

CYBERSPACE AND THE CONSTITUTIONAL ODYSSEY: BALANCING RIGHTS AND GOVERNANCE

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ABSTRACT

The dynamic interplay between cyberspace and Constitutional principles is a modern voyage across the perilous terrain of reconciling individual rights with effective governance. In this paper, the authors will explore into the ongoing issues of aligning digital landscapes with established legal frameworks. As cyberspace transforms communication, privacy and access, Constitutional considerations become more relevant. This paper will explore the delicate equilibrium between safeguarding fundamental rights, such as freedom of expression and privacy, while addressing governance imperatives such as online regulation and cybersecurity. We will get insights into how societies might embrace the potential of cyberspace while protecting democratic norms and the rule of law by exploring this Constitutional odyssey. As cyberspace expands in scope, it has a tremendous impact on many aspects of modern life, from communication and business to information dissemination and civic engagement. This transition needs a rethinking of Constitutional standards in order to fit the new problems and opportunities posed by the digital age. The driving causes behind the requirement to rebalance Constitutional frameworks in response to the cyberspace phenomena will be elucidated in this paper. The paper will further investigate the intricate web of issues concerning cybersecurity, data protection, and digital regulation and will try to address these challenges while upholding the democratic principles upon which they are founded.

INTRODUCTION

“Information is the oxygen of the modern age. It seeps through the walls topped by barbed wire, it wafts across the electrified borders.”

- Ronald Reagan

New digital technologies have given rise to a new phenomenon known as cyberspace. When we enter cyberspace and converse in it, not only does our communication space expand, but so does our living space. The creation and development of cyberspace has profoundly changed people’s thinking and behavioural habits.¹ Two decades ago, the term cyberspace seemed right out of a science fiction movie. In the second decade of the twenty-first century, cyberspace is probably the place where most of us spend a major part of our lives.² It has now become an intrinsic linked part of our lives. Cyberspace is filled with data that has become an asset in this digital era. Many crucial infrastructures such as healthcare, financial services, and power plants use the internet for data storage and communication.³ As a result, data security becomes critical in order to prevent cyber-attacks by hackers. The cyberspace driven by information systems and the internet is transforming our environment in extraordinary ways by enabling economic growth and providing new means by which people connect, interact and collaborate with one another.⁴

Meaning of Cyberspace

Science Fiction Novelist William Gibson first coined the term “cyberspace” in his short story “Burning Chrome.” He then popularized the concept in his debut novel “Neuromancer” in 1984.⁵ This was a Science fiction novel in which William Gibson described the term Cyberspace as the formation of a computer network in the world that has artificial intelligence.⁶ The word “cyber”, apparently referring to the science of cybernetics, was well-chosen for this purpose, as it derives from the Greek verb “Kubernao”, which means “to steer” and which is the root of our present word “to govern”. It connotes both the idea of navigation through a space of electronic data, and of control which is achieved by manipulating those data.⁷

¹ Giancarlo Elia Valori, *The Significance and Potential of Cyberspace*, MODERN DIPLOMACY (Nov. 12, 2021), <https://modern diplomacy.eu/2021/11/12/the-significance-and-potential-of-cyberspace/> (last visited Aug 18, 2023).

² Introduction to Cyberspace: Cyber Security, Cyberspace vs Physical World, TOPPR-GUIDES (Dec. 18, 2018), <https://www.toppr.com/guides/business-laws-cs/cyber-laws/introduction-to-cyberspace/> (last visited Aug 18, 2023).

³ What is Cyber Space? Evolving Technologies and Cybersecurity, SSL2BUY, <https://www.ssl2buy.com/cybