of work, face termination of jobs with the advent of AI.

The sixth one is “India’s Legal Framework to Tackle the Issues: Comparison with other Countries”. European Union has made the first AI Act recently. US has incorporated conflict regarding AI to be treated under specific existing statute as well as State tort law. Comparison of these are made with legal framework of India.

The last chapter is “Conclusion” which is devoted to summarizing and concluding the findings of the study and giving possible suggestions.

CHAPTER 2

EVOLUTION OF FEMINIST JURISPRUDENCE AND INDIAN PERSPECTIVE

Before delving directly into discrimination women face and Artificial Intelligence, it is pertinent to understand in brief the purpose and evolution of feminist jurisprudence and how India views it in light of uplifting as well as protecting women's rights.

2.1 Feminist Jurisprudence

Feminist jurisprudence, or feminist legal theory, is predicated on the idea that women's historical subjugation has been largely caused by the legal system. Feminist legal theory has two goals in mind. Initially, the goal of feminist jurisprudence is to elucidate the manner in which women's previous subservient position was influenced by the law. Second, the goal of feminist legal theory is to improve women's standing by reworking the legal system's gender based perspectives.⁷ It is a legal theory founded on the political, economic, and social equality of women. It has an impact on several discussions about gender-based discrimination, job inequity, and sexual and domestic abuse. Feminists have pointed out the malign consequences of laws and behaviours that apparently seem neutral but are inherently biased.⁸

Feminist jurisprudence's analysis and understanding have been beneficial to laws pertaining to employment, divorce, reproductive rights, rape, domestic abuse, and sexual harassment. Women's contributions to shaping history and societal structure are underrepresented in historical accounts since they were written from a male perspective. Bias has been introduced into conceptions of gender roles, human nature, and societal structures via male-written history. The law was written by men and is based on their reasoning, language, and organizational principles.⁹

Deviation from the norm

⁷ Ann C Scales, "The Emergence of Feminist Jurisprudence: An Essay", *The Yale Law Journal*, Jun., 1986, Vol. 95, No. 7 (Jun., 1986), pp. 1373-1403, 1986

⁸ Baer, Judith A, "Our Lives Before the Law: Constructing a Feminist Jurisprudence", Princeton, NJ: Princeton University Press, 1999

⁹ Ibid

Prevalent legal conceptions strengthen and sustain patriarchal dominance by portraying male attributes as the norm and feminine features as a deviation from the norm. Feminists contest the idea that a person's conduct may be ascribed to their sex because of the biological differences between men and women. Gender is socially rather than biologically formed.

According to **traditional, or liberal feminism**, women should have the same freedom to make their own decisions as men since they are just as sensible.

The 18th century is when modern liberal feminism first emerged historically. An essential tenet of this ideology was individualism, which denoted the notion that a person is free to pursue her interests unhindered by others. An individualistic kind of feminist thought known as the liberal feminism emphasizes women's capacity to maintain their equality by personal decisions and actions. Its main focus is on giving women the same legal and political rights as men. According to liberal feminists, society discriminates against women in the workplace, in forums, and in the classroom because it is mistakenly convinced that women are inherently less intellectually and physically competent than males.¹⁰

Catherine Rottenberg notes that the *raison d'être* of classic liberal feminism was "*to pose an immanent critique of liberalism, revealing the gendered exclusions within liberal democracy's proclamation of universal equality, particularly with respect to the law, institutional access, and the full incorporation of women into the public sphere.*"¹¹

Liberal feminists claim that because women and men are essentially the same, liberals should treat them equally and adhere to their own ideals of equality and universal human rights. These thinkers contend that laws should not impose limitations or provide preferential treatment based only on a person's gender.¹²

Cultural feminists, a different school of feminist legal theory, emphasizes and embraces the distinctions between men and women. They contend that whereas men prioritize abstract legal ideas and reasoning, women place more value on relationships. This school seeks to equalize the voice of women in morality, community values, and care. Liberal feminism's emphasis is flipped by cultural feminism. It contends that feminism's primary goal should be changing institutions to reflect and accommodate values that it views as

¹⁰ Gary Minda, "Feminist legal theory", *Postmodern Legal Movements: Law and Jurisprudence at Century's End*, NYU Press, pp- 128-148, 1995

¹¹ Catherine Rottenberg, "The Rise of Neo Liberal Feminism", *Oxford University Press, Cultural Studies*, 28(3), 2018 418–437, <https://doi.org/10.1080/09502386.2013.857361>

¹² Ibid

women's nurturing virtues, such as love, empathy, patience, and concern, rather than trying to incorporate women into patriarchy and demonstrate that they are similar to men, capable of functioning like men, and able to conform to male norms.¹³

The emphasis of **radical or dominant feminism** is on inequality. It claims that gender inequality has resulted from separating men and women into two separate classes and resultant men's class dominance over women's class. Radical feminists demand that conventional methods be given up which use maleness as their point of reference. Radical feminism views the problem of gender equality as one of male dominance over women rather than one of diversity and sameness¹⁴. It advocates for a drastic restructuring of society in which male domination is eradicated in all spheres of society, including the social and economic. Radical feminists challenge established social norms and structures in order to free everyone from an unfair society, which they regard as primarily a patriarchal system in which men rule and oppress women. This entails resisting the objectification of women for sexual purposes, educating the public about problems like rape and violence against women, and questioning the concept of gender roles themselves.¹⁵

According to radical feminist theory, women have historically been oppressed and disadvantaged because they are seen as the 'other', or the deviation from the norm to the male norm as a result of patriarchy. They go on to say that the subjugation of women benefits males as a class. The idea that all men are always better off when all women are oppressed is not a common definition of patriarchal philosophy. Instead, it contends that a relationship of dominance, in which one side is powerful and uses the other for the advantage of the former, is the fundamental component of patriarchy.¹⁶

Law and justice are a logical development of feminist jurisprudence. The use of legal techniques has been crucial to women's groups' fights for more social justice and equality. Law plays a crucial role in the establishment, upkeep, reinforcement, and continuation of

¹³ Simantini Baraokar, "Shifting from the Patriarchal Legal Model to a Cultural Feminism Model: Combating the Double Burden on Women", 5 INT'L J.L. MGMT. & HUMAN. 414, 2022

¹⁴ Catherine Mackinnon, "Feminism Unmodified: Discourses on Life and Law", Cambridge: Harvard University Press, 1987

¹⁵ Gordon Graham, "Liberal Vs Radical Feminism Revisited", Journal of Applied Philosophy, Vol. 11, No. 2 (1994), pp. 155-170, 1994

¹⁶ Richard A. Epstein, "Liberty, Patriarchy, and Feminism", 1999 U. CHI. LEGAL F. 89, 1999

patriarchy, according to feminist theory, and it examines strategies for change.¹⁷ For example, Dr. Taslima Monsoor views the Bangladeshi law in protecting women stemming from a paternalistic approach where women are protected by the state on account of their de facto status of weaker class or protected class.¹⁸

According to **post-modern feminism**, equality must be reconstructed from a feminist perspective. The school places a strong emphasis on the process of self-definition and the approach that will increase awareness and give voice to the experiences of women that are unknown. This is due to their belief that there are various truths, dependent upon experience and viewpoint rather than a single, unchanging reality. Postmodern feminists use a technique called deconstruction, wherein they examine laws to uncover implicit prejudice. Deconstruction is a tool used by postmodern feminists to argue that laws shouldn't be immutable since they were made by possibly biased individuals and may thus contribute to the oppression of women.¹⁹

2.2 Indian Viewpoint on Women's Rights

In India, the interests of women are safeguarded by our Constitution, which takes all necessary precautions to uphold women's rights. In the case of *National Legal Services Authority Vs Union of India*²⁰, the preamble of the Constitution was examined. It was determined that the concepts of justice- social, economic, and political- equality of status and opportunity, and guaranteeing individual dignity- all of which are included in the preamble clearly recognize the right of every citizen to these fundamental necessities, which are intended to foster each person's unique personality to the fullest. The idea of equality enables everyone to realize their full potential, which is similar to the idea of positive liberty.²¹

Social justice is the interpretation of the Preamble's embedded spirit of the Constitution, not just equality before the law in the written form. Although it provides guidance to the Constitution, the preamble is not the source of authority. Once again, the Preamble affirms

¹⁷ Smith, Patricia, ed., "Feminist Jurisprudence", New York: Oxford University Press, 1993

¹⁸ Taslima Monsoor, "Gender in Law: Five Decades of Struggle for Empowerment", The Dhaka University Studies, Part-F Vol. XII (I): 1-16, June 2001

¹⁹ Edited by Nancy E. Dowd and Michelle S. Jacobs, "Feminist Legal Theory: An Anti-Essentialist Reader", New York Univ. Press, 2003, ISBN 0-8147-1913-9

²⁰ National Legal Services Authority Vs Union of India, 2014 INSC 275

²¹ Infra at Note 49

the "*dignity of individuals*," which includes women's dignity. Our benevolent Constitution takes gender equality into consideration. It undoubtedly demonstrates that the drafters of the Constitution were committed to equality and treating women equally in all domains.

Fundamental Rights

In terms of equality, the positive egalitarian environment is safeguarded by the rights and protections our Constitution grants us. Our Constitution framers' ideas are reflected in Articles 14²² and 15²³, which further protect women from gender discrimination. According to the interpretation of Article 14 in the context of gender equality, everyone, including women, is equal before the law and has the right to equal protection under the law wherever within India's borders. Men and women should be treated equally in identical situations by the law of the State.

In contrast, Article 15 shields women against discrimination of any kind. Article 15(3), grants the state authority to create any particular provisions for women and children in order to uphold the notion of equal protection under the law in situations when the same treatment would have been provided but was violated. This provision is acknowledged in light of the fact that Indian women have historically experienced social and economic disadvantages, which has reduced their participation in the country's socio-economic activities on an equal basis. The fundamental tenet of the provision is to give women a voice, end their socioeconomic disadvantage, and most importantly, empower them.²⁴

Without a question, democracy gives everyone the same opportunity to participate in the decision-making process. Since they make up about half of the population and are free citizens, women should be allowed to use democratic channels to voice their complaints. However, because of cultural norms and socioeconomic factors, they are ineffective participants in the democratic process. It is essential to interpret the Constitution and laws in a way that is pro-women and anti-subordination due to the drawbacks of democracy and the dangers of parliamentary majoritarianism. This clause was also adopted in the light of positive discrimination.

²² Article 14: The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.

²³ Article 15: 15(1) The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them. 15(2) No citizen shall, on grounds only of religion, race, caste, sex, place of birth or any of them, be subject to any disability, liability, restriction or condition with regard to-(a)access to shops, public restaurants, hotels and places of public entertainment; or(b)the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of State funds or dedicated to the use of the general public.15(3) Nothing in this article shall prevent the State from making any special provision for women and children.

²⁴ Mohd. Aqib Islam, "Feminist Jurisprudence and its Impact in India: An Overview", Legal Service India Page | 18

Agreeing that the Constitution is itself feminist, Justice DY Chandrachud articulated, “Feminism is lot about disruption of social hierarchies and that is what the Constitution intends to do. Transformation involves a disruption of the existing social structures”²⁵

In the *Bodhisattwa Gautam Vs Subhra Chakraborty*²⁶ case, the court discussed the need of enacting legislation that would prevent the patriarchal practices of dominance over women. The court ruled that because women in our nation belong to a class or group that is disadvantaged due to a number of social barriers and impediments, they have unfortunately suffered from tyranny at the hands of men. The court further ruled that certain laws serve to improve the status of women in society and are fully constitutional because they fall under the legal category of positive discrimination, which is essentially the rule of equal protection.

Directive Principles of State Policy

Protection for women with the aim to achieve equality of opportunity and life for both men and women are enshrined in the Fundamental rights in Part III of the Constitution as well as the Directive Principles of State Policy in Part IV. Gender equality is discussed in Articles 39(a)²⁷ and 39(d)²⁸ of the Directive Principle of State Policy. While the latter Article advocates equal compensation for equal labour for men and women, the former discusses the equal rights of men and women to a sufficient means of subsistence. Essentially, the Directive Principles of State Policy rest on the idea of preserving a balance between socialism and individuality. The DPSPs has done all possible to address the issue of women in the postmodernist world.²⁹

Women’s status has not been overlooked by the Constitution when considering the legislation taken as a whole. Without a doubt, the drafters of our Constitution attempted to include every clause they could think of that would have resulted in reduction of discrimination against women.

²⁵ Justice Chandrachud on Transformative Constitution & Feminism, “Constitution Itself Is Feminist” Live Law, 2018, available at www.livelaw.in/constitution-itself-is-feminist-justice-chandrachud-on-transformative-constitution-feminism/

²⁶ *Bodhisattwa Gautam Vs Subhra Chakraborty*, 1996 AIR 922

²⁷ Article 39(a): The State shall, in particular, direct its policy towards securing--(a)that the citizens, men and women equally, have the right to an adequate means to livelihood

²⁸ Article 39(d): that there is equal pay for equal work for both men and women

²⁹ Supra at Note 22

Protective Role

Despite the existence of regulations in the Constitution that support equality, women continue to face disadvantages in the 21st century. Because of the stagnant nature of our culture, women are still seen through the patriarchal lens.³⁰

The patriarchal and traditional aspects of Indian society have been reflected in the interpretations of the Constitution's clauses, notwithstanding its vast scope. When the courts interpret the laws, they make it harder for society as a whole to grasp. The court, as a means of enforcing justice, often assumes a protectionist posture. Disbalance arises in society when rules are interpreted differently based on the belief that women are weaker than men. Patriarchy and bigotry end up becoming the basis when such an ideology takes up.³¹

When women are seen to be the weaker sex, they are treated as men's property. The term "weaker sex" was included by the Constitution in recognition of the historical inequality faced by women. Their previous cultural and economic biases have slowed down their pace of development, and as a result, they now need laws to advance. The idea that women are naturally weaker than men is not mentioned anywhere in the Constitution. These kinds of patriarchal interpretations have been around for a while.

Using the statute of adultery as an example, which is now unconstitutional, it was previously decided in the case of *W. Kalyani Vs State Tr. Insp. Of Police & Anr*³² that only males could be tried for the crime of adultery and that women could not. The ruling drew further criticism for exhibiting a marked gender bias that treated a married woman as practically her husband's property.

Later in the case of *Joseph Shine Vs Union of India*³³, adultery was decriminalized on September 27, 2018, when a five-judge bench unanimously decided to overturn Section 497³⁴ of the Indian Penal Code (IPC). On the basis that it contravenes Articles 14, 15, and

³⁰ Himani Bannerji, "Patriarchy in the Era of Neoliberalism: The Case of India", *Social Scientist*, March–April 2016, Vol. 44, No. 3/4 (March–April 2016), pp. 3- 27, 2016

³¹ *Supra* at Note 30

³² *W. Kalyani Vs State Tr. Insp. Of Police & Anr*. AIR 2012 SC 497

³³ *Joseph Shine Vs Union of India*, 2018 SC 1676

³⁴ IPC, Section 497: Adultery - Whoever has sexual intercourse with a person who is and whom he knows or has reason to believe to be the wife of another man, without the consent or connivance of that man, such sexual intercourse not amounting to the offence of rape, is guilty of the offence of adultery, and shall be punished with imprisonment of either description for a term which may extend to five years, or with fine, or with both. In such case the wife shall not be punishable as an abettor.

21³⁵ of the Constitution, it invalidated Section 497 IPC. According to the Bench, the clause violates a woman's liberty and dignity and is an outdated, paternalistic statute. Section 198 of the Code of Criminal Procedure Code (CrPC) was also struck down by the Bench. Only a husband may bring charges for offences under Section 497, according to CrPC 198(2)³⁶.

“Autonomy is intrinsic in dignified human existence and Section 497 denudes women from making choices” – Justice DY Chandrachud³⁷

Women were seen as being under the authority of and subservient to males. It took the Indian court about 160 years to realize that women are not property and have status that is on par with that of males. The equality requirements included in Article 14 did not stop the court from using a different interpretation of the legislation. The court concluded in the most recent Section 497 ruling that neither a husband's control over his wife nor a patriarchal control over his daughter could exist.³⁸

Although the ruling is a step in the direction of gender parity, it is undoubtedly too late to recognize the discrimination that women have faced. Women's independence has been violated primarily by the courts' lack of awareness of gender neutrality notwithstanding the safeguards outlined in the Constitution.

In the case of *Independent Thought Vs Union of India*³⁹, a division bench of the Supreme Court of India interpreted Section 375⁴⁰, Indian Penal Code as amended. This means that sexual relations between a man and his spouse, if the spouse is at least eighteen years old, does not constitute rape. Prior to this, the clause had specified that the age was 15 instead of 18. In addition to being a dehumanizing act, sexual assault violates a woman's right to privacy and her sanctity. It degrades and humiliates the victim, and in cases when the

³⁵ Article 21: Constitution guarantees Right to life and personal liberty except according to procedure established by law.

³⁶ CrPC Section 198(2): For the purpose of Sub-Section (1), no person other than the husband of the woman shall be deemed to be aggrieved by any offence punishable under section 497 or section 498 of the said Code; Provided that in the absence of the husband, some person who had care of the woman on his behalf at the time when such offence was committed may, with the leave of the Court, make a complaint on his behalf.

³⁷ Supra at Note 33

³⁸ Joseph Shine Vs Union of India, 2018 SC 1676

³⁹ Independent Thought Vs Union of India, AIR 2017 SC 4904

⁴⁰ Under Section 375, Rape is “sexual intercourse with a woman against her will, without her consent, by coercion, misrepresentation or fraud or at a time when she has been intoxicated or duped, or is of unsound mental health and in any case if she is under 18 years of age.”

victim is a defenceless innocent child, it leaves a painful experience in its wake. It is a major blow to her honour and offends her self-esteem and dignity.

The rights granted to women in child marriage are the subjects of the "traditional practice" being discussed in this case. The Indian Penal Code elevated the custom to a sacred status by permitting a female child's spouse to engage in sexual relations with her without obtaining her permission, as long as the female is not younger than fifteen. The female child's right to preserve her physical integrity is violated when her husband has complete control over her body, turning her into his property, according to the Court's findings.⁴¹

The IPC similarly violates the right to bodily integrity of adult women by denying them the ability to reject permission to sexual relations with their husbands just by virtue of their marriage. It violates Article 15(3). In this case the court recognised for the first time that a spouse can be guilty of rape as well but only when the wife is below 18 years of age. As a result, the grounds for the Article 21 breach, as stated by the Court, apply to both adult married women and child brides in the same manner. This ruling upends the patriarchal rules that were previously common in our nation and stands firm on the principles of equality and fairness for women.

One of the glaring faults of this view of looking through an apparent 'protective' lens is highlighted by the case of *Aparna Bhat Vs State of Madhya Pradesh*⁴². In this case of sexual assault, the accused was given bail by the judge with the condition that he should go to the victim's house on 'raksha bandhan' and get a rakhi tied by her as well as give her 11 thousand rupees as rakhi gift. In Hindu culture and traditions, tying a rakhi by a sister on her brother implies an unwritten promise of protection and care by her brother. While a judge can set any reasonable conditions in bail for the welfare of all concerned, it has to be in the context of offence being committed. This was a blatant error on part of the judge to direct the accused to meet the victim and get rakhi tied by her. It trivialised the offence on one hand by looking at it from a patriarchal lens, on the other it eroded the dignity of the victim who would feel compelled to follow court directions unwillingly.⁴³

It has the same connotation as some cultures that used to force victims of rape or sexual assault to marry their perpetrators to save the apparent honour of the woman. The reasoning

⁴¹ Independent Thought Vs Union of India, AIR 2017 SC 4904

⁴² Aparna Bhat Vs State of Madhya Pradesh, AIR 2021 SC 1492

⁴³ Aparna Bhat Vs State of Madhya Pradesh, AIR 2021 SC 1492

given was absurd and blatantly patriarchal in nature. The courts cannot make decisions analogous to this. The courts must refrain from undertaking any such attempts at mediation or compromise in these cases. It negates the victims' suffering and plight, not to mention, having to revisit the trauma of the assault by these directions.

In *State of Madhya Pradesh Vs Madan Lal*⁴⁴ it was stated that “*in cases of sexual offences, the idea of compromise, especially in the form of marriage between the accused and the prosecutrix is abhorrent, and should not be considered a judicial remedy, as it would be antithetical to the woman's honour and dignity.*”

In *Ramphal Vs State of Haryana*⁴⁵ it was reiterated by the Court that compromise is irrelevant when it came to cases of sexual assault and rape.

The court gave very progressive guidelines in the *Aparna Bhat* case⁴⁶ like gender sensitisation modules for judges, part of AIBE syllabus for young practitioners etc. However, how far they will be fruitful is a thing only time can tell.

The Constitution has traditionally prioritized the protection of women, but the interpretation highlights a difficulty. As time goes on, the scope expands and the offences are more sincerely brought to light. Only in this instance was the offence of rape interpreted maturely and deemed to be among the most horrific crimes. Justice Madan B. Lokur noted in the ruling that:

*“One of the most horrible crimes against women is rape. It denigrates women. It undermines a woman's honour and hurts her dignity. It makes her seem smaller than she is and makes her feel less confident. It is against her right to life as protected by Article 21 of the Indian Constitution.”*⁴⁷

The IPC's provisions pertaining to honour crimes tackle the harsh reality that confronts women from underprivileged groups who refuse to conform to cultural standards and expectations. Honor killings emphasize the interaction of gender, caste, and community standards. They are often committed against women who pick their spouses against caste or community conventions. These acts perpetuate cycles of violence and discrimination because they are a reflection of ingrained preconceptions and uphold repressive caste

⁴⁴ *State of Madhya Pradesh Vs Madan Lal*, (2015) 7 SCC 681

⁴⁵ *Ramphal Vs State of Haryana*, (2021) 16 SCC 207

⁴⁶ *Aparna Bhat Vs State of Madhya Pradesh*, AIR 2021 SC 1492

⁴⁷ *Ibid*

structures. Honor crimes have a devastating effect on women from underprivileged areas, resulting in the loss of life, means of subsistence, and dignity.⁴⁸

In 1869, “Subjection of Women”⁴⁹ John Stuart Mill stated, “the subordination of one sex to the other ought to be replaced by a principle of perfect equality, admitting no power or privilege on the one side, nor disability on the other”.⁵⁰ We must progress to the extent that such a world is achievable.

⁴⁸ Versha Sharma, “Constitutional Provisions Relating to Women and International Instruments on Rights”. 16-17 ALJ (2001-02).

⁴⁹ John Stuart Mill and Harriet Taylor Mill, “Subjection of Women”, Longmans, Green, Reader and Dyer, 1869

⁵⁰ Justice Deepak Mishra, “Women Empowerment and Gender Justice, Special Training Programme for all District Judges and Chief Judicial Magistrates. Special Training Programme for all District Judges and Chief Judicial Magistrates”, Tamil Nadu, Tamil Nadu State Judicial Academy (2013) 3 LW (JS) 45.

CHAPTER 3

CHANGES IN THE MODE OF EXERCISE OF EXPRESSION BY DIGITAL MEDIA: AN ANALYSIS

3.1 Different Ideas of Liberty

Article 19 of the Indian Constitution, 1950⁵¹ provides freedom regarding certain rights such as freedom of speech and expression, to assemble peacefully, to move freely within the Indian territory as well as settle anywhere therein. The freedoms enumerated in this section are negative freedoms⁵². They promote and ensure these rights by preventing some other entity, namely the government, from interference in exercise of these rights. However, the struggle against inequality is more regarding positive freedom. Isaiah Berlin in “Two concepts of Liberty” made a differentiation between the freedom against interference which translates as negative freedom and the hindrance to fulfilling a right by factors that prevent a person from doing so. The two questions asked in this regard could be, firstly, ‘What is the area within which the subject- a person or group of persons- is or should be left to do or be what he is able to do or be, without interference by other persons?’ and secondly, ‘What, or who, is the source of control or interference that can determine someone to do, or be, this rather than that?’⁵³

The author arrives at the conclusion that the questions maybe different but the cause pertaining to the same may be overlapping in nature. The author considers the French revolution as an instance where positive freedom was the cause behind it. The poverty-stricken masses did not lack freedom as such. They were free citizens, subjects under the French monarchy however the monarchs proved to be their economic oppressors and the revolution became pertinent to ascertain positive freedom for themselves, the freedom to

⁵¹ 19. Protection of certain rights regarding freedom of speech etc

- (1) All citizens shall have the right
- (a) to freedom of speech and expression;
- (b) to assemble peaceably and without arms;
- (c) to form associations or unions;
- (d) to move freely throughout the territory of India;
- (e) to reside and settle in any part of the territory of India; and
- (f) omitted
- (g) to practise any profession, or to carry on any occupation, trade or business

⁵² Isaiah Berlin, “Two Concepts Of Liberty,” Four Essays On Liberty, (Oxford, England: Oxford University Press, 1969), p. 118-172., 1969

⁵³ Ibid

acquire the means to earn, to live with dignity, the ability to earn a livelihood free from economic and other handicap.

In this regard, inequality, the divide between men and women that seems to be never ending, has become broader with Artificial Intelligence. Pervasive and perpetuated inequality is discrimination as well. If the same logic is applied in gender disparity, there is a lack of positive freedom in ensuring emancipation of women as deep-rooted societally encouraged discrimination against them is prevalent even in the digital age and the era of Artificial Intelligence. Rather, that disparity has increased.

3.2 An analogy

When one speaks of gender disparity and greater access, a research area cannot stay constricted to just sociological or just legal. From an interdisciplinary angle, endeavour shall be made to draw an analogy with gendered speech, overt masculinity and how women fit in, all in the confines of an online video game World of Warcraft (WoW). Bonnie A Nardie, in her book titled, “*My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft*”⁵⁴ has a specific chapter dedicated to gender. She cites a lot of authorities as well as her own input to question the representation of female characters in the game as well as its hyper masculine culture and interactions that are considered extremely normal. The female participants are very less in number, and even if they are participating, they tend to be subversive and accepting of the apparent normalcy of the male dominated arena. One reason cited by the author was how males, usually in their 20s and 30s expressed themselves in a manner that would not be considered suitable in discourse at any other area of life. Under the garb of anonymity, blatant homophobic and misogynistic behaviour is considered not only common but a proof to attest to the competence and masculinity of the player. In the stark minority, female players have either one of two options, either to refrain from playing at all or to accept as well as participate minimally (playing along) in this kind of discourse.⁵⁵

Jokes about rape and rampant sexual carnage is commonplace. In several interviews with female players, they have been found to let it go as most of the competitive groups of the

⁵⁴ Bonnie A. Nardie, “My Life as a Night Elf Priest Book Subtitle: An Anthropological Account of World of Warcraft”, University of Michigan Press, Digitalculturebooks, <https://www.jstor.org/stable/j.ctvndv9nw.12>

⁵⁵ Ibid

game require a ‘high abuse tolerance’ and to participate in such, players have to make their peace with it.⁵⁶

While different from other games catered mostly to male players WoW is more inclusive and 20% of players are female in North American servers. This number is larger than most other games.⁵⁷

Freedom of expression of male players should stop at some border of civility. Brutality and crass language cannot be an excuse or reason cited for ousting female players from shared spaces. A lot of young impressionable boys participate in these games. Even if it is a fictional fantasy game, it sets up a bad precedent of acceptable limit of hyper masculinity. Besides it implies that men can only be fully themselves in these spaces and that involves engaging in such behaviour, which is far from the truth. Whether capturing young minds or providing an outlet for frustrations of real life, this is a thin ice to walk on when brought in the context of civility and law.

The counter argument may be that the freedom of speech of participants cannot be infringed.⁵⁸ The same logic could be applied to more widely viewed media such as television, cinema or art. But in that case, creative liberties cannot be infringed upon.

On December 7, 2023 Congress MP Ranjeet Ranjan delivered a strongly worded speech in the Rajya Sabha during Zero Hour in which she criticized the film ‘*Animal*’⁵⁹ directed by Sandeep Reddy Vanga. She expressed her deep concern for the portrayal and justification of violence and misogyny which she labelled to be “shameful” and a “disease to society.” Several eminent personalities have raised their concern over women’s portrayal in commercial cinema targeted to a large audience, mostly catered to young men. However, the fact that a Rajya Sabha MP had to abhor it in Parliament stands testament to the negative impact such portrayal in mass media may cause.⁶⁰

⁵⁶ Supra at Note 52

⁵⁷ Ibid

⁵⁸ Lately, In video games, abusive words are being censored and Artificial Intelligence is tracking the voice as well as text communications between players. They could be reported and on repeat offence they could be banned.

⁵⁹ ‘Animal’, 2023 Hindi language action crime drama revolves around a notorious son of a powerful industrialist who vows to take bloody revenge on those threatening his father’s life. It depicts female characters in a very subservient manner, glorifying toxic masculinity. Its Box Office collection was Rs. 917.82 Crores.

⁶⁰ Shemin Joy, “Negative Review for ‘Animal’ in Rajya Sabha; Cong MP calls Film ‘Disease’ to Society” Deccan Herald, 7 December, 2023

There used to be a time when obscenity charges were used against authors and artists citing that it infringed the sensitivities or boundaries of civility or public morality. And in contemporary times, more outrageous things are shown and protected in name of creative liberty, freedom of expression and realism. While obscenity is very subjective, creative liberty is becoming such as well.

3.3 Social media and Stalking

Portrayal of women in media took a turn with the digital era being embraced over countries worldwide. Despite progress in civil rights, restrictive gender-based representations persist in various contexts. Stereotyping, objectification, and sexualization of women are still common in the media. Exposure to stereotyping representations reinforces gender norms and fosters sexism and violence in men. It also stifles women's career ambitions. Objectifying and sexualizing representations lead to internalization of appearance ideals, sexist attitudes, and tolerance of abuse.⁶¹ Exposure to such representations can negatively impact physical and psychological well-being, including eating disorders and body image issues.⁶²

Female influencers play a significant role in shaping gendered narratives and discourses on social media. Their images impact public perceptions and contribute to societal norms and expectations.⁶³ Despite the democratizing promise of digital media, women remain underrepresented in traditional and digital news. Only 26% of people in Internet news stories and media news tweets are women, and only 4% challenge gender stereotypes.⁶⁴

⁶¹ Coyne, S. M., Linder, J. R., Rasmussen, E. E., Nelson, D. A., & Collier, K. M. (2014). It's a bird! It's a plane! It's a gender stereotype!: Longitudinal associations between superhero viewing and gender stereotyped play. *Sex Roles*, 70, 416-430.

⁶² Fabrizio Santoniccolo, Tommaso Trombetta, Maria Noemi Paradiso, and Luca Rollè, "Gender and Media Representations: A Review of the Literature on Gender Stereotypes, Objectification and Sexualization", *International journal of environmental research and public health* vol. 20,10 5770. 9 May. 2023, [doi:10.3390/ijerph20105770](https://doi.org/10.3390/ijerph20105770)

⁶³ Roberti G, "Female influencers: Analyzing the Social Media Representation of Female Subjectivity in Italy", *Front. Sociol.* 7:1024043., 2022, [doi: 10.3389/fsoc.2022.1024043](https://doi.org/10.3389/fsoc.2022.1024043)

⁶⁴ "Visualizing the data: Women's representation in society", UN Women, published in February, 2020

The gender imbalance in media perpetuates harmful stereotypes. Efforts are needed to increase women's visibility and accurate representation in media.⁶⁵

Content analyses reveal underrepresentation and misrepresentation of femininity and masculinity in mainstream media. While some positive changes have occurred, media's impact on gender stereotypes remains consistent.⁶⁶

Social media is a double-edged sword for gender equality with both negative and positive aspects.

There are unequal portrayals and reinforcing stereotypes. Social media can amplify existing gender stereotypes. Image-centric platforms can pressure women to conform to unrealistic beauty standards, while influencer marketing often channels women into promoting beauty and fashion products. Algorithms that power social media feeds can perpetuate gender bias. Studies suggest these algorithms might recommend content that conforms to traditional gender roles, limiting exposure to diverse female voices.⁶⁷

Online Harassment is one of the major issues of the day. Women are disproportionately targeted by online harassment and abuse. This can silence their voices and discourage them from participating in public discourse, limiting their influence.⁶⁸

However it is not all negative. Some positive aspects are present as well and there is potential for change.

For instance, social media can provide a platform for women to share their experiences, challenge stereotypes, and promote social change. It can be a tool to promote diverse voices. Women can connect with like-minded individuals and build communities around shared interests, fostering solidarity and support. Women can use social media to counter negative narratives and promote positive female role models in various fields.⁶⁹

⁶⁵ Aneeta Rattan, Siri Chilazi, Oriane Georgeac and Iris Bohnet, "Tackling the Underrepresentation of women in Media", Harvard Business Review, June 6, 2019

⁶⁶ L. Monique Ward, Petal Grower "Media and the Development of Gender Role Stereotypes", Vol. 2:177-199 (Volume publication date December 2020) <https://doi.org/10.1146/annurev-devpsych-051120-010630>

⁶⁷ Business Standard, Cybercrime against women up 28% since 2019, Karnataka's share highest: NCRB https://www.business-standard.com/article/current-affairs/cybercrime-against-women-up-28-since-2019-national-crime-records-bureau-122083001139_1.html

⁶⁸ According to NCRB Data, in 2021, 10,730 cases were reported by women and these crimes mostly include cyber blackmail, threatening, cyber pornography, cyber-stalking, bullying, defamation, etc.

⁶⁹ He, L., Firdaus, A., Gong, J. *et al.* "How the social media impact women's psychological well-being in the patriarchal structure? The moderating effect of social capital", BMC Public Health 24, 581 (2024). <https://doi.org/10.1186/s12889-024-18013-y>

Cyberstalking is the term for an "attack" on an individual through digital medium who has been singled out for retaliation, control, or rage. Cyberstalking may take many different forms, such as harassing, embarrassing, and dehumanizing the target.

It saw an upheaval during the period of Covid 19 lockdown. This term is mainly defined under Section 354D⁷⁰ of the IPC. It provides for the punishment of stalking which further includes cyber stalking. Any man who intentionally follows any woman and contacts her or tries to contact her for personal information after several warnings by that woman with clear intention to stop that person from taking such steps will be accused of this offence.⁷¹

India's first case of cyber stalking was reported in 2000 where a woman filed a police complaint that she was being harassed on chat by a man who disclosed and circulated her phone number to others who would call and harass her as well. Police traced and charged the accused under IPC Section 509⁷² for outraging the modesty of a woman. However, this Section only speaks of words or actions intended to outrage modesty but the same could not be applied to actions done through the internet. So there was a need for legislation to step in.

In India, further provisions to prevent cyber stalking and digital media related crimes are given under the Information Technology Act, 2000.

Section 66A encompasses 'punishment for sending offensive messages through communication service, etc.' As per this Section, any individual "who sends, by means of

⁷⁰ IPC Section 354D: (1) Any man who--

- (i) follows a woman and contacts, or attempts to contact such woman to foster personal interaction repeatedly despite a clear indication of disinterest by such woman; or
- (ii) monitors the use by a woman of the internet, email or any other form of electronic communication, commits the offence of stalking

Provided that such conduct shall not amount to stalking if the man who pursued it proves that--

- (i) it was pursued for the purpose of preventing or detecting crime and the man accused of stalking had been entrusted with the responsibility of prevention and detection of crime by the State; or
- (ii) it was pursued under any law or to comply with any condition or requirement imposed by any person under any law; or
- (iii) in the particular circumstances such conduct was reasonable and justified

(2) Whoever commits the offence of stalking shall be punished on first conviction with imprisonment of either description for a term which may extend to three years, and shall also be liable to fine; and be punished on a second or subsequent conviction, with imprisonment of either description for a term which may extend to five years, and shall also be liable to fine.]

⁷¹ Ibid

⁷² IPC Section 509: Whoever, intending to insult the modesty of any woman, utters any word, makes any sound or gesture, or exhibits any object, intending that such word or sound shall be heard, or that such gesture or object shall be seen, by such woman, or intrudes upon the privacy of such woman, shall be punished with simple imprisonment for a term which may extend to three years, and also with fine

a computer resource or a communication device, (a) any information that is grossly offensive or has menacing character; or (b) any information which he knows to be false, but for the purpose of causing annoyance, inconvenience, danger, obstruction, insult, injury, criminal intimidation, enmity, hatred or ill will, persistently by making use of such computer resource or a communication device; (c) any electronic mail or electronic mail message for the purpose of causing annoyance or inconvenience or to deceive or to mislead the addressee or recipient about the origin of such messages, shall be punishable with imprisonment for a term which may extend to three years and with fine.”⁷³

Section 66E of the IT Act deals with voyeurism through the internet, commonly as a result of cyberstalking, and provides punishment for the same.

Section 67 deals with publication of obscene content that are lascivious in nature and appeals to the prurient interest in the electronic form. The punishment of offence is stipulated as upto 5 years term of imprisonment and fine that may extend up to Rs. 10 Lakh.

Sections 67A and 67B stipulate punishments for transmitting sexual content or those featuring children in explicit sexual content.

But the most used provision against cyberstalking in India is Section 72⁷⁴ of the IT Act regarding disclosure of private information or breach of confidentiality.

In the case of *Yogesh Prabhu Vs State of Maharashtra*⁷⁵ two individuals were chatting online and when the man proposed marriage, the woman refused and subsequently cut all contact and removed him from her ‘friends list’ on social media. However, he kept stalking her, sending obscene videos through email from anonymous IDs. Later the perpetrator, Prabhu was charged under Sections 509 IPC and Section 66E of the Information Technology Act, 2008 as Section 354 D was enacted in 2013 and was not allowed to apply retrospectively to a crime of 2009.

Social media has enhanced the facilitation of these crimes. With social media, offenders can commit these crimes swiftly and under the garb of anonymity. Hence, tracing the

⁷³ This was, however, struck down by the Supreme Court of India in the case of *Shreya Singhal Vs Union of India*, (2013) 12 SCC 73 on account of vague wording.

⁷⁴ Section 72 of the IT Act provides for a criminal penalty where a government official discloses records and information accessed in the course of his or her duties without the consent of the concerned person, unless permitted by other laws

⁷⁵ *Yogesh Prabhu Vs State of Maharashtra*, 2006 (3) MhLj 691

offender is difficult. It has opened a floodgate of cyber crimes, with vulnerable sections being women and children against whom these are mostly perpetrated. With the advent of Artificial Intelligence, the level and types of crimes perpetrated through digital platform against women has increased manifold.

In the case of *Inspector General of Police & Anr. Vs S. Samuthiram*⁷⁶, 2012, the Supreme Court gave stipulations to prevent eve teasing and stalking. Some of these encompass deputation of female police officers in plain clothes near bus stands, cinema halls and other public places to monitor eve teasing, installation of CCTV cameras, women helpline numbers etc. Prevention of all these crimes require actual efforts on part of laws as well as society to ensure the same.

Analysis and opinion- One can confront inaccurate representations of women and be aware of the messages they take in. Encouraging diverse voices is another step in the right direction. Women from a variety of backgrounds and professions can be empowered and have a wider audience by actively searching out and boosting their contributions. Social media companies must answer for their efforts to make their platforms welcoming and secure for all users. This is how platforms are to be held accountable.⁷⁷

In general, social media may be a very effective instrument for advancing gender equality, but as a society, we must be conscious of its drawbacks and seek to make the internet a more representative and balanced place.

3.4 Natural Language Processing (NLP)

A branch of artificial intelligence (AI) called Natural Language Processing (NLP) is concerned with natural language interactions between computers and people. Enabling computers to comprehend, interpret, and produce meaningful, contextually relevant human language is the ultimate goal of natural language processing (NLP). NLP covers a wide range of tasks, from easy ones like sentiment analysis and language translation to harder ones like comprehending and producing responses in a conversation that seem human. Named Entity Recognition (NER), tokenization, part-of-speech tagging, semantic

⁷⁶ *Inspector General of Police & Anr. Vs S. Samuthiram*, AIR 2013 SC 14

⁷⁷ Sharad Mehrotra, "Social Media & Women's Safety in a Digital World", Economic Times, June 29, 2017

analysis, and other techniques are used. NLP frequently uses deep learning and machine learning methods to train models on huge datasets.⁷⁸

Systems that use natural language processing (NLP) may inadvertently reinforce or mirror gender preconceptions found in the training data. This problem emerges because biases from society, including gender biases, are frequently included in language data used to train NLP algorithms. In NLP, gender stereotypes can be seen in a few different contexts.⁷⁹

Biased Training Data

Natural Language Processing (NLP) models are trained on large volumes of textual data. If this data contains gender preconceptions or biases, the models may unintentionally pick up on and reinforce those biases. Due to the normalization of gender stereotypes in our society and daily lives, bias against women automatically finds its way into AI models.⁸⁰

Word embeddings

Word embeddings which represent words as vectors in a multidimensional space, can capture and spread gender preconceptions from training data. For example, certain occupations or roles may be linked with particular genders. In this sense, one specific example is medicine. When one hears the terms 'doctor' or 'nurse' or searches for images of them, there is a good possibility that there will be a male doctor and a female nurse. This occupational bias has become established in society as a result of its cultural propagation. So their inherent bias and prejudice subconsciously creeps into AI models or NLP.⁸¹ AI models are provided data by programmers who are mostly male as women in STEM research are less⁸².

Occupational Biases

NLP models may link occupations with specific genders based on training data, which may not accurately reflect real-world diversity. As previously noted, occupational biases are frequent, with a 'parent' being associated with a mother delegating more secondary child-

⁷⁸ Josette Coughlin, "Perspectives on Natural Language Processing", *The French Review*, Oct., 1990, Vol. 64, No. 1 (Oct., 1990), pp. 172-179

⁷⁹ Jim Holdsworth, "What is NLP: Natural language processing", IBM, 2024
<https://www.ibm.com/topics/natural-language-processing>

⁸⁰ Ibid

⁸¹ Nikhil Garg, Londa Schiebinger, Dan Jurafsky and James Zou, "*Word embeddings quantify 100 years of gender and ethnic stereotypes*", *Proceedings of the National Academy of Sciences of the United States of America*, April 17, 2018, Vol. 115, No. 16 (April 17, 2018), pp. E3635-E3644 Published by: National Academy of Sciences

⁸² The World Economic Forum reported in 2023 that women accounted for just 29 per cent of all science, technology, engineering and math (STEM) workers.

rearing chores to the father. “*Artificial Intelligence mirrors the biases that are present in our society and that manifest in AI training data,*” said by Beyza Doğuç in a recent interview with UN Women,⁸³

Stereotypes and Gender Pronouns

Prejudices about what constitutes typical behaviour for certain genders can be strengthened by biases in the usage of gender pronouns and their associations with particular traits or behaviours.⁸⁴

Sentiment Analysis Bias

Based on the author's or the subject's gender, sentiment analysis algorithms may exhibit bias in how they evaluate sentiment.

This is a considerably new area with a lot of progress to be made. There is scope for improvement by addressing gender stereotypes with ongoing efforts to improve the fairness and equity of these systems.⁸⁵

Implementing techniques to detect and mitigate biases during the training and testing phases of NLP models can help reduce the impact of gender stereotypes as well. Including diverse and representative data in the training set can help mitigate biases. Efforts should be made to ensure a balanced representation of genders, ethnicities, and other demographic factors.⁸⁶

Developing and adhering to ethical guidelines for the creation and deployment of NLP systems is necessary. This includes awareness of potential biases and a commitment to addressing them.

Making NLP models more transparent and interpretable can aid in identifying and understanding biases, allowing for more effective mitigation strategies. Regularly monitoring and updating NLP models are required to ensure they remain fair and unbiased over time. This includes addressing emerging biases and adapting to changes in language use.⁸⁷

⁸³ She is the one who found in a generative AI the doctor-male, nurse-female bias

⁸⁴ Supra at Note 79

⁸⁵ Supra at Note 75

⁸⁶ Chen Y., Mahoney C., Grasso I., Wali E., Matthews A., Middleton T., et al.. (2021). “Gender Bias and Under-Representation in Natural Language Processing Across Human Languages”. New York, NY: Association for Computing Machinery. 10.1145/3461702.3462530

⁸⁷ Supra at Note 75

By actively working to minimize bias in training data and improving the fairness of NLP models, researchers and practitioners can contribute to the development of more equitable and unbiased natural language processing systems. It's an ongoing challenge that requires collaboration across disciplines, including computer science, linguistics, and ethics. Gender inequality must be taken into account while discussing Natural Language Processing (NLP) and netiquette (online etiquette) in order to promote equitable and polite interactions in digital spaces.⁸⁸ It is essential to make sure that gender-neutral language is utilized when creating NLP models. Training data may unintentionally teach prejudices, hence it is important to take steps to reduce these biases. In order to prevent perpetuating preconceptions, developers should make an effort to design models that treat each gender equally. Promoting inclusive language and avoiding gender-based stereotypes are two important netiquette guidelines to follow whether participating in online forums, conversations, or social media. People should be aware of the words and expressions they use in order to foster an atmosphere in which all people, regardless of gender, feel valued. Pronoun usage should be taken into consideration in NLP models and online interactions.⁸⁹

Diverse viewpoints should be encouraged to participate in online discussions according to netiquette guidelines. Communities and platforms can actively encourage involvement from people of different backgrounds and genders. Gender-based harassment and discrimination should be specifically addressed and condemned in netiquette norms. Clear policies and procedures for reporting and handling such instances should be in place on online platforms. Including educational elements in netiquette norms can aid in bringing biases and gender inequality to light.⁹⁰

Analysis and opinion- Online communities should have active moderation that addresses gender-based harassment and enforces netiquette guidelines. This helps create a safer and more inclusive environment for all participants. Netiquette can include principles that encourage positive reinforcement and constructive feedback, fostering a supportive

⁸⁸ Tolga Bolukbasi, Kai-Wei Chang, James Zou, Venkatesh Saligrama, Adam Kalai, "Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings", 30th Conference on Neural Information Processing Systems (NIPS 2016), Barcelona, Spain.

⁸⁹ Aylin Caliskan, "Detecting and Mitigating Bias in Natural Language Processing", Report from The Brookings Institution's Artificial Intelligence and Emerging Technology (AIET) Initiative is part of "AI and Bias," 2021

⁹⁰ Nancy Flynn, "Encourage Online Civility with Netiquette Rules", Training Industry, 2022, <https://trainingindustry.com/articles/compliance/encourage-online-civility-with-netiquette-rules/>

environment where individuals feel comfortable expressing themselves without fear of gender-based criticism.

NLP applications should be designed with accessibility and inclusivity in mind, ensuring that the interfaces and interactions are user-friendly for individuals of all genders.

3.5 Deep Fakes

Deep Fakes are a major threat to our society, political system, and business because they 1) put pressure on journalists struggling to filter real from fake news, 2) threaten national security by disseminating propaganda and interfering in elections, 3) hamper citizen trust toward information by authorities, and, 4) raise cybersecurity issues for people and organizations.⁹¹

The impact of deep fakes on women's rights is multifaceted and concerning. Deep fake technology, which can generate highly realistic fake videos and images using artificial intelligence, poses significant threats to privacy, autonomy, and safety, particularly for women. Deep fakes are highly realistic manipulations of audio and video content that can perpetuate harmful stereotypes, facilitate harassment, and undermine women's rights.⁹²

One prevalent use of deep fakes targeting women is the creation of non-consensual pornography (often called "revenge porn"). These fabricated videos can lead to harassment, blackmail, and reputational harm.⁹³

Non-consensual Pornography

With the use of deep fake technology, it is possible to produce pornographic images of people without getting their permission. Such harmful content disproportionately targets women, which can have terrible effects on their personal and professional lives, including trauma, harassment, and reputational damage.⁹⁴

⁹¹Westerlund, M. "The Emergence of Deep fake Technology: A Review" *Technology Innovation Management Review*, 9(11): 40-53, 2019

⁹²Edvinas Meskys & Ors., "Regulating Deep Fakes: Legal and Ethical Considerations", *Journal of Intellectual Property Law & Practice*, Volume 15, Issue 1, January 2020, Pages 24–31.

⁹³Jordan Fairbairn, "Rape Threats and Revenge Porn: Defining Sexual Violence in the Digital Age", University of Ottawa Press, 2015

⁹⁴Suzie Dunn, "Forms of TFGBV", from the Report "Technology Facilitated Gender Based Violence: An Overview", Centre for International Governance Innovation, 2020

Misrepresentation and Objectification

In *Anil Kapoor Vs Simply Life India and Ors*⁹⁵, the Delhi High Court upheld the protection of an actor's identity, personal characteristics, and acting career against exploitation, particularly when it comes to the usage of AI techniques to produce deep fakes. The actor's name, likeness, and image were effectively prohibited from being used for financial benefit or commercial purposes by sixteen businesses by the Court's ex- parte injunction, which also prohibited them from using technical tools like Artificial Intelligence.

In a similar way, the renowned actor Mr. Amitabh Bachchan was granted an ad interim in rem injunction against the illegal use of his personality rights and personal qualities, including voice, name, picture, and likeness, for commercial purpose in the case *Amitabh Bachchan Vs Rajat Negi and Ors*⁹⁶.

Analysis and opinion- The significant differences between men and women form an age old divide here. Most a man can be deprived of in this regard is his reputation and a large number of people would be sympathetic to it, without questioning his decision on providing any semblance of access for the crimes to be committed. However, a woman's reputation being tarnished, ushers in a lot of questioning and vilification by society at large. While the law may look at men and women equally in this regard, society is an intrinsic part of law which cannot be overlooked in making legislation and interpreting the same while dealing with these crimes. By placing the faces of women over explicit or demeaning information, deep fakes have the potential to reinforce negative stereotypes and objectify women. This not only diminishes women's worth but also strengthens negative social perceptions that view women as mere objects of sex.⁹⁷

Celebrities and popular personalities are the easiest targets for perpetrators. Several actresses had raised this concern as their facial features without consent were superimposed on other persons and were finally used to misrepresent them.⁹⁸

Undermining Credibility

⁹⁵ Anil Kapoor Vs Simply Life India & Ors., 2023 SCC OnLine Del 6914

⁹⁶ Amitabh Bachchan Vs Rajat Negi & Ors., 2022 SCC OnLine (Del) 4110

⁹⁷ Aanchal Kabra & Rohit Gupta, "Carving an Indian Mosaic for Image-Based Sexual Abuse", 34 NAT'L L. SCH. INDIA REV. 205 (2022).

⁹⁸ Karen Pereira, "Ranveer Singh to Rashmika Mandanna: Celebs who took legal action against AI-generated deep fake videos", Times of India, 23d April, 2024

Deep fakes can be used to produce inaccurate and misleading audio or video recordings of women, including activists or political figures, disseminating false information or acting inappropriately. This could damage their reputation, sway public opinion, and impede their ability to advocate for social justice and women's rights. Manoj Tiwari, a politician running for the Indian legislative assembly in 2020, had his speech translated into the Haryanvi dialect when in reality the speech was in English.⁹⁹

Cyberbullying and Harassment

While both men and women get “trolled” online, our patriarchal society makes it a point that women suffer more under it. Cyberbullying and harassment of women are already prevalent online. Because deep fakes give offenders strong tools to produce and spread misleading and harmful content meant to intimidate, defame, or silence women, they increase the dangers associated with them. Deep fakes deprive women of agency over their appearances. Deep fakes are so simple to make that a woman's face and body might be utilized in ways she never intended, which can be extremely upsetting.¹⁰⁰

It is not surprising to note that India stands at third position after China and Singapore in cyber bullying.¹⁰¹

Misinformation about women can be disseminated using deep fakes, which could have an effect on their safety, personal lives, and employment. The inability to distinguish between true and fraudulent content is making it harder to trust visual media in general.

Law enforcement agencies worldwide and governments have come to recognize deep fakes as a serious criminal and national security concern. This was demonstrated during a June 2023 United States Senate Committee on the Judiciary hearing on “Artificial Intelligence and Human Rights”.¹⁰² Testimony from Jennifer DeStefano described how

⁹⁹ Tom Wicker, “Deep fake Technology presents Imminent Challenge to Democracy”, International Bar Association, 25th February, 2020 <https://www.ibanet.org/article/432E7100-35BE-44B4-B6AB-AD55758411F4>

¹⁰⁰ Samer Hussain Al-Khazreji & Ors., “Impact of Deep fake Technology on Social Media: Detection, Misinformation and Societal Implications”, The Eurasia Proceedings of Science, Technology, Engineering & Mathematics (EPSTEM), 2023 Volume 23, Pages 429-441

¹⁰¹ According to Microsoft's ‘Global Youth Online Behavior Survey’ in 2012, covering more than 7,600 children across 25 countries aged between 8 and 17, India ranked third in the number of cyberbullying cases (53%)

¹⁰² “Artificial Intelligence and Human Rights.” United States Senate Committee on the Judiciary, June 13, 2023. <https://www.judiciary.senate.gov/committee-activity/hearings/artificial-intelligence-and-human-rights>

she fell victim to an extortion and deep fake kidnapping scheme. In a deep fake phone call purporting to be from her fifteen-year-old daughter, Ms. DeStefano disclosed that she had been abducted and was being held for ransom for a million dollars. News of deep fake "sextortion" scams, in which victims, especially children, are either tricked into revealing information or have sexual images altered onto them, also made the rounds in June 2023. The offenders then issue a threat to make the content publicly available until they receive payment.¹⁰³

Threats of deep fakes harm finances, elections as well as dignity of persons concerned. Recently, for this Lok Sabha election a plea was filed in the Delhi High Court against use of deep fake technology in political campaigns. In addition, until the results were made public on June 4, 2024, the petition asked social media intermediaries including Google, Meta, and X to remove and prohibit Deep fake information about political candidates, representatives, leaders, and/or public personalities.¹⁰⁴

The Union released a recommendation in December, 2023 asking social media intermediaries (SMI) to recognize and take appropriate action against deep faked information, among other things.¹⁰⁵ The Union gave SMIs the following advice:

- ✚ In particular, information that breaches the terms of user agreements, rules and regulations, or both are identified with due diligence and reasonable efforts; such cases are promptly handled and access is disabled well within applicable timelines in accordance with the IT Rules, 2021;
- ✚ Users of SMI are prompted to refrain from hosting any content, including deep fake content, and to remove any such content within 36 hours of being reported. If SMIs fail to take action in this regard, they may be prosecuted under the Indian Penal Code and under Rule 7 of the Information Technology Rules (Intermediary Guidelines and Digital Media Ethics) Code, 2021¹⁰⁶

¹⁰³ Jared Gans, "FBI Warns of 'deep fakes' in Sextortion Schemes," The Hill, June 7, 2023.

Audrey de Rancourt-Raymond and Nadia Smaili, "The unethical use of deep fakes," Journal of Financial Crime 30, no. 4 (2023): pp. 1066-1077

¹⁰⁴ Malavika Peasad, "'Not Proper for Court to Intervene': Delhi HC on plea over Deep fake Videos", Indian Express, May 3, 2024 <https://indianexpress.com/article/cities/delhi/elections-delhi-hc-election-commission-pil-9303559/>

¹⁰⁵ <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1990542>

¹⁰⁶ Non-observance of Rules.—Where an intermediary fails to observe these rules, the provisions of subsection (1) of section 79 of the Act shall not be applicable to such intermediary and the intermediary shall be liable for punishment under any law for the time being in force including the provisions of the Act and the Indian Penal Code.

- ✚ The Advisory warned that SMIs might lose the desired exemption from responsibility for unlawful user-generated material under Section 79 of the IT Act¹⁰⁷, 2000 if they did not fulfill their duties under the IT Act, 2000 and the IT Rules, 2021.

The Union then said that it would be drafting new rules and regulations to counter the production and dissemination of deep fake information. The Union has stated unequivocally that the identification, prevention, reporting, and public knowledge of deep fake technology would form the cornerstone of these measures.¹⁰⁸

According to a report of an Amsterdam based cybersecurity firm, Deeptrace, deep fake pornographic videos are aimed and targeted majorly at women rather than men. Women form 90% of the victims of crimes like revenge porn, non-consensual porn and other forms of harassment and deep fake is one more in the list.¹⁰⁹

Technological Solutions

¹⁰⁷ Notwithstanding anything contained in any law for the time being in force but subject to the provisions of sub-sections (2) and (3), an intermediary shall not be liable for any third party information, data, or communication link made hosted by him.

(2) The provisions of sub-section (1) shall apply if –

(a) the function of the intermediary is limited to providing access to a communication system over which information made available by third parties is transmitted or temporarily stored; or

(b) the intermediary does not –

(i) initiate the transmission,

(ii) select the receiver of the transmission, and

(iii) select or modify the information contained in the transmission

(c) the intermediary observes due diligence while discharging his duties under this Act and also observes such other guidelines as the Central Government may prescribe in this behalf

(3) The provisions of sub-section (1) shall not apply if-

(a) the intermediary has conspired or abetted or aided or induced whether by threats or promise or otherwise in the commission of the unlawful act.

(b) upon receiving actual knowledge, or on being notified by the appropriate Government or its agency that any information, data or communication link residing in or connected to a computer resource controlled by the intermediary is being used to commit the unlawful act, the intermediary fails to expeditiously remove or disable access to that material on that resource without vitiating the evidence in any manner.

¹⁰⁸ Supra at Note 105

¹⁰⁹ DeepTrace, The State of Deep fakes, Landscape, Threats, and Impact https://regmedia.co.uk/2019/10/08/deep_fake_report.pdf ↑

To identify and authenticate digital media, researchers are creating instruments and methods. Thanks to these advancements, users can now confirm the authenticity of content before sharing it. Machine learning algorithms and blockchain-based verification have the potential to enable people to discriminate between real and corrupted material. Technology companies, researchers, and legislators must work together to keep ahead of the ever-evolving capabilities of deep fakes.¹¹⁰

Legal protection

For the purpose of eliminating deep fake harms and making offenders accountable, legislation is essential. The production and dissemination of malicious deep fake content, including non-consensual pornography, ought to be illegal under the law. These laws should have harsh enough penalties to discourage perpetrators and provide victims' justice. Legal frameworks need to change to meet the demands of cross-border enforcement, anonymity, and jurisdiction.¹¹¹ In order to lessen the detrimental effects of deep fakes on women's rights, politicians, tech corporations, law enforcement, and civil society organizations must work together. It curtails women's right to free speech and expression. Advent of deep fake and algorithm bias perpetuates the discrimination against women for centuries.¹¹²

This entails creating strong tools for detection and verification, encouraging media and digital literacy, providing victims with support services and legal options, and cultivating an environment that values women's autonomy and dignity both online and offline.

The *Bletchley Declaration, 2023*¹¹³ was signed in the first ever AI safety summit that acknowledged the transformative good qualities AI can have, but also the devastating threats on individuality, privacy, safety it may pose. India is one of the prominent signatories of it. The Declaration outlines a path forward for international cooperation on the current and future challenges posed by Artificial Intelligence. It also includes an agenda item that aims to identify hazards in the field of Artificial Intelligence and implement

¹¹⁰ Nicholas Mesa-Cucalon, "Deepfakes: Effective Solutions for Rapidly Emerging Issues", May, 27, 2021 <https://medium.com/analytics-vidhya/deepfakes-effective-solutions-for-rapidly-emerging-issues-8b1685feef56>

¹¹¹ Caroline Criado Perez, "Invisible Women: Data Bias in a World Designed for Men", Abrams Press, New York, 2019

¹¹² Ibid

¹¹³ Bletchley Declaration on AI Safety, November 2023

appropriate risk-based legislation in various nations with the goal of enhancing transparency by having private companies create cutting-edge AI capabilities. Otherwise, the digital era would subsume all the efforts made to emancipate women in the last century.¹¹⁴

3.6 Pornography

Indian courts have over time developed different principles of scrutiny in ascertaining how much the state can intervene in matters of pornography or what may be termed as ‘obscene’. While the United Kingdom has developed its own tests, India and the United States have also followed suit. The test in *R Vs Hicklin*¹¹⁵ while not specifically dealing with pornography set up a very low standard of review as it permitted a conviction for ‘obscenity’ if appealed to the prurient interest of the most vulnerable person in society. Later, a comparatively more rational test replaced it with the case of *Roth Vs United States*¹¹⁶ where a person was convicted for selling and advertising erotica which was considered ‘obscene, lewd, lascivious and filthy’. The Roth test proclaimed the test standard to be on par with the community and should apply to an average person. (average person test). Later, this test was modified in the cases of *Memoirs Vs Massachusetts*¹¹⁷ and *Miller Vs California*¹¹⁸ In the latter case, the owner of a mail order business that specialised in pornographic content mass mailed several brochures depicting sexual content. The court developed a three prong test to judge obscenity in this case called the Miller test.¹¹⁹

This takes an offensive approach with community standard, where offence is a criterion for obscenity.¹²⁰

¹¹⁴ Safiya Umoja Noble, “Algorithms of Oppression: How Search Engines reinforce Racism”, NYU Press, 1st Edition, 2018, ISBN- [978-1-4798-4994-9](https://doi.org/10.1215/9781479849949)

¹¹⁵ R Vs Hicklin, England and Wales High Court of Justice, Queen’s Bench Division, 11 Cox C.C. 19 (1868)

¹¹⁶ Roth Vs United States, 354 US 476 (1957)

¹¹⁷ Memoirs Vs Massachusetts, 383 US 413 (1966)

¹¹⁸ Miller Vs California, 413 US 15 (1973)

¹¹⁹ Miller Test: 1)whether the average person, applying contemporary community standards, would find that the work, taken as a whole, appeals to the prurient interest; 2)whether the work depicts or describes, in an offensive way, sexual conduct or excretory functions, as specifically defined by applicable state law; and 3)whether the work, taken as a whole, lacks serious literary, artistic, political, or scientific value

¹²⁰ Alisa L. Carse, “Pornography: An Uncivil Liberty?”, *Hypatia*, Winter, 1995, Vol. 10, No. 1, Feminist Ethics and Social Policy, Part 1 (Winter, 1995), pp. 155-182

However, pornography should be looked through the lens of harm principle by John Stuart Mill, that the consequentiality of pornographic content is directly and/or indirectly harmful to women. The enduring nature of sexual exploitation and violence against women is such that, despite legal changes, women's position and treatment essentially stays the same. The effects of pornography on society upholds prejudice, inequality, and women's subjugation to males. Women who speak out against these injustices encounter major difficulties such as social marginalization, threats, and mockery.¹²¹

In the case of *Paris Adult Theatre Vs Slaton*¹²² showing pornographic content in theatre irrespective of it being consensual and ticket allowed to above 21 year olds only was held against community standards and failed the test outlined in Miller.

Forced filming and circulating, involving children in the act or publicising is a crime and should always be treated as such. Women are the most common victims of it.¹²³

In the Canadian case of *R Vs Butler*¹²⁴ the accused owned a shop selling and renting 'hard core' videotapes and pornographic magazines and sexual paraphernalia. He was charged with various counts of selling obscene material, possessing pornographic material for the purpose of distribution or sale, and exposing obscene lascivious material to public view. The Court in this case relied heavily on feminist arguments regarding the harms of pornography. Hence it is obscene, but also a part of unprotected speech.

There are two opposing polarities when dealing with pornography and need or not for legal intervention. While on one hand, there is individual liberty speaking against censorship and preaching freedom of speech and expression, on the other hand there is public morality and protection of rights of women and need for state intervention.¹²⁵

Analysis and opinion- While some feminist authors preach pornographic content as a form of liberation if done wilfully, this anti-censorial view does not hold good in today's society of incessant and myriad means of access to misuse apparently 'wilful' imagery. In a widely sexually illiterate society, this proliferation of sexual content does more harm than any foreseeable good. While the author does not disagree entirely with feminist authors and

¹²¹ Andrea Dworkin, "Against the Male Flood: Censorship, Pornography and Equality", 8 HARV. WOMEN'S L.J. 1 (1985).

¹²² *Paris Adult Theatre Vs Slaton*, 413 US 49 (1973)

¹²³ Javier P., "Pornography and its Impact on Sexual Exploitation", SOS International, February 16, 2023

¹²⁴ *R Vs Butler*, [1992] 1 SCR 452

¹²⁵ Rosemarie Tong, "Women, Pornography and the Law", *Academe*, Sep. - Oct., 1987, Vol. 73, No. 5 (Sep. - Oct., 1987), pp. 14-22

jurists upholding libertarian values, however in the digital era, especially with the advent of AI and its multiple probable misuse State intervention is absolutely necessary to prevent the ills caused to women due to pornography. Rather than curtailing the freedom of speech and expression of women, the author holds the belief, that state intervention would ensure upholding the same right.

Usually negative liberties are enforced against State by the fundamental rights in Part III of our Constitution, but in this case, proactive State action is needed in likes of ensuring liberty, both positive and negative to mitigate the evils perpetrated against women, if they are to be treated as equal, rather than second class citizens.

Article 19(1)(a) of the Constitution gives freedom of speech and expression to each of its citizens and Article 14 provides equality. As stated before in this paper, there are several provisions in the Constitution outlining the same. Yet, women are consistently treated on sub par levels by society and perpetuated by law by allowing the conditions to prevail that vitiate from their rights as equal and free citizens.

In the radical branch of feminist jurisprudence, eminent thinkers have spoken about one aspect repeatedly called 'bodily autonomy'. Pornography takes away from this very notion and erodes the sense of dignity for women. According to radical feminist theory, sex, prostitution, social sexism and patriarchy lead to the objectification of women. They argue that porn portrays unequal power relations between men and women and compares and demeans women. Feminism's criticism of male-dominated systems of power made the struggle against self-images more important. State intervention becomes necessary here as we have established prior that pornography comes in that area of obscenity that does not fall in protected speech. So there is state interest here, and bringing the Constitutional values of equality (Article 14) as well as right to choice stemming from right to life with dignity (Article 21) and right to freely express themselves (Article 19), it is a fundamental right of women to be protected against such erosion of their rights.

Internet pornography is the act of producing, disseminating, and distributing pornographic content online. Additionally, sexual harassment is covered under Section 354A¹²⁶ of the

¹²⁶ Section 354A IPC: Sexual harassment and punishment for sexual harassment--(1) A man committing any of the following acts- (i) physical contact and advances involving unwelcome and explicit sexual overtures; or (ii) a demand or request for sexual favours; or (iii) showing pornography against the will of a woman; or (iv) making sexually coloured remarks, shall be guilty of the offence of sexual harassment. (2) Any man who commits the offence specified in clause (i) or clause (ii) or clause (iii) of sub-section (1) shall be punished with rigorous imprisonment for a term which may extend to three years, or with fine, or

IPC, which stipulates that a male faces legal repercussions if he purposefully sends a woman pornographic material by email, Whatsapp, or another medium without her consent. Further prohibiting such acts is Section 67A of The Information Technology Act¹²⁷, which applies to items that treat or disseminate sexually explicit activity in any electronic format. According to the Information Technology Act, a first conviction carries a maximum sentence of five years in jail and a fine that may exceed ten lakhs. A second conviction carries a maximum sentence of seven years in prison and a fine that can exceed ten lakhs. But in the past, this legislation was handled by IPC Section 292 which addressed the offense of obscenity and contained everything voyeuristic, lascivious, or meant to degrade and corrupt people. Thus, this clause now makes it illegal to sell, distribute, communicate, exhibit, or profit from such a business in public and imposes legal penalties on such activities. It carries a five-year jail sentence and a five-thousand rupee fine.¹²⁸

with both. (3) Any man who commits the offence specified in clause (iv) of sub-section (1) shall be punished with imprisonment of either description for a term which may extend to one year, or with fine, or with both.]

¹²⁷ IT Act Section 67A: Punishment for publishing or transmitting of material containing sexually explicit act, etc., in electronic form. Whoever publishes or transmits or causes to be published or transmitted in the electronic form any material which contains sexually explicit act or conduct shall be punished on first conviction with imprisonment of either description for a term which may extend to five years and with fine which may extend to ten lakh rupees and in the event of second or subsequent conviction with imprisonment of either description for a term which may extend to seven years and also with fine which may extend to ten lakh rupees.

¹²⁸ IPC Section 292: Sale, etc., of obscene books, etc.—

(1) For the purposes of sub-section (2), a book, pamphlet, paper, writing, drawing, painting, representation, figure or any other object, shall be deemed to be obscene if it is lascivious or appeals to the prurient interest or if its effect, or (where it comprises two or more distinct items) the effect of any one of its items, is, if taken as a whole, such as to tend to deprave and corrupt person, who are likely, having regard to all relevant circumstances, to read, see or hear the matter contained or embodied in it. (2) Whoever—(a) sells, lets to hire, distributes, publicly exhibits or in any manner puts into circulation, or for purposes of sale, hire, distribution, public exhibition or circulation, makes, produces or has in his possession any obscene book, pamphlet, paper, drawing, painting, representation or figure or any other obscene object whatsoever, or (b) imports, exports or conveys any obscene object for any of the purposes aforesaid, or knowing or having reason to believe that such object will be sold, let to hire, distributed or publicly exhibited or in any manner put into circulation, or (c) takes part in or receives profits from any business in the course of which he knows or has reason to believe that any such obscene objects are for any of the purposes aforesaid, made, produced, purchased, kept, imported, exported, conveyed, publicly exhibited or in any manner put into circulation, or (d) advertises or makes known by any means whatsoever that any person is engaged or is ready to engage in any act which is an offence under this section, or that any such obscene object can be procured from or through any person, or (e) offers or attempts to do any act which is an offence under this section, shall be punished on first conviction with imprisonment of either description for a term which may extend to two years, and with fine which may extend to two thousand rupees, and, in the event of a second or subsequent conviction, with imprisonment of either description for a term which may extend to five years, and also with fine which may extend to five thousand rupees.

The case of *Suhas Katti Vs State of Tamil Nadu*¹²⁹ began as a complaint brought by a divorced lady alleging that she was receiving offensive and defamatory comments from a man in a Yahoo messaging group. It took place as a result of her rejection of his marriage proposal. As a result, the man established a fictitious email account in the woman's name and forwarded communications that arrived there. She got more phone calls from people who claimed she worked as a sex worker. As a result, Katti was sentenced to two years of rigorous imprisonment and a fine of Rs. 500 under Section 469 IPC (forgery in cases involving harm to reputation), one year of rigorous imprisonment and a fine of Rs. 500 for an offence under Section 509 IPC (words, gestures, or conduct intended to insult a woman's modesty), and two years of hard labour and a fine of Rs. 4000 for an offence under Section 67 of the Information Technology Act (punishment for publishing or communicating obscene material in electronic form).

In the case of *Kalandi Charan Lenka Vs State of Odisha*¹³⁰ the victim was constantly harassed by the perpetrator by hacking her social accounts and sending sexually explicit content. They had vulgar language imputing her character. Printed pamphlets with sexual remarks were posted on walls as well wherever she resided and went to study. Finally, a fake Facebook account was created in the victim's name and morphed naked pictures were posted there in order to denigrate her character and outrage her modesty. The accused was charged with similar sections as previously discussed, Section 509 IPC, Section 67A of IT Act and Section 354C IPC (Voyeurism). It was characterised as cyber defamation.

The Court in a recent case ruled that, in the context of Non-Consensual Intimate Images (NCII), the intermediaries must take down all offensive information from their platform- not just links to particular URLs that the users/victims have given. The Court emphasized the harm that may result from the uploading of NCII's and the suffering that can be caused to victims who have to scour the internet for fresh uploads of explicit photos/videos in order to request that they be removed. The Court ruled that intermediaries must use technology to make sure that offensive images are removed from reposts and that they make a "reasonable effort" to prevent their users from posting content that is offensive or does not belong to them.¹³¹

¹²⁹ *Suhas Katti Vs State of Tamil Nadu*, CC No. 4680 of 2004

¹³⁰ *Kalandi Charan Lenka Vs State of Odisha*, 2017 SCC OnLine Ori 52

¹³¹ *Infra* at Note 123

In the case of *Mrs. X Vs Union of India*¹³² the perpetrator befriended the victim who was a married woman with a son, online. One day the accused came to the victim's house, assaulted her and transferred explicit photos of the victim from her mobile phone to his. Subsequently, the accused started blackmailing the victim, and even after she paid him, he posted the images on pornographic websites online. Further he started a Youtube channel where he uploads her photos and videos with her face morphed on them. Mrs. X then petitioned the Delhi High Court to have the websites containing her private photos blocked. Despite efforts to eliminate any references to the pictures, they were "repeatedly being re-uploaded and re-produced." the Court was perplexed with the question of what orders it can give to internet intermediaries (such as Google and Microsoft) in situations where those intermediaries remove images but then re-upload them in order to protect both the rights of individuals and the intermediaries' obligations. The accused was caught, and the case became moot but the Court still proceeded with it to create some permanent solution for future victims.¹³³

After the judgment had been reserved, the government alerted the Court to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2022.

Determining the responsibility of intermediaries like Google and Microsoft for eliminating Non-Consensual Intimate Images (NCII)¹³⁴ from the internet was the primary matter under consideration. While the intermediaries must remove offensive content within 24 hours of becoming aware of it, the Ministry of Electronics and Information Technology (MEITY) contended that "*proactive monitoring and removal of content will adversely affect the freedom of speech and expression of other individuals having the same or similar name as the Petitioner*" In order to monitor and prosecute offences against women and children on the internet, Delhi Police said that it was putting in place District Cyber Police Stations and a website feature that helps women and children file complaints.

As per the amicus curiae in the case, the intermediaries were required by the Information Technology Act, 2000 and the Information Technology (Intermediary Guidelines and

¹³² Mrs. X Vs Union of India, Neutral Citation Number: 2023:DHC:2806

¹³³ Ibid

¹³⁴ Rule 3(2)(b) "defines NCII as any content which prima facie exposes any individual's private area, shows such individual in full or partial nudity, shows or depicts such individual in any sexual act or conduct, or is in the nature of impersonation in an electronic form, including artificially morphed images"

Digital Media Ethics Code) Rules, 2021 to eliminate any offensive content from their platform. This obligation extended beyond the specific URLs that users provided. He said that intermediaries would only be safe under immunity if they fulfilled the necessary legal requirements.¹³⁵

The Court defined Non-Consensual Intimate Images (NCII) as "*sexual content that is distributed under the larger umbrella of cyber-harassment, largely meaning that its dissemination is non-consensual and comes under the said larger umbrella of being depicted in said content... [it] may or may not be taken with the consent of the individual involved*" Although the phrase "revenge porn" is often used, the Court pointed out that this is just one instance of NCII.¹³⁶

Even while the public views these offenses as less severe than sexual harassment and molestation, the Court observed that the dissemination of this information harms the victims' mental health via other "life disruptions" such as job losses and family rejection. The Court declared that it was vital to comprehend how the IT Act and its regulations affect NCII misuse as well as the role and responsibilities intermediaries have in the distribution of NCII and the prevention of its abuse, given the rise in NCII cases and internet accessibility.

The Court gave directions, guidelines. So did the government who made rules and directions.¹³⁷

However, none of these stipulations seem to be quite equipped to deal with the myriad issues and crimes that are seemingly cropping up with the ease and availability of technology, especially Artificial Intelligence.

The "*abysmal absence of a collaborative effort that should ideally be undertaken by the intermediaries and the State*" was recognized by Courts with much anguish. Time was wasted when organizations switched around who was responsible and that, since there are no repercussions, this encouraged offenders. The Court also said that this affects the victim's access to legal options and harms their feelings and reputation, particularly in India

¹³⁵ Supra at Note 123

¹³⁶ Supra at Note 123

¹³⁷ Supra at Note 123

where "*NCII abuse does indeed lead to harrowing consequences and everlasting stigma for the victim*"¹³⁸

By means of a release dated June 20, 2021, the Press Information Bureau (PIB) has explained that the Indian government has been instructed by the Supreme Court to establish rules aimed at removing child pornography, visuals of rapes and gangrapes and similar materials from internet platforms and apps. The Government of India created the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, in compliance with this ruling.¹³⁹ In *Re: Prajwala Letters*¹⁴⁰ case, a recommendation letter dated February 8, 2015, a progressive step was taken to form intermediary guidelines. Hyderabad-based Prajwala is a non-governmental organization (NGO) dedicated to ending forced prostitution and sex trafficking.

A letter from NGO Prajwala about films of sexual assault, rape, child pornography that were making the rounds on social media platforms was received by the Hon'ble Supreme Court on February 18, 2015. Following this, the court ordered on March 22, 2017, to establish a committee to help and advise the court in order to ensure that recordings showing the same are not circulated and are rendered fully inaccessible for distribution. It is obvious that the committee's primary goal was to safeguard the victims' identities and reputations, thus it is not at all in the public interest for such films to be distributed.¹⁴¹

The committee was established under the presidency of Dr. Ajay Kumar. The committee gave several recommendations like the Indian government ought to collaborate with civil society groups and the firms it represents to propose adding more keywords to the list that will be shown when CP warning advertisements and public service announcements are displayed during searches. In accordance with other nations, such as the United States with NCMEC¹⁴², the Committee concurs that the establishment of a Central Reporting Mechanism India's hotline portal is imperative. Additionally, law enforcement in this region has to be strengthened. By offering a range of trainings on online criminal investigations and the use of pertinent internet technologies, internet businesses should

¹³⁸ Supra at Note 123

¹³⁹ "Permanent Mission of India responds to the concerns raised by Special Branch of Human Rights Council about India's IT Rules, 2021", Report of Press Information Bureau, Ministry of Electronics & IT, June 2021 <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=172873>

¹⁴⁰ Re: Prajwala Letters case, (2018) 15 SCC 551

¹⁴¹ Ibid

¹⁴² National Center for Missing and Exploited Children, Non profit Organization of the United States

help develop the ability of law enforcement and non-governmental organizations in India, as well as relevant authorities in India.¹⁴³

The Ministry of Electronics and Information Technology, Union of India, submitted an affidavit on December 11, 2018. In order to remove child pornography, rape, gang rape images, videos, and websites in content hosting platforms and other apps, the order gave the GOI two weeks to develop the required guidelines and put it into effect.¹⁴⁴

Reading the conditions and facts makes it clear that the Supreme Court's historic ruling on the Intermediary standards is partially responsible for their creation.¹⁴⁵

However, to make the laws and their execution and implementation actually functional, more stringent legislation and more progressive judgements such as this one from judiciary are required.

¹⁴³ Supra at Note 131

¹⁴⁴ “Supreme Court asks govt to set up cell to fight child porn”, Indian Express, October 27, 2017 <https://indianexpress.com/article/india/supreme-court-asks-govt-to-set-up-cell-to-fight-child-porn-4908458/>

¹⁴⁵ Supra at Note 131

CHAPTER 4

AI IN HEALTHCARE VIS A VIS WOMEN'S RIGHTS

When it comes to health and bodily autonomy, arguments advocated by the radical branch of feminism become prominent. Radical feminists place a strong emphasis on the body and on individual autonomy. They desire freedom for women to do as they choose with their bodies. They have campaigned for women to have the freedom to choose whether or not to have children via the protection of their reproductive rights. In addition, if a woman desires it, she should have access to birth control, safe abortions, and sterilization.

Since ages, married women used to be seen as their husbands' "owned" property¹⁴⁶. Males are the target audience for both advertising and pornography that features female bodies.¹⁴⁷ Women are treated like objects.

According to Adrienne Rich, men's reduction of female biology has stifled its "radical" potential¹⁴⁸. Radical feminists contend that the patriarchy is ingrained in a number of current political, social, and other organizations. The church, which has historically limited women to the maternal role and opposes the concept of non-reproductive sexuality, as well as rules and legislation from the government that limit what women can do with their bodies.

Radical feminists contend that patriarchal structures aim to control women's bodies. The rules governing reproduction, which decide whether or not women have the right to an abortion and contraception, are controlled by patriarchal organizations. Women thus have less control over their own bodies.¹⁴⁹

With the advent of Artificial Intelligence, this discrimination and divide has become more complicated as stated in the previous chapter. Now when it comes to healthcare, identification and reduction of bias becomes extremely crucial. Women's bodies were not

¹⁴⁶ Kathleen Barry, "Female Sexual Slavery", NYU Press, 1984

¹⁴⁷ Ibid

¹⁴⁸ Adrienne Rich, "Of Woman Born: Motherhood as Experience and Institution", WW Norton & Co. Inc. 1976

¹⁴⁹ Catharine Mackinnon, "Feminism Unmodified: Discourses on Life and Law", Harvard University Press, 1988

considered for clinical trials for centuries, resulting in misdiagnosis of symptoms due to physiological differences between men and women.¹⁵⁰

From the last century, this was considered and attempted to be rectified. In the past few years, Artificial Intelligence has been ubiquitous in all aspects of life, and it has reached healthcare as well. However, there are some very crucial problems to be addressed where gender bias is found in AI algorithms prevalent in healthcare.¹⁵¹

In India, a significant factor influencing both men's and women's health is gender. Biological variables and gender conventions, responsibilities, and relationships interact to shape people's exposure to illnesses and health concerns. It is crucial that decision-makers in the health care sector take into account the distinct requirements of men and women. Incorporating these variations and patterns into health policies and programs may enhance their efficacy, mitigate health disparities, and promote universal access to healthcare.¹⁵² Social, economic, and environmental variables that are beyond the purview of the health sector, such as physical security, work, education, and poverty, have a substantial impact on health as well.

Gender inequality, a significant factor in determining health, is still a problem in India and other countries. In many measures of social well-being, including literacy and access to the media, women trail behind males. Gender disparity is also reflected in women's lower participation in the labour force and much greater time spent providing unpaid care.¹⁵³

4.1 Adverse Effects of Unrestricted AI Inculcation in Healthcare

Artificial Intelligence performs several roles in the health sector and will perform even more in the future. Some of them include medical imaging and diagnostic services, virtual patient care, medical research and drug discovery etc¹⁵⁴

¹⁵⁰ Davide Cirillo & Ors., "Sex and Gender bias in Technology and Artificial Intelligence: Biomedicine and Healthcare Applications", Women's Brain Project, Academic Press, 2022

¹⁵¹ Cirillo D, Catuara-Solarz S, Morey C, Guney E, Subirats L, Mellino S, Gigante A, Valencia A, Rementeria MJ, Chadha AS, Mavridis N. "Sex and Gender Differences and Biases in Artificial Intelligence for Biomedicine and Healthcare", NPJ Digit Med. 2020 Jun 1;3:81, 2020 [doi: 10.1038/s41746-020-0288-5](https://doi.org/10.1038/s41746-020-0288-5).

¹⁵² "India: Gender and Health", World Health Organisation Report, South East Asia

¹⁵³ Ibid

¹⁵⁴ Al Kuwaiti A, Nazer K, Al-Reedy A, Al-Shehri S, Al-Muhanna A, Subbarayalu AV, Al Muhanna D, Al-Muhanna FA. "A Review of the Role of Artificial Intelligence in Healthcare". Journal of Personalized Medicine, 2023

There are several advantages to accommodating AI in healthcare, that is naturally why it is applied. However, that is not the focus of this paper. Hence, the adverse consequences will be directly discussed here. There is a gigantic wave of applications of AI-driven healthcare in India ranging from diagnosis to treatment, and even post-treatment care. According to recent statistics, the Indian healthcare AI market is expected to reach USD 1.6 billion by 2025, with a CAGR¹⁵⁵ of 40.5% from 2020 to 2025.¹⁵⁶

So it is of utmost importance to understand the vices of AI associated here. Healthcare systems powered by AI have the ability to misdiagnose illnesses, minimize symptoms due to skewed data, and spread stigma and false information about women's health difficulties. Women may have restricted access to these AI-powered healthcare solutions, particularly those who come from underprivileged backgrounds. These developments may disproportionately harm women due to factors including language hurdles, economic inequalities, and gaps in computer literacy.¹⁵⁷

Particular ethical issues are also raised by the use of AI in fertility therapies and diagnostics for reproductive health. When sensitive information about a woman's fertility, contraception, or pregnancy is processed by AI systems, her privacy may be jeopardized, particularly because some jurisdictions are reducing the protections afforded to women regarding reproductive rights.¹⁵⁸

There are many potential advantages in the use of AI in healthcare as well such as early disease detection and personalised medication, but there are also a number of drawbacks that may disproportionately harm women. These issues are caused by bias¹⁵⁹ in AI

¹⁵⁵ Compound Annual Growth Rate

¹⁵⁶ "Growing at 40.5% CAGR, Indian AI in healthcare market to cross USD 1.6B", Medical Buyer, April 8, 2024, <https://www.medicalbuyer.co.in/growing-at-40-5-cagr-indian-ai-in-healthcare-market-to-cross-usd-1-6b/#:~:text=The%20Indian%20context,be%20created%20in%20the%20space.>

¹⁵⁷ Kavitha Hariharan, "How Will AI Affect Gender Gaps In Health Care?: Gender data gaps in health care are already putting women at risk in many ways.", Marsh McLennan <https://www.marshmclennan.com/insights/publications/2020/apr/how-will-ai-affect-gender-gaps-in-health-care-.html>

¹⁵⁸ Afaq M., Abraham D.E., Patel S.H., Al-Dhoun A.D., Arshad Z., Abraham D.E. "Empowering Women's Health: A Global Perspective on Artificial Intelligence and Robotics." *Cureus*. 2023;15:e49611. [doi: 10.7759/cureus.49611.](https://doi.org/10.7759/cureus.49611)

¹⁵⁹ Sahar Takshi, Unexpected Inequality: Disparate-Impact from Artificial Intelligence in Healthcare Decisions, 34 J.L. & HEALTH 215 (2021).

algorithms, unequal data representation, and methods of implementing and using AI technology.

The main issues AI raises for women in healthcare are as follows:

Erroneous Diagnosis in Algorithms

There could be gender bias in training data. Massive datasets are used to train AI systems, which leads to training data bias. A large number of AI systems are trained on datasets mostly made up of male participants¹⁶⁰. This may result in algorithms that incorrectly identify or handle illnesses in women. For instance, women often have different heart attack symptoms than do males. If an AI system trained mostly on male data fails to identify these distinctions, it may result in a misdiagnosis. Through ages the perpetuated trials on men would be quicker to identify symptoms in male bodies, algorithms may pick up on these ideas hence exacerbating the issue. This stems primarily from underrepresentation in clinical data. Because women are often underrepresented in clinical trials, AI models may not adequately represent female patients.¹⁶¹ Women may get less effective treatment suggestions and diagnoses as a consequence of this.¹⁶²

Pervasive issues with Access and Equity

There is a prevalent digital divide. Women in lower income or rural locations may face considerable obstacles to accessing AI-driven healthcare technology. This may worsen already-existing health inequalities by depriving these women of the advantages of cutting-edge medical technology. It is a case of cost barriers. The high cost of AI healthcare technology may prevent certain women from accessing them, especially those from disadvantaged groups and those with lower socio-economic standing.¹⁶³

Interaction between Patients and Healthcare Providers

¹⁶⁰ Dhruv Khullar, “A.I. Could Worsen Health Disparities”, N.Y. TIMES (Jan. 3, 2019)

¹⁶¹ Paik KE, Hicklen R, Kaggwa F, Puyat CV, Nakayama LF, Ong BA, Shropshire JN, Villanueva C. “Digital Determinants of Health: Health data poverty amplifies existing health disparities-A scoping review”, PLOS Digit Health. 2023, doi: [10.1371/journal.pdig.0000313](https://doi.org/10.1371/journal.pdig.0000313)

¹⁶² Supra at Note 149

¹⁶³ Gretchen Borchelt, “The Impact Poverty has on Women’s Health”, American Bar Association, 2015-2016

An AI, however efficient it is, cannot replicate an actual human being, with the nuances that come with human expertise. As AI is used more often in healthcare, there may be less in-person encounters with medical professionals. Women may need individualized treatment and more time with medical specialists to address their unique health issues, thus this might be especially difficult for them. Women may have less faith in AI systems, particularly if they believe these technologies to be prejudiced or poorly understood. Reluctance to accept AI-driven healthcare solutions may result from this. Artificial Intelligence should be tailored to supplement human intelligence, not negate and replace human involvement, especially in a crucial field such as health care.¹⁶⁴

Prevalent concerns about Data Security and Privacy

The health data concerned may be sensitive. A lot of personal health data is often needed for AI systems in the healthcare industry. Data security and privacy are issues, especially when it comes to private information regarding mental health, reproductive health, and other problems that disproportionately impact women¹⁶⁵ as in the case of women it becomes social stigmas and cause for shame rather than just a medical issue. An AI could hardly be expected to understand long standing social taboos of Indian society.

At a much worse level, data privacy of patients may be at risk. Without their informed permission, women's health data may be used for commercial gain, violating their right to privacy and perhaps resulting in the abuse of their personal data. In the case of *Sorrell Vs IMS Health Inc*¹⁶⁶ a Vermont legislation that limited the sale, disclosure, and use of pharmacy information that disclosed specific physicians' prescription patterns was at issue before the U.S. Supreme Court. Because the issue deals with the exploitation of health data for commercial reasons, it is pertinent to AI in healthcare. AI's use of health data may be affected by the Court's decision that data mining and the selling of prescription information are protected activities under the First Amendment which stipulates right to free speech. The Vermont statute was overturned by the Court, which emphasized the value of free

¹⁶⁴ Sauerbrei A, Kerasidou A, Lucivero F, Hallowell N. "The Impact of Artificial Intelligence on the Person-Centred, Doctor-Patient Relationship: some Problems and Solutions". BMC Med Inform Decis Mak. 2023 Apr 20;23(1):73. [doi: 10.1186/s12911-023-02162-y](https://doi.org/10.1186/s12911-023-02162-y).

¹⁶⁵ Supra at Note 147

¹⁶⁶ Sorrell Vs IMS Health Inc., 564 US 552

speech and data usage. This had an effect on how AI systems in healthcare may use health data.¹⁶⁷

A clear violation of right to privacy is unconstitutional in India stemming from right to life under Article 21. Right to privacy has been upheld as a fundamental right in the case of *KS Puttaswamy Vs Union of India*¹⁶⁸.

Impact on Reproductive Health

In the case of *Suchita Srivastava Vs Chandigarh Administration*¹⁶⁹ the Court held that the right to reproductive choice flows from the right of bodily autonomy of a woman that is inherent in the right to life under Article 21. Hence it is fundamental in nature.

But there are issues that crop up both on account of data security as well as bias in reproductive health AI. Prenatal care technology and fertility monitoring applications are two examples of AI systems that potentially have biases that limit their utility and dependability for women. For example, they may not take into consideration the whole spectrum of experiences and situations related to reproductive health. Generally, with the use and application of AI there are always ethical concerns.¹⁷⁰ The use of AI to IVF and genetic screening raises ethical concerns regarding privacy, consent, and the possibility of coercion or pressure on women to make certain reproductive decisions.

In the realm of mental health, AI-driven solutions may not be sufficiently customized to meet the unique mental health requirements of women. This might lead to the misinterpretation or underdiagnosis of illnesses like anxiety or postpartum depression. Additionally, these tools may have gender-based biases in how they perceive symptoms.¹⁷¹

¹⁶⁷ Ibid

¹⁶⁸ *KS Puttaswamy Vs Union of India*, (2017) 10 SCC 1

¹⁶⁹ *Suchita Srivastava Vs Chandigarh Administration*, AIR 2010 SC 235

¹⁷⁰ Cath C. "Governing artificial intelligence: ethical, legal and technical opportunities and challenges". *Phil. Trans. R. Soc. A* 376: 20180080, 2018

¹⁷¹ Graham S, Depp C, Lee EE, Nebeker C, Tu X, Kim HC, Jeste DV. "Artificial Intelligence for Mental Health and Mental Illnesses: an Overview" *Curr Psychiatry Rep.* 2019 Nov 7;21(11):116. [doi: 10.1007/s11920-019-1094-0](https://doi.org/10.1007/s11920-019-1094-0).

Data privacy comes in this regard as well. Women may be discouraged from using AI-driven platforms to seek treatment because they are concerned about privacy, given the possibility of breaches or exploitation of sensitive data pertaining to their mental health.¹⁷²

Gender Norms in AI Models

AI models may unintentionally propagate negative gender stereotypes, such as presumptions about women's pain thresholds or the severity of their illnesses. Women's willingness to talk about their health concerns and the quality of treatment they get may be impacted by this. As most clinical trials till about half of the last century were conducted on male test subjects, alternate treatments may not be considered even. This poses even more problems for illnesses unique to women.¹⁷³

Misinformation is always a possibility. AI systems that use data from skewed or untrustworthy sources may rely on false information about women's health, which may cause misunderstandings and misdiagnosis.¹⁷⁴

Informed Consent

In the case of *Samira Kohli Vs Dr. Prabha Manchanda*¹⁷⁵ after providing her permission for a diagnostic laparoscopy, Samira Kohli had surgery, but she did not specifically agree to an extended procedure that included a simultaneous hysterectomy and oophorectomy. For lack of informed consent, she filed a lawsuit. The Supreme Court upheld Samira Kohli's decision, highlighting the need of getting express, informed consent for any particular surgery. The components of informed consent were specified by the court and include giving enough information about the procedure's nature and purpose, its dangers, accessible alternatives, and the anticipated consequences of not going through with it. The verdict made it clear that medical professionals, particularly when performing invasive operations, need to make sure patients are aware of the treatment they are agreeing to. By emphasizing women's autonomy in making medical choices, it set a precedent for informed consent.¹⁷⁶

¹⁷² Ibid

¹⁷³ Supra at Note 150

¹⁷⁴ Supra at Note 146

¹⁷⁵ *Samira Kohli Vs Dr. Prabha Manchanda*, AIR 2008 SC 1385

¹⁷⁶ Supra at Note 164

4.2 Possible Solutions for mitigating these Issues

AI-driven treatments or diagnoses can be difficult to explain in layperson's terms, making it challenging to ensure that women genuinely understand and consent to the care they're receiving. The steps to be taken to prevent AI negatively impacting women's health could be several, some of them being discussed here.

Inclusive Data Collection

The accuracy of AI tools for women may be increased and gender bias can be lessened by ensuring that AI systems are trained on a varied and representative dataset that includes a sizable percentage of female participants. Bias in AI can affect the treatment recommendations provided to women. If AI systems are trained on data that reflects historical gender biases in healthcare, they may recommend treatments that are not tailored to women's specific needs or may not consider their individual circumstances, potentially leading to disparities in healthcare quality. Hence it is recommended to have a robust and inclusive data collection.¹⁷⁷

Transparency and Accountability

In the case of "Black Box" AI Decisions¹⁷⁸ female patients be unaware of the rationale behind the AI's suggestions, hence feel ignored by their physicians. A lack of transparency may be an issue if AI is used to make decisions about medical treatment. Healthcare providers and AI developers have to be open and honest about the development, training, and use of AI systems. This involves disclosing to the public the possible drawbacks and prejudices of these technologies. Transparency and accountability, in fact is optimum in any sphere where AI is involved.¹⁷⁹

Privacy Protections

In the case of *Anthem Inc. Data breach Litigation, 2015* An enormous data breach at Anthem Inc. that affected around 80 million people resulted in several lawsuits and a large

¹⁷⁷ Arora A, Alderman JE, Palmer J, Ganapathi S, Laws E, McCradden MD, Oakden-Rayner L, Pfohl SR, Ghassemi M, McKay F, Treanor D, Rostamzadeh N, Mateen B, Gath J, Adebajo AO, Kuku S, Matin R, Heller K, Sapay E, Sebire NJ, Cole-Lewis H, Calvert M, Denniston A, Liu X. "The Value of Standards for Health Datasets in Artificial Intelligence-based Applications", *Nat Med.* 2023 Nov;29(11):2929-2938., 2023 [doi: 10.1038/s41591-023-02608-w](https://doi.org/10.1038/s41591-023-02608-w).

¹⁷⁸ Black Box AI decisions are those decisions made by AI where rationale behind them is unknown.

¹⁷⁹ Peter Engleke, "AI, Society and Governance: An Introduction", Atlantic Council, March, 2020

settlement.

The case emphasizes how crucial data security is to the healthcare industry. To safeguard patient information, AI systems processing health data need to have strong security mechanisms in place. By highlighting the legal repercussions of data breaches and the need of strict data security in AI applications, Anthem consented to a \$115 million settlement.¹⁸⁰

It is critical to have robust data security and privacy protections in place to safeguard women's health information. Informed permission must be obtained, and women must have control over the use of their data.

Education and Training

Providing healthcare professionals with the knowledge and skills to use AI tools efficiently, along with educating them about the possible biases and limits of these tools, may enhance patient outcomes. Women who are educated about these technologies might also feel more empowered to speak out for their own health needs. The accessibility and affordability of AI-driven healthcare technology should be improved, especially for women residing in underprivileged areas. This entails making investments in digital infrastructure and offering support financially when required.¹⁸¹

The development and observance of ethical principles for the use of AI in healthcare, especially in delicate domains such as reproductive health, might serve as a means of safeguarding women's rights and guaranteeing the responsible utilization of these technologies.¹⁸²

By tackling these problems, the medical community can make sure that women are fairly benefited by AI technology, improving rather than detracting from their healthcare experiences.

Indeed, there may be some difficulties brought about by AI in healthcare, particularly for women. Artificial intelligence (AI) has the potential to change medicine, but if used carelessly, it may have unexpected negative effects.

¹⁸⁰ Anthem Inc. Data Breach Litigation, 2015, 162 F. Supp. 3d 953 (N.D. Cal. 2016)

¹⁸¹ Paranjape K, Schinkel M, Nannan Panday R, Car J, Nanayakkara P. "Introducing Artificial Intelligence Training in Medical Education", JMIR Med Educ. 2019 Dec 3;5(2):e16048. [doi: 10.2196/16048](https://doi.org/10.2196/16048).

¹⁸² "Unpacking Artificial Intelligence in Sexual and Reproductive Health and Rights", World Health Organization, 22 March 2024

4.3 Legal Repercussions

In India, Right to healthcare is no longer just a positive liberty. It has been elevated to the status of a fundamental right. It has been considered a fundamental right under Article 21 in the case of *Parmanand Katara Vs Union of India*¹⁸³ and *Consumer Education and Research Centre Vs Union of India*¹⁸⁴

Besides, the Directive Principles of State Policy also emphasise right to health under Article 38 (promoting welfare of people), Article 39(e) (protecting health and strength of people from abuse), Article 41 (providing public assistance in case of sickness, disability or ‘undeserved want’), Article 47 (raising nutrition levels, improving standard of living and considering improvement of public health as primary duty).

India has ratified Article 25 of the 1948 Universal Declaration of Human Rights, 1948, which guarantees everyone the right to a living standard sufficient for their health and well-being, including access to food, clothing, housing, healthcare, and other social services.

However, in practicality, significant health inequities affect women in India, including higher rates of maternal death, restricted access to healthcare, and violence based on gender. India has ranked low at 135th place out of 146 countries in terms of gender parity in 2022 and this includes health and survival.¹⁸⁵

As it has been established in this chapter, inculcation of Artificial Intelligence may adversely affect women and increase this disparity further. This is a clear violation of Article 14, that stipulates equality. Further, in spite of Article 15 of the Constitution stating that the State shall not discriminate on grounds of sex, there is implicit discrimination impending with the advent of unchecked AI inculcation.

The legal implications of AI-assisted decision-making in healthcare are unclear. It is uncertain who should be held liable for errors or incorrect diagnoses, whether healthcare providers, AI developers, or the AI systems themselves. Therefore, thrusting the onus on someone is difficult, as is difficult the scope of judicial review in this regard. Some countries like United States, apart from taking AI related issues under consideration in specific statutes, makes offences related to it punishable under state tort law as well. Hence

¹⁸³ *Parmanand Katara Vs Union of India*, AIR 1989 SC 2039

¹⁸⁴ *Consumer Education and Research Centre Vs Union of India*, AIR 1995 SC 922

¹⁸⁵ The annual Gender Gap Report 2022 of the World Economic Forum (WEF) released in Geneva on July

it is imperative for India to follow suit and have legislations and be prepared for the onslaught of issues cropping up in this regard.

Under Article 15(3) the state can make provisions and laws for the betterment of women. If the State indeed intends to uphold this Constitutional provision, it must make laws regarding misuse of AI harming women adversely at the earliest.

As stated in chapters prior, John Stuart Mill stipulates a comprehensive and practical idea of liberty subject to harm caused to others, where that exercise of liberty should naturally stop.¹⁸⁶ Here the harm comes as a very real impending threat in India.

The establishment of AI ethical guidelines in healthcare is crucial to ensure responsible and ethical use of AI technology. These principles can assist AI developers, healthcare practitioners, and other stakeholders in navigating the ethical issues around privacy, data protection, fairness, and openness in the use of AI in healthcare settings.¹⁸⁷

However, there is no clear legislation present that regulates the same.

There is an urgent need for continued development and refinement of legal frameworks that specifically address the unique challenges and considerations related to AI-driven healthcare and privacy/data protection. The current legal framework proves insufficient in this regard. Harmonization and alignment of legal frameworks at national and international levels are necessary to ensure a cohesive and standardized approach to AI-driven healthcare and data protection.

Advances in AI technologies, such as explainable AI, interpretable machine learning, and privacy-preserving approaches, can help shape future paths for assuring privacy and data protection in AI-driven healthcare. India is progressing well in the direction of data protection, with new rules and guideline that aim to secure privacy and transparency in data protection, especially keeping the challenges of digital age in mind, But a more streamlined approach is required to combat gender discrimination in this regard.

¹⁸⁶ Piers Norris Turner, “Harm and Mill’s Harm Principle”, The University of Chicago Press, *Ethics*, Vol. 124, No. 2 (January 2014), pp. 299-326, 2014

¹⁸⁷ Heinz-Uwe Dettling, Kynya Jacobus, Dirk Tassilo Wassen, “How the Challenge of Regulating AI in Healthcare is Escalating”, *EY*, 27 July, 2022

CHAPTER 5

AI IN THE WORKFORCE: MIXED EFFECTS ON WOMEN'S EMPLOYMENT

Generally speaking, the percentage of women in the workforce has increased over time according to several reports.¹⁸⁸ Nonetheless, there is still a gender gap in leadership positions.

Although there is a noticeable increase in the percentage of women in entry-level and senior independent contributor roles there is still a noticeable obstacle in the progress of women's leadership in Indian organizations.¹⁸⁹

A clarity in visibility of opportunities, workplace flexibility and access to opportunities makes for a fair environment to work in. In a study regarding age discrimination Eliana Carmel, Chief People Officer at Agoda says the findings are telling for employers looking to retain quality talent in Asia. *“Creating a culture where people feel socially and professionally respected is paramount, Fairness in opportunity – both the ability to see what opportunities are available and having access to the tools or training to reach them comes through loud and clear from this study.”*¹⁹⁰

This applies at the same time to gender disparity as well.

With the advent of Artificial Intelligence, this divide has possibility of increasing further. AI has become an indispensable part of our lives, especially when it comes in sectors like health and workforce.

73% of Indian workers say their companies utilize AI in the workplace, but just 47% and 44% of workers, respectively, fully and partly grasp the technology's use. A study by UKG

¹⁸⁸ “The latest Periodic Labour Force Survey for 2021-22 highlights that the Female Labour Force Participation Rate (FLFPR) for prime working age group (15 years & above) has increased considerably and stood at 32.8% in India”, Report on ‘Female Labour Utilisation in India’, Employment Statistics in Focus: April 2023, Ministry of Labour & Employment

¹⁸⁹ Ibid

¹⁹⁰ “Women in the Workplace: Asia” conducted by the Asian-based tech travel company Agoda, 2023

that was done in nine different nations, including India, shows that an astounding 95% of Indian workers think AI may improve their working conditions.¹⁹¹

In order to guarantee that AI models are transparent, organizations must adopt a multipronged strategy that involves the creation of explainability tools, frequent audits, and adherence to industry-wide standards.

AI has a wide range of implications for women's professional life. Women make up just 29% of scientific R&D roles worldwide, and they are 25% less likely than males to know how to utilize digital technology for fundamental purposes¹⁹².

These statistics highlight the stark differences in women's and men's engagement in the STEM disciplines. In addition, women make up just 22% of AI professionals and only 36% of STEM degree holders, indicating a gender disparity in both domains.¹⁹³

It has been shown that AI may disrupt or automate over 80% of women's employment, which highlights the possibility of job displacement and the need of reskilling and upskilling initiatives.¹⁹⁴

In addition, AI systems may reinforce prejudices that hinder women's abilities to reskill, upskill, and pursue careers in STEM sectors. These effects on labour, caregiving, and domestic work, that were predominantly considered specific to woman's duties might be reimposed.

Given its dual potential to impede and promote gender parity in the labour market, Artificial Intelligence's impact on women's professional life is an important area of research and concern. The need for further research and focus on how AI impacts women and the digital gender gap highlights the need to protect women from being disadvantaged in the changing work environment. It's obvious that understanding and addressing the effects of AI on women in the workplace is crucial to promoting substantive conversations about gender equality and ensuring that AI advances gender equality rather than exacerbating existing inequalities.¹⁹⁵

¹⁹¹ A study done by American multinational technology company UKG called "UKG AI in the Workplace Survey", 2023

¹⁹² Andrea Gallego & Ors., "How AI Could Help-or Hinder-Women in the Workforce", BCG, 2019

¹⁹³ Collett, Clementine, UNESCO, Neff, Gina, Gomes, Livia Gouvea, Inter-American Development Bank Organisation for Economic Co-operation and Development, "The Effects of AI on the Working Lives of Women", ISBN: 978-92-3-100513-8, 2022

¹⁹⁴ Alicia Wallace, "Nearly 80% of Women's jobs could be Disrupted, Automated by AI", CNN, 2023

¹⁹⁵ Supra at Note 181

This will only occur with putting stress on the importance of continuing study, disseminating information, and taking proactive steps to promote gender equality and guarantee that women may successfully participate and thrive in the fast-paced workplace, particularly in light of emerging technologies like Artificial Intelligence.

5.1 Opportunities and Merits of AI for women in workforce

Artificial Intelligence in the workforce could be a game changer to usher in an era of equity and equal rights for women. But it won't happen on its own. Measures need to be taken to safeguard the use of AI that act equitably in mitigating bias. Several merits of the same can be enumerated as follows:

Creation of new and widespread employment opportunities

AI is opening up new career paths in STEM disciplines, giving women the opportunity to take use of AI. As AI develops, new positions in data science and technology are opening up, sectors that are increasingly fostering diversity and inclusion. Women may discover new employment prospects by joining these industries. Through the acquisition of pertinent skills, women may effectively use these novel positions.¹⁹⁶

Inclusive Hiring

By assessing applicants based on their learning capacity, attitude, and transferable abilities rather than their prior experiences, Artificial Intelligence (AI) techniques in recruiting might help minimize gender prejudice in hiring procedures. It would only look at merit requirements, rather than a prejudiced recruiter. However, it is to be noted, that bias in algorithm can perpetuate discrimination against women. So, caution must be exercised to utilise and get the best out of AI. It is a tool, which if used properly can be the harbinger of a new age of equity, especially in employment.¹⁹⁷

Less prejudice at work

AI may be able to eliminate discrimination from hiring, evaluation and promotion procedures, improving the chances for women to progress in the workplace. It could foster equitable work environment with healthy and fair competition where evaluation is done

¹⁹⁶ Pauline T. Kim & Matthew T. Bodie, "Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy", 35 A.B.A. J. LAB. & EMP. L. 289, 2021

¹⁹⁷ Fosch-Villaronga, E., Poulsen, A. , "Diversity and Inclusion in Artificial Intelligence" In: Custers, B., Fosch-Villaronga, E. (eds), "Law and Artificial Intelligence", Information Technology and Law Series, vol 35. T.M.C. Asser Press, The Hague., 2022

without any preconceived notions. It would provide a sort of ‘level playing field’ for women. However, caution is to be exercised here as well. At the end of the day, to err is to human. And bias of some form is inherent in most of us. AI would function as efficient as we can make it. So the aim is to always eliminate bias from algorithm as much as practicable.¹⁹⁸

Greater Flexibility and Remote Work Opportunities

AI-powered solutions make it possible to work remotely and on a more flexible schedule, which is advantageous for women who often balance work and caregiving obligations. Post Covid 19, ‘Work From Home’ has become prominent. Along with the ease of using AI, some employers have started granting flexibility in work timing and remote working opportunities. This is a welcome change for both men and women.¹⁹⁹

Improved Work-Life Balance

This is another advantage of the emergence and wide application of Artificial Intelligence in workforce that benefits all employees. AI may automate repetitive jobs, which may lighten the load of menial labour and enhance pursuit of other aspects of life, rather than just work. This will improve work-life balance.²⁰⁰

Personalized Career Development and Learning

AI-powered platforms may provide career development and learning plans that are specifically tailored to women, enabling them to grow professionally and gain new skills. This is pertinent to inculcate them in more AI research that ultimately it promotes more equitable AI usage and application in workforce.²⁰¹

5.2 Challenges faced by Women with the Application of AI at workforce

The inculcation of Artificial Intelligence in workforce has created significant issues for all employees. The potential for automation in AI technologies raises questions regarding

¹⁹⁸ Ibid

¹⁹⁹ Kate Crawford, “The AI Now Report: The Social And Economic Implications Of Artificial Intelligence Technologies In The Near-Term 6-7”, 2016

²⁰⁰ Elana Zeide, “The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity”, 91 UMKC L. REV. 403, 2022

²⁰¹ “Will Gen AI Help or Hinder Women in the Workplace?”, “New Work, New World” Report, Cognizant, 2024

employment displacement, especially in the case of repetitive and menial jobs. Because of this displacement, affected employees may need to enrol in reskilling or upskilling programs in order to adjust to new responsibilities in an ever-changing workplace. The management and security of enormous volumes of data may give rise to serious privacy and security concerns with the introduction of AI. AI systems that have security flaws run the danger of allowing unwanted access, misusing user data, and compromising private information.²⁰²

Customer service and other occupations that require human touch and ingenuity cannot be effectively replaced by AI. Besides, employees' reliance on AI may have an adverse effect on their ability to think critically, solve problems, and make innovative decisions. The use of AI has the potential to bring bias into decision-making procedures, undermining the objective of guaranteeing diversity and inclusion.²⁰³

These problems are common to both men and women employees. Additionally, women face other challenges with regard to Artificial Intelligence that has been enumerated several times in the past chapters. Those are prevalent, on top of it. The additional issues that women may face in AI driven work environments are manifold. Gender bias and underrepresentation form the major concerns that are exacerbated by AI. Some of them are as follows:

Gender Bias in AI Algorithms

Machine learning algorithms have the potential to reinforce historical biases, leading to discrimination against women in a variety of contexts. Prejudice has the power to influence how choices are made, which may affect women's opportunities for advancement and recognition. Existing gender prejudices may be reinforced by AI systems, producing unjust results. AI models could, for instance, favour males more when it comes to job assessments and promotions.²⁰⁴

Unrepresented in AI-Related Fields

²⁰² Zhiqing Bian, “Research on the Impact of Artificial Intelligence on the Labor Market”, Highlights in Business, Economics and Management, EMFRM 2023, Volume 24, 2024

²⁰³ Supra at Note 191

²⁰⁴ Women in AI and Machine Learning, “What are the biggest challenges women face in AI?”, Women in Tech Career Fair and Summit, 2024

Although AI could open up new career paths in STEM industries, men typically hold the majority of these positions. This suggests that women could not gain equally from AI's ability to create jobs, which would increase the gender pay gap in the workforce. Women make up a smaller percentage of AI-related elements and are underrepresented in AI and other STEM fields. Because of this underrepresentation, gender-neutral advancement and growth are hampered, which emphasizes the necessity for diverse experiences and points of view in AI improvement.²⁰⁵

Skills Gap and Training Access

The skill gap may be exacerbated if women have less access to opportunities or assistance for obtaining the education and training needed to keep up with new technology breakthroughs.

Women have barriers to accessing AI-related training and education, which results in an aptitude gap that hinders their ability to advance in AI-driven workplaces. In order to fully use AI in the workplace, it is imperative that one is ready.²⁰⁶

Financial Inequality

If women who are displaced by automation are forced to adopt lower-paying employment or if new AI-driven occupations in historically female-dominated industries pay less, this will worsen already existing wage discrepancies. Women may be pushed to take up part-time or gig work, which often offers lower pay and fewer benefits than full-time employment.²⁰⁷

Job Displacement

AI is expected to replace workers in a number of occupations, especially those that have historically been occupied by women, such as clerical, administrative, and customer service positions. Data input, document processing, and customer support are among the jobs that AI may automate, that are often done by women. This task automation may result in job losses in many industries, aggravating the gender gap in the displacement of workers²⁰⁸.

²⁰⁵ Anu Madgavkar & Ors., “The Future of Women at Work, Transitions in the Age of Automation”, MCKinsey Global Institute, 2019

²⁰⁶ Parul Munshi & Nicki Wakefield, “How AI is being adopted to accelerate Gender Equity in the Workplace”, PWC Global, 2024

²⁰⁷ Supra at Note 193

²⁰⁸ Supra at Note 182

This may pose threat to women who are sole earners or single parents, causing economic instability in their lives. A McKinsey analysis found that women are 1.5 times more likely than men to change occupations since they are overrepresented in fields like food service, office assistance, and customer service, which are all seeing persistent declines in employment.²⁰⁹

Limited Senior Roles and Leadership Opportunities

In AI companies, women face obstacles in obtaining senior jobs and leadership positions. Women seeking leadership positions in the typically male-dominated IT sector face challenges that impede their advancement in the field of Artificial Intelligence.²¹⁰

The underrepresentation may result in solutions and products that fail to address gender-specific problems, which would lessen the efficacy and equity of AI applications for women.²¹¹

Workplace Dynamics and Gender-based Challenges

Women in AI-driven businesses confront a variety of gender-specific hurdles, including work-family balance issues, male-dominated conferences, biased training materials, harassment at work, and gender-based workspaces. Women's involvement, productivity, and general job happiness may all be impacted by these difficulties.²¹²

Privacy and Surveillance

Employers may experience unpleasant work environments and privacy violations as a result of using AI to track employee performance. Women may be disproportionately impacted by these monitoring tactics since they are often more susceptible to harassment at work.²¹³

5.3 Aiming to Mitigate Challenges

²⁰⁹ Anu Madgavkar & Ors., “The Future of Women at Work, Transitions in the Age of Automation”, MCKinsey Global Institute, 2019

²¹⁰Elana Zeide, The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity, 91 UMKC L. REV. 403, 2022

²¹¹ Ibid

²¹² Supra at Note 200

²¹³ Pauline T. Kim & Matthew T. Bodie, Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy, 35 A.B.A. J. LAB. & EMP. L. 289, 2021

Artificial Intelligence will only be resourceful if humans are. The issues and challenges can be addressed in several ways so bias against women can be practically reduced in the workplace.

Gender Bias Mitigation

AI has the ability to lessen gender discrimination in the workplace, especially during the hiring process. It may aid in reducing prejudice in employment choices, which is important for improving inclusion and gender diversity, particularly in STEM-related sectors. Reducing bias and unfavourable results may be achieved by encouraging women to pursue digital skills and ensuring intelligent and balanced inputs into AI models. Reducing the effects of discrimination may be achieved by making sure AI systems are built with tools to identify and counteract prejudice. Hence, there is a need for anti-bias auditing companies to analyse outcomes beforehand.²¹⁴

Career Advancement Opportunities

Due to its ability to provide training programs and upskilling possibilities in related disciplines, AI may open up new job paths for women. This might provide women the confidence to learn new skills and adjust to a changing workplace. Women-only reskilling and upskilling initiatives may aid those impacted by job displacement in obtaining new jobs.²¹⁵

Monitoring and Reporting Tools

Applications using Artificial Intelligence (AI) may be used to track and report cases of discrimination and harassment at work. AI solutions may be used in the workplace to identify and resolve these problems, making it safer and more welcoming for female workers.²¹⁶

Skills Development and Training

AI technology makes it possible to create effective, individualized training programs that may assist women improve their technical proficiency and maintain their competitiveness in AI-driven industries. Women who have access to AI training may get the skills and

²¹⁴ Elana Zeide, *The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity*, 91 UMKC L. REV. 403 (2022).

²¹⁵ Roine Bertelson, “Women in AI Leadership: Overcoming the 5 Main Challenges and Celebrating Successes”, *The Inclusive AI*, 2024

²¹⁶ Dave Zielinski, “Predicting Misconduct: How AI Helps Head Off Harassment, Bias and Other Ethics Issues”, *SHRM*, 2021, <https://www.shrm.org/in/topics-tools/news/hr-magazine/predicting-misconduct-how-ai-helps-head-harassment-bias-ethics-issues>

knowledge necessary to succeed in tech positions. The skill gap can be closed and women may be better prepared for AI-driven job markets by being encouraged and assisted to seek education and professions in STEM subjects. It is essential to inspire students to seek STEM careers and associated skill development. Increasing female engagement in STEM subjects and promoting diversity in AI and IT industries may guarantee that more women are engaged in developing AI solutions.²¹⁷

Inclusion and Equity Initiatives

AI is a tool that businesses may use to help their efforts to promote inclusion and diversity in the workplace. In order to enhance fairness and representation for women, specific programs may be designed with the assistance of AI technologies, which can also help identify areas where gender gaps exist.²¹⁸

Companies need to consider how AI will affect women differently and strive to provide inclusive work environments that support everyone's well-being and equitable access to opportunities. It is important for developers to construct bias-free AI technologies. Fair representation in the design teams and the use of a variety of datasets are necessary for this.²¹⁹

Ethical Considerations

AI technology brings up moral questions about prejudice and gender representation. Organizations must address these moral issues and make sure AI systems don't support discrimination or gender stereotypes in the workplace. Businesses should foster inclusive workplaces where women are empowered to use AI to their advantage. To guarantee that AI systems are developed and deployed in ways that take into account and benefit all users, businesses and organizations should work to diversify their AI development teams.²²⁰

Objective Evaluation

In order to assess a candidate's fitness for a position, AI algorithms may evaluate pertinent data points including experience, education, and talents. This reduces the influence of

²¹⁷ Pauline T. Kim & Matthew T. Bodie, Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy, 35 A.B.A. J. LAB. & EMP. L. 289, 2021

²¹⁸ Ibid

²¹⁹ Ignacio Peinado & Ors. , "Digital Inclusion at the Workplace post Covid 19", page no. 460- 467, 2021
DOI: [10.5220/0010722900003063](https://doi.org/10.5220/0010722900003063)

²²⁰ Salvi del Pero, A., P. Wyckoff and A. Voure'h, "Using Artificial Intelligence in the workplace: What are the main ethical risks?", *OECD Social, Employment and Migration Working Papers*, No. 273, OECD Publishing, Paris, 2022, <https://doi.org/10.1787/840a2d9f-en>.

unconscious bias in hiring choices. In a sort of blind hiring, AI may be designed to disregard demographic data, such as age, gender, and ethnicity, that may be used by hiring managers and recruiters as covert forms of discrimination. This ensures a more equitable assessment process. Job advertisements ought to be unbiased. AI can examine historical data to spot biased trends in job ads. By recommending inclusive wording and emphasizing the relevant training, experience, and credentials needed for a position, it can draw in a wider range of applicants.²²¹

AI may help with organized interviews, which reduce the possibility of bias leaking into the evaluation and guarantee a more objective assessment. In these interviews, each applicant is given the same set of pre-planned questions. Artificial intelligence can analyse diversity criteria, examine enormous volumes of HR data to find patterns and trends pertaining to diversity and inclusion. This may assist HR professionals in identifying possible areas of prejudice and proactively addressing them. AI may assist companies in shifting their hiring emphasis from educational or certification requirements, which often favour male candidates, to skills. This strategy guarantees that competent applicants won't be excluded due to their gender.²²²

Transparency and Communication

To preserve justice and confidence, employers must be transparent about how they use AI to evaluate candidates and make hiring choices. Some of the detrimental effects of AI on women may be lessened by implementing regulations that support gender equality in the workplace, such as those pertaining to parental leave, equal pay, and anti-discrimination. People find it challenging to understand the reasoning behind some conclusions due to the opaque nature of algorithms, the 'black box' effect.²²³

Source code or algorithm disclosure by itself could not shed enough light on their consequences, underscoring the need of appreciating the value of pertinent data. Since computer predictions regarding human potential are sometimes unverifiable, simplifying algorithmic computations may result in less accurate conclusions.²²⁴

²²¹ Supra at Note 206

²²² Satya D Sinha, "The Impact of AI on Diversity and Inclusion Initiatives in Hiring", Express Computer, 2024, <https://www.expresscomputer.in/guest-blogs/the-impact-of-ai-on-diversity-and-inclusion-initiatives-in-hiring/110312/>

²²³ Supra at Note 167

²²⁴ Supra at Note 206

5.4 Legal aspects

The ethical ramifications of AI in the workplace, particularly concerns about accountability, transparency, and justice, are attracting the attention of legislators and legal experts more and more. The legal environment around AI technology is shaped in part by legal studies on algorithmic responsibility and due process for automated choices. Concerns of due process, individual rights, and the possibility of biased results are raised by the use of AI algorithms in hiring choices. To promote equitable and transparent decision-making processes, legal academics support the implementation of accountability mechanisms and the auditing of algorithms for prejudice.

Regulatory Frameworks

AI systems often need a lot of personal data, which poses serious privacy issues. If these technologies violate their privacy or abuse their personal data, women may be disproportionately impacted. The use of AI in the workplace presents new legal and regulatory issues with regard to algorithmic transparency, accountability, and data protection. The use of AI technology in employment practices is mostly regulated in the United States by regulations like the California Consumer Privacy Act (CCPA), 2018²²⁵ and in the European Union by the General Data Protection Regulation (GDPR)²²⁶. In India, the Digital Personal Data Protection Act 2023 (DPDPA) attempts to protect people's privacy in the digital era. The Act went into force on September 1, 2023, and it is applicable to any entities that handle Indian citizens' personal data.

However, no specific legislation is there to address the glaring issues of discrimination faced by women in workforce due to advent of AI. Articles 15 and 16 of the Constitution of India enumerate the rights of women on par with men to secure employment without bias and discrimination. Besides, Article 15(3) enables the State to further make laws to ensure the rights of women and uplift them whenever need arises. In *Government of A.P. Vs P.K. Bijayakumar*²²⁷, the Supreme Court upheld a service rule that gave preference to women in recruitment for public employment up to 30% of posts, holding that creating job

²²⁵ The California Consumer Privacy Act is a state statute intended to enhance privacy rights and consumer protection for residents of the state of California in the United States.

²²⁶ A European Union legislation concerning information privacy in the European Union (EU) and the European Economic Area (EEA) is known as the General Data Protection Regulation (Regulation (EU) 2016/679, or GDPR for short). A significant part of EU human rights and privacy legislation is the GDPR. It also controls the flow of personal information beyond the EEA and EU. Enhancing people's ownership and rights over their personal information and streamlining laws for global business are the two main objectives of the GDPR.

²²⁷ *Government of Andhra Pradesh Vs PK Bijayakumar*, AIR 1995 SC 164

opportunities for women would be uplifting the fundamental idea behind Article 15(3), which makes special provisions for women with regard to employments or posts under the state an essential component of the article.

Article 39 ensures equal pay for equal work for both men and women. So, there is a need for legislation directed at mitigating the challenges faced by women in this regard. Besides, Article 41 recognises the Right to work urging the State to provide opportunities and make suitable working conditions for women and Article 42 further directs the State to ensure a healthy work environment and provision of maternity benefits.

Anti-Discrimination Laws

The inculcation of AI in workforce can have several positive and equitable impact for women as it can mitigate centuries of discrimination women face in workplace. In fact, the effect of AI on workplace may prove quite positive as opposed to those in healthcare or social media. But it can only be true if precautionary measures are taken, constant audits are done and legislation is strict to regulate its use. AI tools are covered by current anti-discrimination legislation, however it's not always clear how these rules should be applied when making judgments based on AI. Anti-discrimination regulations must be followed by AI systems used in hiring and performance reviews to avoid prejudice against protected classifications, such as gender. Legal frameworks that prohibit discrimination in the workplace on the basis of gender, ethnicity, and other characteristics include Title VII of the Civil Rights Act of 1964.²²⁸

Amazon created an artificial intelligence (AI) recruitment tool to automate the job application evaluation process.²²⁹ Over a ten-year period, the AI system was trained using resumes that were provided to the organization. The AI was trained mostly on the resumes of male applicants, which is indicative of the gender disparity in the IT sector. The AI became biased against female applicants as a consequence. Resumes including the term "women's," "women's chess club captain," were progressively demoted. Furthermore, resumes with language and experiences more often associated with male applicants were given preference by the AI. Title VII of the Civil Rights Act of 1964, which forbids employment discrimination based on sex, is one anti-discrimination legislation that this

²²⁸ In the United States, Title VII of the Civil Rights Act, as amended, protects employees and job applicants from employment discrimination based on race, color, religion, sex and national origin. Title VII protection covers the full spectrum of employment decisions, including recruitment, selections, terminations, and other decisions concerning terms and conditions of employment

²²⁹ *Infra* at Note 219

prejudice may have violated. Due to the prejudice of the tool against female candidates, hiring practices may engage in illegal gender discrimination. Because of this, previous data, gender inequities already in place were maintained. This emphasizes how important it is to give the training data utilized by AI systems considerable thought. Businesses need to routinely check their AI systems for biases in order to adhere to ethical and regulatory requirements. Examining the training set and the AI's decision-making procedures are part of this. There are serious issues with the AI's decision-making process being opaque. Businesses must make sure that there are procedures for and redress in the event that biases are discovered, as well as that their AI systems are transparent. After realizing the prejudice, Amazon made the decision to stop using the AI hiring tool. This ruling emphasizes how crucial it is to exercise caution and take remedial measures when biases in AI systems are found.²³⁰

Intersection of Labor Law and AI

The intersection of labour law and AI technologies requires a nuanced understanding of how automated systems impact employment relationships, worker rights, and collective bargaining. Legal scholars explore the implications of AI on labour practices and advocate for legal frameworks that protect workers in the age of automation.²³¹

In India there are several legislations on labour and industry that protect women's rights in the workplace such as the Mines Act²³² of 1952 which outlines measures for employees working in coal, metal, ferrous, and oil mines who use shafts, opencast workings, conveyors, aerial ropeways, etc. Female workers are entitled to separate latrines and urinals under Section 20. In addition, women are not allowed to work in any mine, above or below ground, unless it is between the hours of 6 a.m. and 7 p.m. It also stipulates that a minimum of 11 hours must elapse between the conclusion of the workday and the beginning of the following day for any woman employed above ground in a mine.²³³

²³⁰ Chang, Xinyu, "Gender Bias in Hiring: An Analysis of the Impact of Amazon's Recruiting Algorithm", *Advances in Economics, Management and Political Sciences*. 23. 134-140. 10.54254/2754-1169/23/20230367.

²³¹ Elana Zeide, *The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity*, 91 *UMKC L. REV.* 403 (2022).

²³² Mines Act, 1952, §4&5, No. 35, Act of Parliament, 1952(India)

²³³ Section 20, Mines Act, 1952

The Maternity Benefit Act of 1961 gives women 26 weeks of paid maternity leave²³⁴, one month of paid leave for pregnancy-related sickness or miscarriage²³⁵, and a medical bonus of a certain sum if the employer covers prenatal and postpartum care²³⁶. No one has the authority to terminate a woman while she is on maternity leave.²³⁷

The Equal Remuneration Act of 1976 contributes to reducing the wage gap that our nation's female employees face. Article 39 gives the right to demand equal compensation. For the same position, employers must compensate men and women equally. Additionally, employers are not allowed to discriminate against women in any way throughout the hiring process. This legislation was enforced by the Central Industrial Relations Machinery (CIRM). Equal pay or compensation for men and women in equal positions are mentioned in Sections 4 and 5 of this statute.

The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 gives strict measures to curb sexual harassment at workplace. Workplace sexual harassment is seen as a violation of women's rights to equality, life, and liberty. It discourages women from working by fostering an unfriendly and uncertain work environment, which has an effect on both the objective of comprehensive development and women's socioeconomic empowerment. According to the Act, sexual harassment includes any unwelcome physical, verbal, or nonverbal sexual activity as well as solicitations for sexual favours, advances, comments with overt sexual connotations, and pornographic displays. Sexual harassment is applied to any unwelcome sexual activity.²³⁸

There are specific legislations to address specific issues women face in the workplace. As and when there was requirement in the form of regulatory gaps and discrepancies, an Act

²³⁴ Working women's paid maternity leave now lasts 26 weeks instead of 12 according to the Maternity Benefit (Amendment) Act of 2017. Women who have worked in an establishment for a minimum of 80 days in the 12 months prior to the anticipated date of delivery are eligible for this. Section 5(3) of The Maternity Benefit Act, 1961, as revised in 2017, provides coverage for this.

²³⁵ A woman is entitled to leave with earnings at the rate of maternity benefit for a period of six weeks immediately after the day of her miscarriage or medical termination of pregnancy, as per Section 9 of the Maternity Benefit Act, 1961. The Act offers extra leave under Section 10 for sickness connected to pregnancy, allowing up to one month of paid leave at the rate of maternity benefit.

²³⁶ According to Section 8 of the Maternity Benefit Act, 1961, a woman is entitled to a medical bonus up to a particular sum set by the government if her employer does not cover the cost of prenatal confinement and postoperative care. The Amendment Act, 2017 strengthens the employer's duty to offer either the medical bonus or the required medical treatment, but it does not alter this clause.

²³⁷ Section 12 of the Maternity Benefit Act, 1961

²³⁸ Chigateri, Shraddha., "Labour Law Reforms and Women's Work in India: Assessing the New Labour Codes from a Gender Lens", Institute of Social Studies Trust, 2021

was passed to curb the same. So it is high time, to inculcate provisions in statutes, or pass an entire statute altogether to prevent discrimination against women in the workplace.

Transparency and Accountability

The decision-making process of AI systems is opaque, which might hide instances of discrimination and make it harder for those who are impacted to protest unjust treatment. Compared to the US and India, the EU has stricter and more protective regulations around AI and data protection. Future American policies intended to lessen the detrimental effects of AI on women and other vulnerable groups in the workforce may be influenced by this regulatory environment. The two major issues in this regard are discrimination and privacy concerns. So, India should make adequate legislation to improve the scenario on both of these areas. While the new Data Act in India currently in place seems to alleviate some of these issues, more stringent legislation is the need of the hour.²³⁹

²³⁹ Felzmann, H., Villaronga, E. F., Lutz, C., & Tamò-Larrieux, A., “Transparency you can Trust: Transparency Requirements for Artificial Intelligence between Legal Norms and Contextual Concerns”. *Big Data & Society*, 6(1), 2019 <https://doi.org/10.1177/2053951719860542>

CHAPTER 6

INDIA'S LEGAL FRAMEWORK TO TACKLE THE ISSUES: COMPARISON WITH OTHER COUNTRIES

European Union enacted and enforced the first legislation fully focusing on Artificial Intelligence in the world recently in 2024. EU had its own robust framework of regulations in this regard leading up to it. In 2018, they created the General Data Protection Regulation (GDPR).

6.1 GDPR

The cornerstone of data protection in the EU is the GDPR, which went into force in May 2018. It is applicable to all organizations processing personal data of persons inside the EU.

The General Data Protection Regulation (GDPR) upholds a number of important data protection principles, including lawfulness, fairness, openness etc. Consent is an important aspect. When processing personal data, particularly sensitive data categories, data subjects must provide their informed permission. Automated decision making forms another pillar of GDPR.²⁴⁰ Article 22 of the GDPR covers automated decision-making, which includes profiling. It gives people the right to refuse to have choices made only on the basis of automated processing, including AI, unless certain requirements are satisfied (such as express permission or a legal need). The rights of data subjects include the ability to access, edit, remove, and transfer personal data as well as the ability to object to processing, including profiling.²⁴¹

The following are the main ideas and clauses of the GDPR that emphasize anti-discrimination:

Principles of Data Protection (Article 5)²⁴²

²⁴⁰ Infra at Note 230

²⁴¹ Nicolò Ghibellini, "Some Aspects of the EU's New Framework for Personal Data Privacy Protection", *The Business Lawyer*, WINTER 2017-2018, Vol. 73, No. 1 (WINTER 2017-2018), pp. 207-214

²⁴² Article 5 GDPR outlines principles for processing personal data, including lawfulness, fairness, transparency, collection for legitimate purposes, data minimisation, accuracy, storage limitation, and security. Personal data must be lawful, fair, and transparent, collected for specific purposes, and not further processed incompatible with those purposes. Data minimisation ensures data is adequate, relevant, and limited to what is necessary. Accuracy ensures data is accurate and up-to-date, while storage limitation

Page | 77

Fundamental data protection standards established by the GDPR obliquely promote anti-discrimination, including prejudice based on gender.

The processing of data must be equitable, legal, and open to the data subject. By following this concept, data processing is protected from being exploited in ways that can unjustly discriminate against women.²⁴³

Information should only be gathered for clear, unambiguous, and legal objectives. It shouldn't be handled in a way that goes against those goals. This idea aids in preventing the improper use of data for discriminating intentions.²⁴⁴

Processing of data should be sufficient, relevant, and restricted to what is required. This restricts the acquisition of superfluous data that can result in biased profiling.²⁴⁵

Personal information has to be current and correct. It is necessary to update inaccurate data that can support prejudices or preconceptions.²⁴⁶

Information shouldn't be retained for longer than is required to minimize the possibility that out-of-date data would support discriminatory actions.²⁴⁷

To avoid unauthorized access that might result in discriminatory uses, personal data processing must be done securely.²⁴⁸

Data Subject Rights (Chapter III)

With the help of the GDPR, people, including women, will be able to exercise control over how their data is used, which will help fight prejudice.

Right of Access (Article 15)²⁴⁹

allows for longer periods for specific purposes. Security ensures data is processed securely, including protection against unauthorised or unlawful processing and accidental loss, destruction, or damage.

²⁴³ Article 5, GDPR, Supra at Note 231

²⁴⁴ Ibid

²⁴⁵ Ibid

²⁴⁶ Ibid

²⁴⁷ Ibid

²⁴⁸ Ibid

²⁴⁹ Article 15 GDPR states that the data subject has the right to request confirmation from the controller about the processing of their personal data, access to information about the purposes, categories, recipients, storage period, rectification, erasure, objecting, complaint lodgement, source information, and automated decision-making, including profiling. This right includes the right to request rectification, erasure, restriction of processing, object to processing, lodge a complaint, and understand the logic and consequences of automated decision-making.

People are entitled to see their personal data and learn about the manner in which it is handled. Women are able to recognize and contest discriminatory data processing practices because to this openness.

Right to Rectification (Article 16)²⁵⁰

Individuals who are the subjects of data may ask that incomplete or erroneous data be corrected. This right guarantees the correction of inaccurate data that can support gender discrimination.

Right to Erasure (Right to be Forgotten) (Article 17)²⁵¹

People have the ability to ask for the erasure of their personal data in certain situations, such as when information has been improperly handled or is no longer required for the reasons for which it was obtained. Women may benefit from this privilege by having data that might be used against them removed.

Right to Restriction of Processing (Article 18)²⁵²

People have the right to request that certain limits be placed on the processing of personal data, which will help to prevent their data from being used in a discriminatory manner.

The right to data portability (Article 20)²⁵³

²⁵⁰ Article 16 GDPR, Right to Rectification: The data subject shall have the right to obtain from the controller without undue delay the rectification of inaccurate personal data concerning him or her. Taking into account the purposes of the processing, the data subject shall have the right to have incomplete personal data completed, including by means of providing a supplementary statement.

²⁵¹ Article 17 GDPR The right to erasure is a fundamental human right that allows individuals to request the erasure of their personal data without delay. This right applies to various reasons, including the data being no longer necessary for the purposes of collection or processing, withdrawing consent, objecting to processing, being unlawfully processed, complying with legal obligations, or being collected for information society services. If a controller is obliged to erase personal data, they must inform processing controllers of the request. However, these paragraphs do not apply to processing necessary for freedom of expression, compliance with legal obligations, public health reasons, archiving purposes, scientific research, or legal claims.

²⁵² Article 18 GDPR allows data subjects to request restriction of processing from their controllers if their personal data is contested, unlawful, no longer needed for legal claims, or objected to processing. Processing restricted under this Section must only be processed with consent, legal claims, or public interest. The data subject must be informed by the controller before the restriction is lifted. The controller must verify the data subject's rights before lifting the restriction.

²⁵³ Article 20 GDPR The data subject has the right to receive structured, machine-readable personal data from a controller and transmit it to another controller without hindrance, provided the processing is based on consent, contract, or automated means. They can also transmit data directly from one controller to another, if technically feasible. This right is not affected by public interest or official authority, and does not adversely affect others' rights and freedoms.

It grants people the opportunity to move their data to another controller in a format that is widely used and machine-readable. Women now have the authority to move their data to service providers that follow non-discriminatory policies.

Right to Object (Article 21)²⁵⁴

People are entitled to object to the processing of their personal information, including profiling and direct marketing. This is especially important for avoiding gender-based biased profiling.

Automated Decision-Making and Profiling (Article 22)²⁵⁵

The use of automated decision-making, which includes profiling and may result in discriminatory consequences, is covered in Article 22.

People have the right not to be subjected to choices that materially impact them that are only based on automated processing, including profiling. This clause attempts to stop choices on insurance, credit, or employment that could be skewed against women.²⁵⁶

If automated decision-making is permitted, it must have protections such the freedom to request human involvement, voice one's opinion, and challenge the outcome. These measures aid in shielding women from unjust computerized judgments.²⁵⁷

Impact Assessments on Data Protection (DPIAs) (Article 35)²⁵⁸

When processing is anticipated to pose a serious danger to an individual's rights and freedoms, a DPIA is necessary. DPIAs assist in identifying and reducing the possibility of discriminatory effects, particularly those based on gender.²⁵⁹ In order to ensure that data

²⁵⁴Article 21 GDPR allows data subjects to object to processing of their personal data for specific reasons, including profiling. The controller must demonstrate legitimate grounds for processing that override the data subject's interests, rights, and freedoms. If personal data is processed for direct marketing, the data subject can object to this processing. The right to object is explicitly communicated to the data subject at the time of first communication. In information society services, the data subject can exercise their right through automated means. In scientific or historical research or statistical purposes, the data subject can object if necessary.

²⁵⁵Article 22 GDPR states that data subjects have the right to be protected from decisions based solely on automated processing, including profiling, unless it is necessary for a contract, authorized by Union or Member State law, or based on explicit consent. In such cases, data controllers must implement measures to safeguard the subjects' rights, freedoms, and legitimate interests. Decisions should not be based on special categories of personal data unless these measures are in place.

²⁵⁶ Ibid

²⁵⁷ Ibid

²⁵⁸ Infra at Note 249

²⁵⁹ Infra at Note 249

processing does not result in discrimination against women, controllers must put in place measures to mitigate risks that have been identified.²⁶⁰

Data Protection by Design and by Default (Article 25)²⁶¹

According to this concept, the evolution of processing operations must include data protection measures. Designing systems to avoid prejudice, especially gender discrimination, is encouraged by data protection. Data protection by default minimizes the possibility of discriminatory actions by processing only the data that is required.

Monitoring Bodies and Recourse (Chapters VI and VIII)²⁶²

GDPR compliance is enforced by supervisory bodies, and people are entitled to file complaints and pursue legal remedies.

Discriminatory data processing practices may be looked into and addressed by supervisory authorities. In the event that someone's data protection rights are infringed upon, people, including women, have the right to pursue redress as a means of combating prejudice.²⁶³

A strong foundation for shielding people from discriminatory data processing practices, including gender-based discrimination, is established by the GDPR's guiding principles and regulations. Through the implementation of safeguards against automated decision-making, the enforcement of fairness and openness in data processing, and the empowerment of persons with rights over their personal data, the GDPR contributes to ensuring that data processing preserves and respects the principle of non-discrimination.²⁶⁴

²⁶⁰ Article 35 GDPR requires controllers to assess the impact of processing operations on personal data protection before processing new technologies that may pose a high risk to natural persons' rights and freedoms. This assessment may address similar operations with similar high risks. The controller must seek advice from a designated data protection officer. This assessment is particularly necessary for automated processing, large-scale processing of specific categories of data, or systematic monitoring of publicly accessible areas.

²⁶¹ Article 25 GDPR requires controllers to implement technical and organizational measures, such as pseudonymisation, to protect data subjects' rights and freedoms. These measures should be implemented during the determination of means for processing and during processing itself. By default, only necessary personal data is processed, including the amount, extent, storage period, and accessibility. These measures ensure that personal data is not accessible without individual intervention to an indefinite number of natural persons.

²⁶² Chapter VI consists provisions of independent supervisory authorities and Chapter VII speaks of cooperation and mutual assistance of different supervisory bodies as well as consistency mechanisms

²⁶³ Ibid

²⁶⁴ W Gregory Voss, "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, and the Right to Delisting", *The Business Lawyer*, Vol. 72, No. 1 (WINTER 2016-2017), pp. 221-234

6.2 Artificial Intelligence Act (AIA), 2024

The European Union Artificial Intelligence Act (the AI Act) was passed by the European Union Council on May 21, 2024. After the EU Parliament decided to approve the law on March 13, 2024, the last phase of the legislative procedure is completed. With this last vote, the Act will now be officially signed and published in the EU Official Journal. The world's first stand-alone law regulating AI usage, this landmark legislation takes a risk-based approach, meaning that the more likely an AI system is to do damage to society, the stricter the regulations will be. All sectors and industries are covered by the AI Act, which places additional requirements on product makers, suppliers, users (or deployers), distributors, and importers of AI systems. Examples of these responsibilities include conformance evaluations, data quality, technical standards and documentation, record keeping, transparency, and human supervision.²⁶⁵

A comprehensive set of sections and articles of the AI Act of 2024 are dedicated to combating discrimination, particularly gender-based discrimination against women. The Act offers a comprehensive framework to guarantee that AI technologies are developed and used in a way that respects basic rights and prohibits discriminatory consequences.²⁶⁶

This framework includes risk management, transparency, human monitoring, and rigorous criteria for high-risk AI systems. The Act has a number of noteworthy provisions intended to eliminate discrimination, notably discrimination against women on the basis of gender. The salient features are as follows:

Classification Based on Risk

The AI Act divides AI systems into four risk categories, each with unique regulations and restrictions.²⁶⁷ In the category of ‘unacceptable risk’ it is forbidden to use AI systems that clearly endanger people's rights, livelihoods, or safety. This includes AI programs that could result in biased actions, such as government social score. In the second category,

²⁶⁵ “One Step Closer: AI Act approved by the Council of EU”, Sidley, June 6, 2024, <https://datamatters.sidley.com/2024/06/06/one-step-closer-ai-act-approved-by-council-of-the-eu/>

²⁶⁶ Mariya Hristozova, “The EU Artificial Intelligence Act: the Necessary Tool to guarantee the Fundamental Rights of Citizens”, Knowledge Proceedings, 44(1), 91-96, 2024, <https://ikm.mk/proceedings/index.php/kp/article/view/15>

²⁶⁷ Articles 5 and 6 of the AI Act deal with these. Article 5 gives stipulations for prohibited AI practices such as it outlaws AI systems that influence behavior via subliminal messaging, or takes use of weaknesses belonging to certain groups, including vulnerabilities related to gender. Article 6 gives categorization of High-Risk AI Systems and outlines the requirements for designating some AI systems as high-risk, including those used in vital domains including employment, education, and law enforcement.

there is ‘high risk’. Strict regulations are in place to prevent discrimination against AI systems that have a substantial potential to affect basic rights. Examples of these systems include those used in employment, education, law enforcement, and access to key services. The third category is that of ‘limited risk’. In order to reduce biased interactions, AI systems with a modest level of risk must comply with transparency requirements that make sure users are aware that they are dealing with AI. The last one is ‘little risk’ where in order to avoid biases, AI systems with little risk are urged to adhere to voluntary standards of behaviour, while being mostly unregulated.²⁶⁸

Conditions for AI Systems at High Risk

Strict guidelines are applied to high-risk AI systems²⁶⁹ in order to avoid discrimination. In order to recognize, evaluate, and reduce risks connected to AI systems, including the possibility of discrimination against women, developers need to put in place a risk management system.²⁷⁰

To train AI models, high-risk AI systems need to employ representative, impartial, and high-quality information. This lessens the likelihood of gender bias in AI results.²⁷¹

To guarantee accountability and openness, thorough documentation is necessary.²⁷² Information about the steps taken to avoid prejudice must be included in this record. In order for users to comprehend how choices are made and recognize possible biases, AI systems must provide clear and unambiguous information about their capabilities and limits. To guarantee that AI judgments may be examined and changed if they lead to prejudice, high-risk AI systems must have human supervision methods.²⁷³

²⁶⁸ Latham & Watkins, “EU AI Act: Navigating a brave New World”, May, 2024

²⁶⁹ Chapter II of the AI Act gives requirements for high risk AI systems.

²⁷⁰ Article 8 and 9 of the Act stipulates a risk management system which demands that risks, such as possible prejudice, be identified and mitigated via the use of a risk management system. Further it guarantees ongoing oversight and revision of risk management procedures.

²⁷¹ Article 10 of the AI Act deals with governance of data. Requires the use of representative, impartial, and high-quality datasets. Demands steps to guarantee that data processing doesn't provide results that are biased.

²⁷² Article 11 of the AI Act provides technical documentation guidelines. Needs extensive documentation demonstrating the AI system's adherence to anti-discrimination laws and other requirements set out in the AI Act. Assures that the necessary authorities may access the material for examination.

²⁷³ Article 13 of the Act provides for transparency and Informational provisions. Needs precise details on the strengths, weaknesses, and any biases of the AI system.

Section 2: Guarantees that users comprehend how choices are made and are aware that they are dealing with an AI system. Article 14 speaks of human supervision needed. It establishes procedures for human

To avoid mistakes and biases that might produce discriminatory results, AI systems need to adhere to strict requirements for accuracy, robustness, and cybersecurity.²⁷⁴

Prohibited Activities

Certain AI activities that are considered to represent an unacceptable danger are expressly prohibited under the AI Act, and they include²⁷⁵:

Subliminal Techniques: Artificial intelligence systems may do damage by manipulating human behaviour, such as by discriminating means.²⁷⁶

Vulnerability Exploitation: AI systems that take advantage of weaknesses in certain populations, such as children, the elderly, or those with impairments, including weaknesses related to gender.²⁷⁷

Social Scoring: AI programs used by government agencies for social scoring may result in gender-based discrimination.²⁷⁸

There are fines stipulated in the Act itself and provisions for monitoring and reporting.²⁷⁹

Transparency Requirements for All AI Systems

AI systems that are used for biometric identification, content generation, or human interaction must comply with some requirements that are stipulated. Disclosure of Artificial Intelligence use is one of them. In order for users to identify and question any biases, they must be educated while engaging with AI systems. In order to prevent biases and false information from skewing consumers' opinions and choices, AI-generated material has to be properly labelled.²⁸⁰

Governance and Accountability

supervision to guarantee that AI judgments may be examined and changed if they are discriminatory. The duties and obligations of human operators in risk monitoring and mitigation are outlined.

²⁷⁴ Article 15 of the Act maintains strict requirements for reliability and accuracy to avoid mistakes that might cause prejudice. Further it requires cybersecurity measures to guard against data breaches that can lead to the abuse of data in a discriminatory manner.

²⁷⁵ Article 5, Supra at Note 256

²⁷⁶ Ibid

²⁷⁷ Ibid

²⁷⁸ Ibid

²⁷⁹ Article 61 of the AI Act speaks of Continuous monitoring and Article 71 of penalties.

²⁸⁰ Article 13 speaks of transparency and provision of information to users

The AI Act places a strong emphasis on governance and accountability to eliminate discrimination. In order to guarantee conformity to the AI Act, organizations must set up compliance frameworks that include anti-discrimination procedures. To detect and address any emerging discriminatory effects, AI systems must be continuously monitored after deployment. High-risk AI system developers and operators are required to notify the appropriate authorities of any significant events or malfunctions that may result in discriminatory effects.²⁸¹

Encouragement of Research and Innovation

In order to promote the creation of impartial and equitable AI systems, the AI Act promotes innovation and research in AI. Before releasing AI systems onto the market, inventors may test them in safe, supervised settings to verify compliance and avoid prejudice. Research initiatives aimed at developing impartial, open, and equitable AI systems are eligible for financing and incentives under the Act.²⁸²

The goal of the AI Act of 2024 is to guarantee the safe and moral use of AI inside the European Union, with a particular focus on eliminating discrimination, particularly gender-based discrimination against women. The AI Act aims to create an environment where AI technologies are developed and used in a way that respects fundamental rights and prevents discriminatory outcomes. It does this by classifying AI systems based on risk, imposing strict requirements on high-risk AI systems, prohibiting harmful practices, enforcing transparency, and encouraging accountability and innovation²⁸³.

6.3 Legal Framework regarding Protection against Misuse of AI in the United States

As of now the United States does not have any specific legislation directly targeted to Artificial Intelligence. However, there are a number of frameworks and rules in place to direct the regulation of AI, such as:

²⁸¹ Article 56 of the AI Act speaks of establishment of European Artificial Intelligence Board, its provisions and tasks in the subsequent sections. In different Articles it stipulates obligations of different stakeholders.

²⁸² Article 53 of the AI Act speaks of AI Regulatory Sandboxes where research and development are promoted in controlled environments.

²⁸³ The Final Draft of the Act submitted to the European Commission <https://artificialintelligenceact.eu/wp-content/uploads/2021/08/The-AI-Act.pdf>

The ‘Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence Executive Order’ issued by the White House is based on the idea that “[h]arnessing AI for good and realizing its myriad benefits requires mitigating its substantial risks.”²⁸⁴

It is directed towards a variety of industries. The presidential order compels the creation of federal standards, targets federal agencies and foundation model developers, and forces creators of the most potent AI systems to provide the U.S. government with the results of safety studies and other vital data. As part of the Executive Order, the Department of Commerce is also required to provide guidelines for watermarking and content authentication for AI-generated material.²⁸⁵

The White House Blueprint for an AI Bill of Rights lays out principles for fair access to and use of AI technology. In order to help with the design, use, and deployment of “automated systems,” the AI Bill of Rights offers five principles and related practices. These include algorithmic discrimination and protection, data privacy, notice and explanation, safe and effective systems, and human alternatives, consideration, and fallbacks.²⁸⁶

Adobe, Amazon, IBM, Google, Meta, Microsoft, Open AI, Salesforce, and other well-known AI firms have all freely pledged to “assist move toward safe, secure, and transparent development of AI technology.” These businesses pledged to evaluate AI systems’ internal and external security before releasing them, to share knowledge on risk management with one another, and to make investments in security measures.²⁸⁷

The Federal Communications Commission declared that Artificial Intelligence (AI) technologies that produce human voices are covered by the Telephone Consumer

²⁸⁴ Executive Order 14110 of October 30, 2023, “Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence”, Federal Register Vol. 88, No. 210 Wednesday, November 1, 2023
<https://www.govinfo.gov/content/pkg/FR-2023-11-01/pdf/2023-24283.pdf>

²⁸⁵ Ibid

²⁸⁶ “The Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People”, published by the White House Office of Science and Technology Policy, October 2022.
<https://www.whitehouse.gov/ostp/ai-bill-of-rights/>

²⁸⁷ “FACT SHEET: Biden-Harris Administration Secures Voluntary Commitments from Leading Artificial Intelligence Companies to Manage the Risks Posed by AI”, The White House, July 21, 2023
<https://www.whitehouse.gov/briefing-room/statements-releases/2023/07/21/fact-sheet-biden-harris-administration-secures-voluntary-commitments-from-leading-artificial-intelligence-companies-to-manage-the-risks-posed-by-ai/>

Protection Act of the 1990s, indicating that regulatory bodies will enforce the application of current law to AI.²⁸⁸

There are several proposed bills regarding this and the state legislatures have their own specific legislations in this regard. For example, the California Consumer Privacy Act published proposed regulations on these clauses which are widely defined in the regulations and deal with consumer notice, access, and opt-out rights with regard to automated decision-making technologies. Although the rules are still being defined, they probably will include further usage of AI.²⁸⁹

The proposed regulations would require extensive information about how companies utilize and execute AI.²⁹⁰

Further, in the United States the regulatory gap is often filled by tort law, as theoretically, it is possible to view the AI liability in the broad spectrum of tort jurisprudence. It can be looked at from three angles, negligence of companies who use AI without precaution, subsequently, harm caused due to AI to end users, and liability arising out of it could be mitigated by paying monetary compensation to the affected party.²⁹¹

In the case of *Mracek Vs Bryn Mawr Hospital*²⁹² Roland C. Mracek had a prostatectomy at Bryn Mawr Hospital, where the ‘da Vinci’ surgical robot was used. The ‘da Vinci’ robot shut down, flashed problem signals, and could not be restarted during the procedure. Mracek sued Intuitive Surgical, Inc. and Bryn Mawr Hospital, claiming negligence, strict malfunction responsibility, strict product liability, and breach of warranty. The primary issue was whether Mracek could provide enough proof of a da Vinci robot flaw to support his claims of damages. The court's reasoning focused on the need of proving a malfunction,

²⁸⁸ Before the Federal Communications Commission Washington, D.C. 20554, In the Matter of Implications of Artificial Intelligence Technologies on Protecting Consumers from Unwanted Robocalls and Robotexts, CG Docket No. 23-362, Declaratory Ruling released February 8, 2024 <https://docs.fcc.gov/public/attachments/FCC-24-17A1.pdf>

²⁸⁹ AI Watch: Global Regulatory Tracker- United States, 13 May, 2024 <https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-united-states#:~:text=As%20noted%20above%2C%20there%20is,Responsible%20innovation%20and%20development>

²⁹⁰ California Consumer Privacy Act of 2018 https://leginfo.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5

²⁹¹ Matthew van der Merwe, Ketan Ramakrishnan, Markus Anderljung, “Tort Law and Frontier AI Governance”, Lawfare, May 24, 2024

²⁹² *Mracek Vs Bryn Mawr Hospital*, 610 F. Supp. 2d 401 (E.D. Pa. 2009)

the product's intended use, and the lack of other plausible secondary causes when addressing the burden of proof in strict product liability cases.²⁹³

It was seen that Mracek neglected to rule out any plausible secondary causes of the event, which was necessary in order to apply the strict product responsibility malfunction hypothesis.

The court decided in favour of the defendant by granting Intuitive Surgical, Inc.'s Motion for Summary Judgment. Mracek's inability to satisfy the strict liability burden of proof and the dearth of adequate evidence to prove a 'da Vinci' robot flaw in the absence of expert testimony served as the basis for the finding. Mracek's allegations of strict product culpability, strict malfunction liability, carelessness, and warranty violation in relation to the prostatectomy operation were therefore rejected.²⁹⁴

Extrapolating it to perpetuating gender bias due to AI, more careful considerations need to be taken in well thought out legislations to mitigate these challenges and United States is on the path towards it.

6.4 Indian Legal Framework to tackle the Issue

In recent years, India has seen considerable growth in the digital landscape impacting various sectors such as education, media, healthcare etc.²⁹⁵ However, India does not have a comprehensive framework to combat issues arising out of rampant unrestricted use of Artificial Intelligence. The current framework that deals with AI related concerns is discussed briefly.

The Information Technology Act, 2000 has been used initially to combat the discrimination issues coming up with the advent of AI. As outlined in Chapter 3 of this dissertation, they have fallen short of need and there arose a gap in the regulatory framework. In 2021 new rules were proposed by the government to meet the challenges of the new era of Artificial Intelligence.

As part of their due diligence obligations under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 ("IT Rules"), framed under the

²⁹³ Supra at Note 281

²⁹⁴ Supra at Note 281

²⁹⁵ " Digital Progress and Trends Report, 2023", World Bank Group, 1/3d of India's population has access to digital media since 2018. <https://bfsi.economictimes.indiatimes.com/news/industry/indias-digital-landscape-world-bank-report-spotlights-progress-amid-challenges/108224833>

Information Technology Act, 2000, "intermediaries" and "platforms" that develop and make available AI tools and/or technologies to Indian users have received advisories from the Ministry of Electronics and Information Technology ("MeitY"), asking them to comply with additional requirements specific to AI tools. Although there is no legal support for these advisory, it seems that businesses and the government are collaborating to resolve some of the government's concerns.²⁹⁶

The IT Rules, 2021 provide a thorough framework for policing information on the internet, including the obligations of digital media producers and intermediaries like social media platforms. These regulations include elements that tangentially support women's empowerment and protection from discrimination, including those motivated by AI, even if they are not expressly intended to address AI-related prejudice.²⁹⁷

Rule 3 stipulates due diligence by Intermediaries, which ensures that content discriminatory towards women should not be circulated by intermediaries. Further content has to be swiftly removed upon order from authorities. Women have the ability to directly report discriminatory behaviors or material, including AI-related ones, guaranteeing a redress process.²⁹⁸

Rule 4 provides some relief to the discrimination perpetuated against women on social media by mandating additional due diligence of Significant Social Media Intermediaries (SSMIs). There are regulations to help identify the source of discriminatory content. It is a path to hold the guilty accountable. A strong grievance redressal system must be put in place at SSMIs, and this includes designating a Chief Compliance Officer, a Nodal Contact Person, and a Resident Grievance Officer. These officers make sure that the IT Rules are followed and provide people, especially women, ways to report and confront discriminatory actions. AI-powered moderation instruments may assist in identifying and halting the spread of information that is harmful to women.²⁹⁹

MeitY sent out a warning to all "intermediaries" on December 26, 2023, in response to mounting worries about disinformation propagated by AI deep fakes. This warning called on social networking sites and other intermediaries to abide by the IT Rules, especially

²⁹⁶ Advisory No. eNo. 2(4)/2023-CyberLaws-3 and Advisory No. eNo. 2(4)/2023-CyberLaws-3

²⁹⁷ "IT Rules 2021: A Regulatory Impact Assessment Study", Internet and Mobile Association of India, Volume 2, July 2023

²⁹⁸ Ibid, Rule 3

²⁹⁹ Ibid, Rule 4

with respect to identifying and removing material that is forbidden, such as deep fakes that propagate false information or impersonate other people.³⁰⁰

The Government of India initially released guidelines for the use and applications of generative AI, large language models ("LLMs"), software, and methodologies on March 15, 2024, via an advisory sent by MeitY to "intermediaries" and "platforms," including "significant and large platforms." It was the first AI related formal step by the Government of India to deal with AI related crises.³⁰¹

It suggests that they, among other things make sure that the use of AI models, LLMs, generative AI, software, and algorithms complies with content-related regulations outlined in the IT Rules, make sure that the use of these technologies does not allow for any bias or discrimination or jeopardize the integrity of the electoral process, identify any potential inherent fallibility or unreliability of the output generated by the AI models and put in place a consent mechanism that clearly notifies users that the content is derived from an AI tool or technology³⁰²

It also gives stipulations to make sure that any synthetic creation, generation, or modification of text, audio, visual, or audio-visual information that can potentially be utilised in deep fakes or spreading misinformation is embedded with a unique identifier.³⁰³

The public policy think tank in India, NITI Aayog, was given the duty of creating guidelines and regulations for the advancement of AI in the country as part of the country's national AI program. The National Strategy for Artificial Intelligence #AIforAll ("NSAI 2018"), published by NITI Aayog in 2018, emphasized using AI to promote inclusive and social progress in accordance with the Government of India's planned AI roadmap.³⁰⁴

³⁰⁰ MeitY issues advisory to all intermediaries to comply with existing IT rules – PIB Release, available at – <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1990542>

³⁰¹ Akshaya Suresh, Neeraja Shankar, "Revised MeitY Advisory on Deployment of AI Models", April, 2024 [https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D\)%20models%2C%20and%20to](https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D)%20models%2C%20and%20to)

³⁰² Ibid

³⁰³ Edited by Charles Kerrigan, CMS, "AI, Machine Learning & Big Data Laws and Regulations 2024" Edition 6th, published 2024

³⁰⁴ National Strategy for Artificial Intelligence, 2018, available at <https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>

The industries that stand to gain the most from AI are healthcare, agriculture, education etc. according to the NSAI 2018.³⁰⁵ The Artificial Intelligence Research, Analytics, and Knowledge Assimilation Platform (AIRAWAT) was also introduced at NSAI 2018 with the goal of advancing AI research and development in India by fostering collaboration amongst different stakeholders, including government agencies, industry, and academia.³⁰⁶

NITI Aayog released a set of guidelines for ethical AI activities in February 2021. The need of guaranteeing safe, dependable, equitable, transparent, responsible, and inclusive AI systems is emphasized by these concepts³⁰⁷.

In August 2021, NITI Aayog released recommendations for incorporating these fundamental principles into practical AI applications, therefore further operationalizing responsible AI practices.³⁰⁸

To present a report on AI for India's economic transformation, the Ministry of Commerce and Industry has established a Task Force on Artificial Intelligence.³⁰⁹ The Task Force Report said that the amount and quality of data are the primary determinants of the trustworthiness of AI systems, and that data is the foundation of AI systems. According to the report, among other things, AI systems must possess behaviour that is comprehensible and observable, include engineering for security and safety, conduct an audit to ensure that human biases and prejudices are not present, be open and adhere to industry standards.³¹⁰

The Task Force also demanded that legal rules that apply to human users of AI systems be extended to autonomous machines as appropriate and that particular liability clauses be developed for certain types of machines.³¹¹

³⁰⁵ Ibid

³⁰⁶ AI Supercomputer 'AIRAWAT' puts India among top supercomputing league 'AIRAWAT' ranks 75th in top 500 Supercomputing List, Ministry of Electronics & IT, 24 MAY 2023. At the 2023 International Supercomputing Conference in Germany, "AIRWAT" was recently placed 75th out of 500 worldwide supercomputing systems.

³⁰⁷NITI Ayog "Approach document for India Part1– Principles for Responsible AI", 2021 available at <https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>

³⁰⁸ Supra at Note 292

³⁰⁹ "Report of the Artificial Intelligence Taskforce", 2018

https://psa.gov.in/CMS/web/sites/default/files/publication/Report_of_Task_Force_on_ArtificialIntelligence_20March2018_2.pdf

³¹⁰ Ibid

³¹¹ Supra at Note 292

The National Data Governance Framework Policy, or "NDGFP," is under draft. It was issued by MeitY in May 2022, and it aims to maximize data-led governance and data-based innovation in order to fully realize the promise of digital governance. The policy also introduced the non-personal data-based India Datasets initiative, which described the procedures and guidelines that commercial and public organizations needed to follow in order to securely get anonymized and non-personal data for use in research and innovation. The NDGFP suggests, among other things, creating a Data Management Office, which would be in charge of creating, overseeing, and reevaluating the policy as well as designing and running the India datasets platform, which would handle requests and provide access to anonymized or non-personal information.³¹²

In October 2023, MeitY had published the first version of "IndiaAI₂" outlining detailed plans for using AI to further India's progress and prosperity. The paper makes recommendations on how to provide India's labour force the essential AI skills via focused training and programs. It suggests forming public-private alliances to support India's position as a hub for AI innovation and infrastructure.³¹³

In an effort to address ethical issues surrounding the use of AI in medical research and healthcare, the Indian Council of Medical Research has released recommendations. These recommendations are intended for IT firms, medical professionals, and academic institutions that want to use health data for medical research and use AI to streamline healthcare delivery.³¹⁴

Another Act by the State came into force recently called the Digital Personal Data Protection Act (DPDP Act), 2023. It does not directly mitigate discrimination against women, but it provides a concrete framework for data protection which is one major aspect of data protection of vulnerable groups.

³¹² "National Data Governance Framework Policy Draft", Ministry of Electronics and Information Technology, May 2022, <https://www.meity.gov.in/writereaddata/files/National-Data-Governance-Framework-Policy.pdf>

³¹³ "IndiaAI 2023", First Edition by Expert Group To Ministry of Electronics and Information Technology <https://www.meity.gov.in/writereaddata/files/IndiaAI-Expert-Group-Report-First-Edition.pdf>

³¹⁴ "Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare", prepared by DHR-ICMR Artificial Intelligence Cell, Indian Council of Medical Research, ISBN: 978-93-5811-343-3

https://main.icmr.nic.in/sites/default/files/upload_documents/Ethical_Guidelines_AI_Healthcare_2023.pdf

Sections 4³¹⁵ and 5³¹⁶ of the Act promote fairness and equity in requiring that personal data be treated fairly, legally, and openly. It guarantees that procedures used in data processing do not subject anyone, particularly women, to unfair or prejudiced treatment.

No personal data may be handled in a way that is inconsistent with the stated, clear, and lawful objectives for which it is obtained which assists in preventing data abuse that can result in biased decision-making or profiling of women. Sections 12³¹⁷ and 13³¹⁸ ensures that data principals³¹⁹ are entitled to information about how and why their personal data is being handled, as well as the types of data that are being processed. It encourages openness in the use of personal information, which may help stop discriminatory or prejudiced use of information against women. Data principals may ask that erroneous or deceptive personal information be corrected and that personal information that is no longer required for the purposes for which it was processed be erased³²⁰

It gives women the right to amend or remove information that can be interpreted negatively against them. There are grievance redressal mechanisms, instructions for setting up a Data Protection Board to act as an organisational safeguard and provisions of transparency and consent.³²¹

DPDP Act, 2023 has the same framework as GDPR or AI Act of the European Union. However, like these legislations, it lacks explicit provisions of providing safety specifically catering to women in this regard. Interestingly, the DPDP Act of 2023 is especially mindful of data related to children understanding the probable harm caused to minors³²²

³¹⁵ Section 4 of DPDP Act is in Chapter II which speaks of obligation of data fiduciary. Section 4 specifically mandates data to be processed only with consent of data principal and for legitimate purpose.

³¹⁶ Section 5 of DPDP Act mandates notice to be given to Data Principal about the purpose of use of their data and their rights.

³¹⁷ Section 12 of DPDP Act stipulates the Data principal's right to correction, update, erasure of personal data for which consent was provided previously.

³¹⁸ Section 13 of DPDP Act speaks of Data Principal's right to easily available means of grievance redressal regarding any discrepancy in the use of their personal data

³¹⁹ A data principal is primarily considered to be the natural person or individual to whom the data relates i.e., the person whose data is being processed (collected, stored, shared, etc.). The DPDP Act also considers within the scope of a data principal the parent / lawful guardian of a child to whom the personal data relates and the lawful guardian of a 'person with disability'.

³²⁰ Lalit Kaira, "Advent of Privacy Era in India, The Digital personal Data Protection act, 2023", August 2023 https://www.ey.com/en_in/cybersecurity/decoding-the-digital-personal-data-protection-act-2023

³²¹ "Readiness of India Inc. for the Digital Personal Data Protection act, 2023: A PwC Analysis", PwC, 2023

³²² Section 9 of the DPDP Act stipulates verified consent of lawful guardian is needed to process personal data of a child or a person with disability.

Analysis and opinion- In tort law, there is a provision for obtaining special damages in case of specific hurt, not general hurt caused due to a widespread incident with multiple aggrieved. Similarly, advent of unregulated unrestricted AI is harmful to all, but more towards women as established in the previous chapters of this dissertation. So, drawing upon this analogy, due to the specific damage caused, there should be particular legislation covering specifically these aspects.

CHAPTER 7

CONCLUSION

The tenets of feminist jurisprudence, also known as feminist legal theory, is that the legal system has had a substantial influence on the historical enslavement of women. It seeks to expose the ways in which the legal system has supported women's subordination and to change it in a way that would elevate women's position. The approach tackles problems like sexual and domestic violence, employment inequality, and discrimination based on gender.

While liberal feminism promotes women's equality before the law and in politics while highlighting their autonomy and sense of self³²³, cultural feminism highlights the distinctions between men and women and promotes the integration of feminine ideals, such as compassion and empathy, within institutions of society.³²⁴ Radical feminism aims to destroy patriarchal systems that support male supremacy by focusing on the inherent disparity in gender interactions.³²⁵ In the context of India, the Constitution has several feminist connotations in the way that it provides for the protection of women's rights via a number of measures that are designed to advance gender equality and shield women from discrimination.

Article 14 guarantees parity in front of law. Article 15 allows for particular measures for women and children to promote equality and forbids discrimination on a variety of grounds, including sex. Articles 39(a) and 39(d) of the Directive Principles of State Policy promote equitable compensation for equal labour and equal rights of habitation for men and women.

In order to further women's rights, the Indian courts have been instrumental in interpreting these constitutional provisions. Prominent instances include those of justice, equality, and individual dignity emphasized in the case of *National Legal Services Authority Vs Union of India*³²⁶ where the Courts examined the ideas enshrined in the preamble and reached the

³²³ Gary Minda, "Feminist legal theory", *Postmodern Legal Movements: Law and Jurisprudence at Century's End*, NYU Press, pp- 128-148, 1995

³²⁴ Simantini Baraokar, "Shifting from the Patriarchal Legal Model to a Cultural Feminism Model: Combating the Double Burden on Women", 5 *INT'L J.L. MGMT. & HUMAN.* 414, 2022

³²⁵ Gordon Graham, "Liberal Vs Radical Feminism Revisited", *Journal of Applied Philosophy*, Vol. 11, No. 2 (1994), pp. 155-170, 1994

³²⁶ *National Legal Services Authority Vs Union of India*, 2014 INSC 275

verdict that these are integral components of life, applicable to all citizens of the country, no matter their gender. In *Bodhisattwa Gautam Vs Subhra Chakraborty*³²⁷ the need of legal measures to thwart the supremacy of patriarchy was ensured. In *Joseph Shine Vs Union of India*³²⁸, adultery was decriminalized and acknowledged as a transgression against women's dignity. *Independent Thought Vs Union of India*³²⁹ addressed the problem of marital rape by raising the age of consent in a marriage to 18.

In India, women continue to endure substantial disadvantages despite constitutional safeguards because of patriarchal legal interpretations and cultural norms. As seen by instances when judges have enforced rules that reflect gender prejudices, the judiciary's protective stance may sometimes serve to uphold conventional wisdom.³³⁰ But feminist decisions, like those pertaining to honour crimes and sexual assault, show that women's rights are becoming more widely acknowledged. When it comes to matters like rape, the courts are becoming more and more mature, placing a strong emphasis on defending the autonomy and dignity of women.³³¹

7.1 Findings

The digital age has brought about a notable shift in the way women are portrayed in media, resulting in both advancements and ongoing difficulties. Gender-based depictions that are harmful and restricted are nevertheless common, even in the face of gains in civil rights. Stereotyping, objectification, and sexualization of women are still prevalent, which promotes sexism and violence and helps to reinstate gender norms.³³²

The rise in cyberstalking cases in India emphasizes the need of laws to combat cybercrimes against women. The first documented instance³³³ in 2000 highlighted the shortcomings of existing legislation, such as IPC Section 509, which proved inadequate in addressing cyber-based harassment. In order to close these loopholes, the Information Technology Act of 2000 and its later revisions were essential. The case *Yogesh Prabhu Vs State of*

³²⁷ *Bodhisattwa Gautam Vs Subhra Chakraborty*, 1996 AIR 922

³²⁸ *Joseph Shine Vs Union of India*, 2018 SC 1676

³²⁹ *Independent Thought Vs Union of India*, AIR 2017 SC 4904

³³⁰ *Aparna Bhat Vs State of Madhya Pradesh*, AIR 2021 SC 1492

³³¹ *Ramphal Vs State of Haryana*, (2021) 16 SCC 207

³³² L. Monique Ward, Petal Grower "Media and the Development of Gender Role Stereotypes", Vol. 2:177-199 (Volume publication date December 2020) <https://doi.org/10.1146/annurev-devpsych-051120-010630>

³³³ *Yogesh Prabhu Vs State of Maharashtra*, 2006 (3) MhLj 691

*Maharashtra*³³⁴, for example, demonstrated how to apply Sections 509 IPC and 66E of the IT Act, but it also brought attention to the restrictions placed on legislation that could not be applied retrospectively. Cybercrimes against women and children in particular have increased as a result of social media. It is difficult to track down violators on these sites because of the anonymity and quick material distribution. The rise in the variety and intensity of crimes committed via digital platforms brought about by the development of artificial intelligence has further exacerbated the situation.³³⁵

AI's Natural Language Processing (NLP) branch is essential to computers' ability to comprehend and produce human language. Nevertheless, it often replicates cultural prejudices, such as gender stereotypes, that are present in its training data. Word embeddings and other NLP models, for example, could unintentionally reinforce stereotyped gender connections and occupational prejudices. Diverse training data, moral standards, and ongoing attempts to identify and reduce prejudices in NLP systems are all necessary to address these biases.³³⁶

Women's rights are seriously threatened by deep fake technology, especially when it comes to the production of non-consensual pornography and the spread of damaging and deceptive information. These very realistic manipulations have the potential to spread unfavourable preconceptions and cause harassment, blackmail, and reputational damage. In order to counter these risks, legislative bodies, IT corporations, and civil society organizations must work together to provide technical solutions and legal safeguards.³³⁷

Pornography is a problem that requires striking a balance between public morality and private liberty. Although the Indian Constitution's Article 19(1)(a) guarantees freedom of expression, the effects of pornography on women's physical autonomy and dignity call for government involvement. The transmission of pornographic content and sexual

³³⁴ Yogesh Prabhu Vs State of Maharashtra, 2006 (3) MhLj 691

³³⁵ Kim Barker and Olga Jurasz, "Online Misogyny", *Journal of International Affairs*, Vol. 72, No. 2, *Dynamics of Global Feminism* (Spring/Summer - 2019), pp. 95-114

³³⁶ Aylin Caliskan, "Detecting and Mitigating Bias in Natural Language Processing", Report from The Brookings Institution's Artificial Intelligence and Emerging Technology (AIET) Initiative is part of "AI and Bias." 2021

³³⁷ Edvinas Meskys & Ors., "Regulating Deep Fakes: Legal and Ethical Considerations", *Journal of Intellectual Property Law & Practice*, Volume 15, Issue 1, January 2020, Pages 24–31.

harassment is covered under the Information Technology Act and the IPC regulations, however more enforcement and more liberal court interpretations are required.³³⁸

The radical feminist movement emphasizes the importance of reproductive rights and bodily autonomy. It supports women's autonomy to make decisions about their bodies, including having access to birth control, safe abortions, and sterilization.³³⁹ Women have historically been objectified in pornography and advertising and seen as property. These problems are made more difficult by the development of AI, especially in the healthcare industry where gender bias in AI algorithms may result in incorrect diagnoses and insufficient care for women.³⁴⁰

Data was historically biased toward male physiology since women were not allowed to participate in clinical studies.³⁴¹ Health in India is heavily impacted by gender imbalance, which is made worse by the use of AI in healthcare. Healthcare systems powered by AI have the potential to misdiagnose patients, downplay symptoms because of skewed data, and spread false information and stigma concerning women's health.³⁴²

Women's healthcare may be impacted by AI's reduction of in-person encounters as they may need more individualized treatment.³⁴³ Women's privacy may be violated by the improper use of sensitive health information, particularly that which relates to reproductive health.³⁴⁴ Gender preconceptions and misinformation may be inadvertently propagated by AI, which might have an impact on diagnosis and treatment. It may be difficult to ensure that women are aware of and agree to AI-driven treatments, which may have an influence on their autonomy.³⁴⁵

³³⁸ Andrea Dworkin, "Against the Male Flood: Censorship, Pornography and Equality", 8 HARV. WOMEN'S L.J. 1 (1985).

³³⁹ Gordon Graham, "Liberal Vs Radical Feminism Revisited", Journal of Applied Philosophy, Vol. 11, No. 2 (1994), pp. 155-170, 1994

³⁴⁰ Kavitha Hariharan, "How Will AI Affect Gender Gaps In Health Care?: Gender data gaps in health care are already putting women at risk in many ways.", Marsh McLennan

³⁴¹ Davide Cirillo & Ors., "Sex and Gender bias in Technology and Artificial Intelligence: Biomedicine and Healthcare Applications", Women's Brain Project, Academic Press, 2022

³⁴² "India: Gender and Health", World Health Organisation Report, South East Asia

³⁴³ Sauerbrei A, Kerasidou A, Lucivero F, Hallowell N. "The Impact of Artificial Intelligence on the Person-Centred, Doctor-Patient Relationship: some Problems and Solutions". BMC Med Inform Decis Mak. 2023 Apr 20;23(1):73. doi: 10.1186/s12911-023-02162-y.

³⁴⁴ Afaq M., Abraham D.E., Patel S.H., Al-Dhoun A.D., Arshad Z., Abraham D.E. "Empowering Women's Health: A Global Perspective on Artificial Intelligence and Robotics." *Cureus*. 2023;15:e49611.

³⁴⁵ Sameera Kohli Vs Dr. Prabha Manchanda, AIR 2008 SC 1385

Artificial Intelligence in the workplace is posing new possibilities as well as difficulties. Hence there are mixed effects of AI on women's employment. It is opening up new job opportunities in STEM fields. For women, the expanding fields of data science and technology hold great promise.³⁴⁶ Women may successfully use these new roles and contribute to the development of AI by gaining the necessary skills, which will promote diversity and inclusion. By assessing applicants on their abilities, capacity for learning, and attitude rather than just their past experience, AI has the potential to lessen gender bias in recruiting procedures.³⁴⁷ However, in order to guarantee just and equal recruiting procedures, it is imperative to overcome algorithmic biases. AI may contribute to the eradication of prejudice in the recruiting, evaluating, and promotion processes, resulting in a more fair workplace.³⁴⁸

To reduce the inherent biases in AI systems, however, ongoing attention to detail is required. AI systems have the potential to perpetuate past prejudices, which might result in discrimination against women in a variety of settings, such as job interviews and promotions. This impedes women's job progress and reinforces current gender stereotypes.³⁴⁹ The underrepresentation of women in STEM and AI disciplines hinders their capacity to equitably benefit from the growth of jobs driven by AI. The need for a variety of viewpoints in AI research is highlighted by this underrepresentation.³⁵⁰ Women often encounter obstacles while trying to get AI-related education and training, which leaves them with a skills gap that prevents them from progressing in AI-driven businesses.³⁵¹ Automation has the potential to aggravate pay gaps by displacing women from professions that have historically been held by women.³⁵² In AI firms, it might be difficult for women to advance to senior jobs and leadership positions.

³⁴⁶ Pauline T. Kim & Matthew T. Bodie, "Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy", 35 A.B.A. J. LAB. & EMP. L. 289, 2021

³⁴⁷ Fosch-Villaronga, E., Poulsen, A. , "Diversity and Inclusion in Artificial Intelligence" In: Custers, B., Fosch-Villaronga, E. (eds), "Law and Artificial Intelligence", Information Technology and Law Series, vol 35. T.M.C. Asser Press, The Hague., 2022

³⁴⁸ Ibid

³⁴⁹ Women in AI and Machine Learning, "What are the biggest challenges women face in AI?", Women in Tech Career Fair and Summit, 2024

³⁵⁰ Anu Madgavkar & Ors., "The Future of Women at Work, Transitions in the Age of Automation", MCKinsey Global Institute, 2019

³⁵¹ Parul Munshi & Nicki Wakefield, "How AI is being adopted to accelerate Gender Equity in the Workplace", PWC Global, 2024

³⁵² Supra at Note 342

For women, the use of AI in the workplace brings both potential and obstacles. If AI is not properly controlled, it might worsen already-existing gaps even as it can increase gender equality by eliminating prejudice and opening up new employment pathways. In order to fully use AI's potential to advance gender equality, companies need to have policies in place to reduce prejudice, encourage inclusive behaviour, and guarantee accountability and transparency. Women should be able to fully benefit from technology breakthroughs in the workplace by ensuring that legal frameworks are enhanced to handle the particular difficulties provided by AI.

The European Union and United States are taking sufficient steps to safeguard unregulated AI use in this regard.³⁵³ India has several rules and guidelines in the past few years in this direction as well. India's digital ecosystem has significantly expanded in recent years, impacting a number of industries like media, healthcare, and education. But as of right now, the nation lacks a thorough framework to deal with problems arising from the unrestrained use of AI. There are gaps in the legal framework as a result of the inadequacies of the current legislation, which are mostly based on the Information Technology Act of 2000, Information Technology (Digital Media Ethics Code and Intermediary Guidelines) Regulations, 2021 etc. Under the auspices of the Information Technology Act of 2000, the IT Rules, 2021 seek to provide a comprehensive framework for the regulation of online material, including information produced by AI. Due diligence requirements are mandated by the regulations for platforms and intermediaries, and they include, making sure middlemen don't spread anti-women information and requiring that it be removed immediately upon official directive,³⁵⁴ demanding that major social media intermediaries (SSMIs) carry out further investigation, locate the origin of discriminatory material, and set up a strong grievance redressal system.³⁵⁵ Initiatives and Advice from the Government include the Ministry of Electronics and Information Technology (MeitY) issuing advisory and starting initiatives like in December 2023 the advisory stressed the need of adhering to the IT Rules while alerting intermediaries to the risks posed by deep fakes and false information created by AI.³⁵⁶

³⁵³ In EU, GDPR guidelines came in 2018 and the first AI Act in the world in 2024. United States has several state specific legislation as well as State tort law to handle the menace of AI.

³⁵⁴ Rule 3, IT Rules, 2021

³⁵⁵ Rule 4, IT Rules, 2021

³⁵⁶ Advisory No. eNo. 2(4)/2023-CyberLaws-3 and Advisory No. eNo. 2(4)/2023-CyberLaws-3

Large language models (LLMs), generative AI, and other AI-related technologies are outlined in the March 2024 advisory, which emphasizes the significance of impartial and open AI systems.³⁵⁷

India's public policy think tank, NITI Aayog, is vital in establishing the nation's AI policies. NSAI 2018 promotes the use of AI to advance economic and social development, with an emphasis on industries including education, healthcare, and agriculture. AIRAWAT was developed to promote government, business, and academic cooperation in AI research and development.³⁵⁸ The focus of the 2021 Ethical AI Guidelines is on inclusive, equitable, transparent, safe, and dependable AI systems. India has to strive to apply ethical AI techniques to a range of applications. A Task Force on Artificial Intelligence was formed by the Ministry of Commerce and Industry to investigate the possible economic benefits of AI.³⁵⁹ There are calls for explicit liability provisions for autonomous machines and emphasizes the significance of data quality and openness in AI systems. Policy for the National Data Governance Framework (NDGFP) suggested the establishment of a Data Management Office to supervise policy implementation and control access to anonymized data in an effort to improve data governance and innovation.³⁶⁰

The Act of 2023 Digital Personal Data Protection (DPDP Act) does not specifically address discrimination against women, but it does provide a strong foundation for data security. It prevents biased decision-making by requiring the fair, lawful, and transparent handling of

³⁵⁷ Akshaya Suresh, Neeraja Shankar, "Revised MeitY Advisory on Deployment of AI Models", April, 2024 [https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D\)%20models%2C%20and%20to](https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D)%20models%2C%20and%20to)

³⁵⁸ AI Supercomputer 'AIRAWAT' puts India among top supercomputing league 'AIRAWAT' ranks 75th in top 500 Supercomputing List, Ministry of Electronics & IT, 24 MAY 2023. At the 2023 International Supercomputing Conference in Germany, "AIRWAT" was recently placed 75th out of 500 worldwide supercomputing systems.

³⁵⁹ "Report of the Artificial Intelligence Taskforce", 2018 https://psa.gov.in/CMS/web/sites/default/files/publication/Report_of_Task_Force_on_ArtificialIntelligence_20March2018_2.pdf

³⁶⁰ "National Data Governance Framework Policy Draft", Ministry of Electronics and Information Technology, May 2022, <https://www.meity.gov.in/writereaddata/files/National-Data-Governance-Framework-Policy.pdf>

personal data.³⁶¹ To manage complaints and guarantee compliance, there are guidelines to set up a Data Protection Board.³⁶²

7.2 Suggestions and Recommendations

Artificial Intelligence is exacerbating the gender gap in India. Digital media and unregulated AI use is impeding on women's fundamental rights of freedom of expression.

1. Enacting comprehensive laws, implementing moral AI procedures, and mobilizing society to build an equitable and representational digital environment are all necessary to address these issues. In order to safeguard women's rights and advance gender equality in the digital age, it is imperative that laws and regulations be continuously updated and vigilant.
2. AI systems need to be trained on a variety of datasets with a high proportion of female representation. When it comes to the creation of AI systems and any biases, developers and healthcare practitioners need to be open and honest. To safeguard women's health information, strong data security measures need to be in place and consent should be given voluntarily.
3. To improve knowledge and trust, women and healthcare professionals are to be educated about AI technology. Especially in delicate areas like reproductive health, ethical criteria for the use of AI is needed.
4. AI in healthcare raises issues with judicial scrutiny and culpability from a legal standpoint. The right to healthcare and non-discrimination are protected by the Indian Constitution, but the legal system must specifically address challenges relating to Artificial Intelligence. To guarantee the ethical and responsible use of AI in healthcare, national and international legislative framework harmonization and the establishment of AI ethical standards are crucial.
5. Developing anti-bias auditing tools, guaranteeing varied inputs into AI models, and encouraging women to pursue digital skills are some of the steps necessary to lessen prejudice in AI systems. AI may provide women-only reskilling and upskilling programs, enabling them to adjust to new responsibilities in a changing workplace. To increase the presence of women in AI development, STEM education and jobs must be encouraged.

³⁶¹ Sections 4 & 5, DPDP Act, 2023

³⁶² PwC, "Readiness of India Inc. for the Digital Personal Data Protection act, 2023: A PwC Analysis", 2023

6. AI may be used to detect and resolve harassment and discrimination in the workplace, improving the safety and inclusivity of the work environment for women. Diverse AI development teams and inclusive workplaces are essential. AI-driven recruiting procedures that are fair and transparent may advance gender parity in the workforce.
7. To avoid gender prejudice, AI-driven hiring processes must adhere to current anti-discrimination regulations. Worker rights and employment relationships are affected by AI, and this has to be addressed in labour legislation. This involves safeguarding employees from losing their jobs and making sure they are treated fairly in AI-driven businesses. To guarantee gender equality, particular legislation addressing AI's effects on women in the workforce is required. Companies need to be open about how they utilize AI in hiring choices.
8. Women are disproportionately affected by privacy issues caused by AI-driven surveillance. To safeguard worker rights and advance equity in the workplace, legal frameworks must take these issues into consideration.
9. Though the existing legal framework offers a starting point for tackling AI-related issues, new legislation is required to shield women and other vulnerable groups from prejudice brought on by AI. A specialized legal framework could make it easier to alleviate these particular damages and guarantee a more equitable and secure environment for everyone.

Fundamental rights of equality, freedom of speech and prohibition of discrimination are fundamental rights given to every citizen of the country under the Constitution in India. However, with unchecked unsupervised AI use, these rights of women are in jeopardy. The current legal framework is insufficient to address it. But the government is on the right track with numerous guidelines and possible future legislations in this regard. The implementation and practical equitable execution of these policies and guidelines will be a step towards filling the gap in regulatory framework. Specific legislation safeguarding women or incorporating provisions in previously existing legislation should be the next step.

BIBLIOGRAPHY

Books

1. Adrienne Rich, "Of Woman Born: Motherhood as Experience and Institution", WW Norton & Co. Inc. 1976
2. Baer, Judith A, "Our Lives Before the Law: Constructing a Feminist Jurisprudence", Princeton, NJ: Princeton University Press, 1999
3. Caroline Criado Perez, "Invisible Women: Data Bias in a World Designed for Men", Abrams Press, New York, 2019
4. Catharine Mackinnon, "Feminism Unmodified: Discourses on Life and Law", Harvard University Press, 1988
5. Catherine Rottenberg, "The Rise of Neo Liberal Feminism", Oxford University Press, Cultural Studies, 28(3), 2018 418–437, <https://doi.org/10.1080/09502386.2013.857361>
6. Edited by Charles Kerrigan, CMS, "AI, Machine Learning & Big Data Laws and Regulations 2024" Edition 6th, published 2024
7. Edited by Nancy E. Dowd and Michelle S. Jacobs, "Feminist Legal Theory: An Anti-Essentialist Reader", New York Univ. Press, 2003
8. Gary Minda, "Feminist legal theory", Postmodern Legal Movements: Law and Jurisprudence at Century's End, NYU Press, pp- 128-148, 1995
9. John Stuart Mill and Harriet Taylor Mill, "Subjection of Women", Longmans, Green, Reader and Dyer, 1869
10. Kathleen Barry, "Female Sexual Slavery", NYU Press, 1984
11. Safiya Umoja Noble, "Algorithms of Oppression: How Search Engines reinforce Racism", NYU Press, 1st Edition, 2018
12. Smith, Patricia, ed., "Feminist Jurisprudence", New York: Oxford University Press, 1993

Articles

1. Coyne, S. M., Linder, J. R., Rasmussen, E. E., Nelson, D. A., & Collier, K. M, "It's a bird! It's a plane! It's a gender stereotype!: Longitudinal associations between superhero viewing and gender stereotyped play". *Sex Roles*, 70, 416-430., 2014

2. "IT Rules 2021: A Regulatory Impact Assessment Study", Internet and Mobile Association of India, Volume 2, July 2023
3. Aanchal Kabra & Rohit Gupta, "Carving an Indian Mosaic for Image-Based Sexual Abuse", 34 NAT'L L. SCH. INDIA REV. 205 (2022).
4. Afaq M., Abraham D.E., Patel S.H., Al-Dhoun A.D., Arshad Z., Abraham D.E. "Empowering Women's Health: A Global Perspective on Artificial Intelligence and Robotics." *Cureus*. 2023;15:e49611. [doi: 10.7759/cureus.49611](https://doi.org/10.7759/cureus.49611).
5. Al Kuwaiti A, Nazer K, Al-Reedy A, Al-Shehri S, Al-Muhanna A, Subbarayalu AV, Al Muhanna D, Al-Muhanna FA. "A Review of the Role of Artificial Intelligence in Healthcare". *Journal of Personalized Medicine*, 2023
6. Alisa L. Carse, "Pornography: An Uncivil Liberty?", *Hypatia*, Winter, 1995, Vol. 10, No. 1, *Feminist Ethics and Social Policy*, Part 1 (Winter, 1995), pp. 155-182
7. Andrea Dworkin, "Against the Male Flood: Censorship, Pornography and Equality", 8 HARV. WOMEN'S L.J. 1 (1985).
8. Aneeta Rattan, Siri Chilazi, Oriane Georgeac and Iris Bohnet, "Tackling the Underrepresentation of women in Media", *Harvard Business Review*, June 6, 2019
9. Ann C Scales, "The Emergence of Feminist Jurisprudence: An Essay", *The Yale Law Journal*, Jun., 1986, Vol. 95, No. 7 (Jun., 1986), pp. 1373-1403, 1986
10. Arora A, Alderman JE, Palmer J, Ganapathi S, Laws E, McCradden MD, Oakden-Rayner L, Pfohl SR, Ghassemi M, McKay F, Treanor D, Rostamzadeh N, Mateen B, Gath J, Adebajo AO, Kuku S, Matin R, Heller K, Sapey E, Sebire NJ, Cole-Lewis H, Calvert M, Denniston A, Liu X. "The Value of Standards for Health Datasets in Artificial Intelligence-based Applications", *Nat Med*. 2023 Nov;29(11):2929-2938. 2023 [doi: 10.1038/s41591-023-02608-w](https://doi.org/10.1038/s41591-023-02608-w).
11. Audrey de Rancourt-Raymond and Nadia Smaili, "The unethical use of deep fakes," *Journal of Financial Crime* 30, no. 4 (2023): pp. 1066-1077
12. Bonnie A. Nardie, "My Life as a Night Elf Priest Book Subtitle: An Anthropological Account of World of Warcraft", University of Michigan Press, Digitalculturebooks,
13. Cath C. "Governing artificial intelligence: ethical, legal and technical opportunities and challenges". *Phil. Trans. R. Soc. A* 376: 20180080, 2018
14. Chang, Xinyu, "Gender Bias in Hiring: An Analysis of the Impact of Amazon's Recruiting Algorithm", *Advances in Economics, Management and Political Sciences*. 23. 134-140. [10.54254/2754-1169/23/20230367](https://doi.org/10.54254/2754-1169/23/20230367)

15. Chen Y., Mahoney C., Grasso I., Wali E., Matthews A., Middleton T., et al... “Gender Bias and Under-Representation in Natural Language Processing Across Human Languages”. New York, NY: Association for Computing Machinery., 2021, 10.1145/3461702.3462530
16. Chigateri, Shraddha., “Labour Law Reforms and Women's Work in India: Assessing the New Labour Codes from a Gender Lens”, Institute of Social Studies Trust, 2021
17. Cirillo D, Catuara-Solarz S, Morey C, Guney E, Subirats L, Mellino S, Gigante A, Valencia A, Rementeria MJ, Chadha AS, Mavridis N. “Sex and Gender Differences and Biases in Artificial Intelligence for Biomedicine and Healthcare”, NPJ Digit Med. 2020 Jun 1;3:81, 2020 [doi: 10.1038/s41746-020-0288-5](https://doi.org/10.1038/s41746-020-0288-5).
18. Davide Cirillo & Ors., “Sex and Gender bias in Technology and Artificial Intelligence: Biomedicine and Healthcare Applications”, Women’s Brain Project, Academic Press, 2022
19. Edvinas Meskys & Ors., “Regulating Deep Fakes: Legal and Ethical Considerations”, Journal of Intellectual Property Law & Practice, Volume 15, Issue 1, January 2020, Pages 24–31.
20. Elana Zeide, “The Silicon Ceiling: How Artificial Intelligence Constructs an Invisible Barrier to Opportunity”, 91 UMKC L. REV. 403, 2022.
21. Felzmann, H., Villaronga, E. F., Lutz, C., & Tamò-Larrieux, A., “Transparency you can Trust: Transparency Requirements for Artificial Intelligence between Legal Norms and Contextual Concerns”. Big Data & Society, 6(1), 2019 <https://doi.org/10.1177/2053951719860542>
22. Fosch-Villaronga, E., Poulsen, A. , “Diversity and Inclusion in Artificial Intelligence” In: Custers, B., Fosch-Villaronga, E. (eds), “Law and Artificial Intelligence”, Information Technology and Law Series, vol 35. T.M.C. Asser Press, The Hague., 2022
23. Gordon Graham, “Liberal Vs Radical Feminism Revisited”, Journal of Applied Philosophy , Vol. 11, No. 2 (1994), pp. 155-170, 1994
24. Graham S, Depp C, Lee EE, Nebeker C, Tu X, Kim HC, Jeste DV. “Artificial Intelligence for Mental Health and Mental Illnesses: an Overview” Curr Psychiatry Rep. 2019 Nov 7;21(11):116. [doi: 10.1007/s11920-019-1094-0](https://doi.org/10.1007/s11920-019-1094-0).

25. He, L., Firdaus, A., Gong, J. *et al.* “How the social media impact women’s psychological well-being in the patriarchal structure? The moderating effect of social capital”, *BMC Public Health* 24, 581 (2024).
<https://doi.org/10.1186/s12889-024-18013-y>
26. Heinz-Uwe Dettling, Kynya Jacobus, Dirk Tassilo Wassen, “How the Challenge of Regulating AI in Healthcare is Escalating”, *EY*, 27 July, 2022
27. Himani Bannerji, “Patriarchy in the Era of Neoliberalism: The Case of India”, *Social Scientist*, March–April 201
28. Ignacio Peinado & Ors. , “Digital Inclusion at the Workplace post Covid 19”, page no. 460- 467, 2021 DOI: [10.5220/0010722900003063](https://doi.org/10.5220/0010722900003063).
29. Isaiah Berlin, “Two Concepts Of Liberty,” *Four Essays On Liberty*, (Oxford, England: Oxford University Press, 1969), p. 118-172., 1969
30. Jordan Fairbairn, “Rape Threats and Revenge Porn: Defining Sexual Violence in the Digital Age”, *University of Ottawa Press*, 2015
31. Josette Coughlin, “Perspectives on Natural Language Processing”, *The French Review*, Oct., 1990, Vol. 64, No. 1 (Oct., 1990), pp. 172-179
32. Kim Barker and Olga Jurasz, “Online Misogyny”, *Journal of International Affairs*, Vol. 72, No. 2, *Dynamics of Global Feminism* (Spring/Summer - 2019), pp. 95-114
33. L. Monique Ward, Petal Grower “Media and the Development of Gender Role Stereotypes”, Vol. 2:177-199 (Volume publication date December 2020)
<https://doi.org/10.1146/annurev-devpsych-051120-010630>
34. Latham & Watkins, “EU AI Act: Navigating a brave New World”, May, 2024
35. Matthew van der Merwe, Ketan Ramakrishnan, Markus Anderljung, “Tort Law and Frontier AI Governance”, *Lawfare*, May 24, 2024
36. Nicolò Ghibellini, ” Some Aspects of the EU's New Framework for Personal Data Privacy Protection”, *The Business Lawyer*, WINTER 2017-2018, Vol. 73, No. 1 (WINTER 2017-2018), pp. 207-214
37. Nikhil Garg, Londa Schiebinger, Dan Jurafsky and James Zou, “Word embeddings quantify 100 years of gender and ethnic stereotypes”, *Proceedings of the National Academy of Sciences of the United States of America*, April 17, 2018, Vol. 115, No. 16 (April 17, 2018), pp. E3635-E3644 Published by: National Academy of Sciences

38. Paik KE, Hicklen R, Kaggwa F, Puyat CV, Nakayama LF, Ong BA, Shropshire JN, Villanueva C. “Digital Determinants of Health: Health data poverty amplifies existing health disparities-A scoping review”, *PLOS Digit Health*. 2023, doi: [10.1371/journal.pdig.0000313](https://doi.org/10.1371/journal.pdig.0000313)
39. Paranjape K, Schinkel M, Nannan Panday R, Car J, Nanayakkara P. “Introducing Artificial Intelligence Training in Medical Education”, *JMIR Med Educ*. 2019 Dec 3;5(2):e16048. doi: [10.2196/16048](https://doi.org/10.2196/16048).
40. Pauline T. Kim & Matthew T. Bodie, “Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy”, *35 A.B.A. J. LAB. & EMP. L.* 289, 2021
41. Piers Norris Turner, “Harm and Mill’s Harm Principle”, *The University of Chicago Press, Ethics* , Vol. 124, No. 2 (January 2014), pp. 299-326, 2014
42. Richard A. Epstein, “Liberty, Patriarchy, and Feminism”, 1999 *U. CHI. LEGAL F.* 89, 1999
43. Roberti G, “Female influencers: Analyzing the Social Media Representation of Female Subjectivity in Italy”, *Front. Sociol.* 7:1024043., 2022, doi: [10.3389/fsoc.2022.1024043](https://doi.org/10.3389/fsoc.2022.1024043)
44. Rosemarie Tong, “Women, Pornography and the Law”, *Academe* , Sep. - Oct., 1987, Vol. 73, No. 5 (Sep. - Oct., 1987), pp. 14-22
45. Sahar Takshi, “Unexpected Inequality: Disparate-Impact from Artificial Intelligence in Healthcare Decisions”, *34 J.L. & HEALTH* 215, 2021.
46. Salvi del Pero, A., P. Wyckoff and A. Vourc’h, "Using Artificial Intelligence in the workplace: What are the main ethical risks?", *OECD Social, Employment and Migration Working Papers*, No. 273, OECD Publishing, Paris, 2022, <https://doi.org/10.1787/840a2d9f-en>
47. Samer Hussain Al-Khazreji & Ors., “Impact of Deep fake Technology on Social Media: Detection, Misinformation and Societal Implications”, *The Eurasia Proceedings of Science, Technology, Engineering & Mathematics (EPSTEM)*, 2023 Volume 23, Pages 429-441
48. Sauerbrei A, Kerasidou A, Lucivero F, Hallowell N. “The Impact of Artificial Intelligence on the Person-Centred, Doctor-Patient Relationship: some Problems and Solutions”. *BMC Med Inform Decis Mak.* 2023 Apr 20;23(1):73. doi: [10.1186/s12911-023-02162-y](https://doi.org/10.1186/s12911-023-02162-y).

49. Simantinini Baraokar, “Shifting from the Patriarchal Legal Model to a Cultural Feminism Model: Combating the Double Burden on Women”, 5 INT’L J.L. MGMT. & HUMAN. 414, 2022
50. Taslima Monsoor, “Gender in Law: Five Decades of Struggle for Empowerment”, The Dhaka University Studies, Part-F Vol. XII (I): 1-16, June 2001
51. Tolga Bolukbasi, Kai-Wei Chang, James Zou, Venkatesh Saligrama, Adam Kalai, “Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings”, 30th Conference on Neural Information Processing Systems (NIPS 2016), Barcelona, Spain.
52. Versha Sharma, “Constitutional Provisions Relating to Women and International Instruments on Rights”. 16-17 ALJ (2001-02).
53. W Gregory Voss, “European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, and the Right to Delisting”, The Business Lawyer , Vol. 72, No. 1 (WINTER 2016-2017), pp. 221-234
54. Westerlund, M. “The Emergence of Deep fake Technology: A Review” Technology Innovation Management Review, 9(11): 40-53, 2019
55. Zhiqing Bian, “Research on the Impact of Artificial Intelligence on the Labor Market”, Highlights in Business, Economics and Management, EMFRM 2023, Volume 24, 2024

Online Resources

1. “Artificial Intelligence and Human Rights.” United States Senate Committee on the Judiciary, June 13, 2023. <https://www.judiciary.senate.gov/committee-activity/hearings/artificial-intelligence-and-human-rights>
2. “Digital Progress and Trends Report, 2023”, World Bank Group, 1/3d of India’s population has access to digital media since 2018. <https://bfsi.economicstimes.indiatimes.com/news/industry/indias-digital-landscape-world-bank-report-spotlights-progress-amid-challenges/108224833>
3. “Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare”, prepared by DHR-ICMR Artificial Intelligence Cell, Indian Council of Medical Research, ISBN: 978-93-5811-343-3 https://main.icmr.nic.in/sites/default/files/upload_documents/Ethical_Guidelines_AI_Healthcare_2023.pdf

4. “FACT SHEET: Biden-Harris Administration Secures Voluntary Commitments from Leading Artificial Intelligence Companies to Manage the Risks Posed by AI”, The White House, July 21, 2023 <https://www.whitehouse.gov/briefing-room/statements-releases/2023/07/21/fact-sheet-biden-harris-administration-secures-voluntary-commitments-from-leading-artificial-intelligence-companies-to-manage-the-risks-posed-by-ai/>
5. “Growing at 40.5% CAGR, Indian AI in healthcare market to cross USD 1.6B”, Medical Buyer, April 8, 2024, <https://www.medicalbuyer.co.in/growing-at-40-5-cagr-indian-ai-in-healthcare-market-to-cross-usd-1-6b/#:~:text=The%20Indian%20context,be%20created%20in%20the%20space.>
6. “IndiaAI 2023”, First Edition by Expert Group To Ministry of Electronics and Information Technology <https://www.meity.gov.in/writereaddata/files/IndiaAI-Expert-Group-Report-First-Edition.pdf>
7. “National Data Governance Framework Policy Draft”, Ministry of Electronics and Information Technology, May 2022, <https://www.meity.gov.in/writereaddata/files/National-Data-Governance-Framework-Policy.pdf>
8. “Permanent Mission of India responds to the concerns raised by Special Branch of Human Rights Council about India's IT Rules, 2021”, Report of Press Information Bureau, Ministry of Electronics & IT, June 2021 <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=172873>
9. “Report of the Artificial Intelligence Taskforce”, 2018, https://psa.gov.in/CMS/web/sites/default/files/publication/Report_of_Task_Force_on_ArtificialIntelligence_20March2018_2.pdf
10. “Supreme Court asks govt to set up cell to fight child porn”, Indian Express, October 27, 2017, <https://indianexpress.com/article/india/supreme-court-asks-govt-to-set-up-cell-to-fight-child-porn-4908458/>
11. “The Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People”, published by the White House Office of Science and Technology Policy, October 2022. <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>
12. “Will Gen AI Help or Hinder Women in the Workplace?”, “New Work, New World” Report, Cognizant, 2024,

<https://www.cognizant.com/us/en/insights/insights-blog/gen-ai-impact-on-women-in-the-workplace-wf2458851>

13. AI Watch: Global Regulatory Tracker- United States, 13 May, 2024
<https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-united-states#:~:text=As%20noted%20above%2C%20there%20is,Responsible%20innovation%20and%20development>
14. Akshaya Suresh, Neeraja Shankar, “Revised MeitY Advisory on Deployment of AI Models”, April, 2024 [https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D\)%20models%2C%20and%20to](https://www.jsalaw.com/newsletters-and-updates/revised-meity-advisory-on-deployment-of-ai-models/#:~:text=On%20March%201%2C%202024%2C%20the,AI%E2%80%9D)%20models%2C%20and%20to)
15. Before the Federal Communications Commission Washington, D.C. 20554, In the Matter of Implications of Artificial Intelligence Technologies on Protecting Consumers from Unwanted Robocalls and Robotexts, CG Docket No. 23-362, Declaratory Ruling released February 8, 2024
<https://docs.fcc.gov/public/attachments/FCC-24-17A1.pdf>
16. Business Standard, Cybercrime against women up 28% since 2019, Karnataka's share highest: NCRB https://www.business-standard.com/article/current-affairs/cybercrime-against-women-up-28-since-2019-national-crime-records-bureau-122083001139_1.html
17. California Consumer Privacy Act of 2018
https://leginfo.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5
18. Collett, Clementine, UNESCO, Neff, Gina, Gomes, Livia Gouvea, Inter-American Development Bank Organisation for Economic Co-operation and Development, “The Effects of AI on the Working Lives of Women”, ISBN: 978-92-3-100513-8, 2022 <https://unesdoc.unesco.org/ark:/48223/pf0000380861>
19. Dave Zielinski, “Predicting Misconduct: How AI Helps Head Off Harassment, Bias and Other Ethics Issues”, SHRM, 2021, <https://www.shrm.org/in/topics-tools/news/hr-magazine/predicting-misconduct-how-ai-helps-head-harassment-bias-ethics-issues>

20. DeepTrace, The State of Deep fakes, Landscape, Threats, and Impact https://regmedia.co.uk/2019/10/08/deep_fake_report.pdf ↑
21. Executive Order 14110 of October 30, 2023, “Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence”, Federal Register Vol. 88, No. 210 Wednesday, November 1, 2023 <https://www.govinfo.gov/content/pkg/FR-2023-11-01/pdf/2023-24283.pdf>
22. Jim Holdsworth, “What is NLP: Natural language processing”, IBM, 2024 <https://www.ibm.com/topics/natural-language-processing>
23. Kavitha Hariharan, “How Will AI Affect Gender Gaps In Health Care?: Gender data gaps in health care are already putting women at risk in many ways.”, Marsh McLennan <https://www.marshmcclennan.com/insights/publications/2020/apr/how-will-ai-affect-gender-gaps-in-health-care-.html>
24. Lalit Kaira, “Advent of Privacy Era in India, The Digital personal Data Protection act, 2023”, August 2023 https://www.ey.com/en_in/cybersecurity/decoding-the-digital-personal-data-protection-act-2023
25. Malavika Prasad, “‘Not Proper for Court to Intervene’: Delhi HC on plea over Deep fake Videos”, Indian Express, May 3, 2024 <https://indianexpress.com/article/cities/delhi/elections-delhi-hc-election-commission-pil-9303559/>
26. Mariya Hristozova, “The EU Artificial Intelligence Act: the Necessary Tool to guarantee the Fundamental Rights of Citizens”, Knowledge Proceedings, 44(1), 91-96, 2024, <https://ikm.mk/proceedings/index.php/kp/article/view/15>
27. MeitY issues advisory to all intermediaries to comply with existing IT rules – PIB Release, available at – <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1990542>
28. Mohd. Aqib Islam, “Feminist Jurisprudence and its Impact in India: An Overview”, Legal Service India, <https://www.legalserviceindia.com/legal/article-1859-feminist-jurisprudence-and-its-impact-in-india-an-overview.html>
29. Nancy Flynn, “Encourage Online Civility with Netiquette Rules”, Training Industry, 2022, <https://trainingindustry.com/articles/compliance/encourage-online-civility-with-netiquette-rules/>

30. National Strategy for Artificial Intelligence, 2018, available at <https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>
31. Nicholas Mesa-Cucalon, “Deepfakes: Effective Solutions for Rapidly Emerging Issues”, May, 27, 2021 <https://medium.com/analytics-vidhya/deepfakes-effective-solutions-for-rapidly-emerging-issues-8b1685feef56>
32. NITI Ayog “Approach document for India Part1– Principles for Responsible AI”, 2021 available at <https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>
33. Satya D Sinha, “The Impact of AI on Diversity and Inclusion Initiatives in Hiring”, Express Computer, 2024, <https://www.expresscomputer.in/guest-blogs/the-impact-of-ai-on-diversity-and-inclusion-initiatives-in-hiring/110312/>
34. Suzie Dunn, “Forms of TFGBV”, from the Report “Technology Facilitated Gender Based Violence: An Overview”, Centre for International Governance Innovation, 2020
https://www.cigionline.org/sites/default/files/documents/SaferInternet_Paper%20no%201_0.pdf
35. Tom Wicker, “Deep fake Technology presents Imminent Challenge to Democracy”, International Bar Association, 25th February, 2020
<https://www.ibanet.org/article/432E7100-35BE-44B4-B6AB-AD55758411F4>

Statutes and Legislations

India:

1. Constitution of India, 1950
2. Indian Penal Code, 1860
3. Mines Act, 1952
4. Maternity Benefit Act, 1961
5. Equal Remuneration Act, 1976
6. Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
7. Information Technology Act, 2000

8. Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

9. Digital Personal Data Protection Act, 2023

European Union:

10. General Data Protection Regulations, 2018

11. Artificial Intelligence Act, 2024

United States:

12. California Consumer Privacy Act, 2018

APPENDIX

1.	Name of the Candidate	Debasrita Choudhury
2.	Title of the Dissertation/Thesis	Technology and its Impact on Gender Disparity: an Analysis with Special Reference to Artificial Intelligence
3.	Name of the Supervisor	Dr. Athira P.S.
4.	Similar Content (%) identified	9%
5.	Acceptable Maximum Limit (%)	10%
6.	Software used	Grammarly
7.	Date of Verification	25/06/2024

https://docs.google.com/document/d/1H3P76DguQCt8pefhlqS98TZ_NWWWXcMUquD7Q-ByY/edit

100% | Normal text | Times ... | 12

1 of 130

THE NATIONAL UNIVERSITY OF ADVANCED LEGAL STUDIES, KOCHI

DISSERTATION

Submitted in partial fulfilment of the requirement of the award of a degree of

MASTER OF LAW (LL.M)

(2023-24)

ON THE TOPIC

Technology and its Impact on Gender Disparity: an Analysis with Special Reference to Artificial Intelligence

Plagiarism detected (APA)

1% of this text matches Three-...

1% of this text matches...

Detected Reference
(2015). PROPORTIONALITY ANALYSES ON GENDER EQUALITY : A MULTIJURISDICTIONAL COMPARISON WITH A VIEW TOWARD AN INDIAN MIGRATION.
<https://core.ac.uk/download/48809703.pdf>

Copy reference

9% of your document matches text in 201 sources on the web or in academic databases.

100% | Normal text | Times ... | 12

(2023-24)

ON THE TOPIC

Technology and its Impact on Gender Disparity: an Analysis with Special Reference to Artificial Intelligence

Under the Guidance and Supervision of

Dr. Athira PS.

The National University of Advanced Legal Studies, Kochi

Submitted by:

Debasrita Choudhury

Register No: 10528

LL.M (Constitutional and Administrative Law)

Plagiarism detected (APA)

1% of this text matches Three-...

1% of this text matches...

Detected Reference
(2015). PROPORTIONALITY ANALYSES ON GENDER EQUALITY : A MULTIJURISDICTIONAL COMPARISON WITH A VIEW TOWARD AN INDIAN MIGRATION.
<https://core.ac.uk/download/48809703.pdf>

Copy reference

9% of your document matches text in 201 sources on the web or in academic databases.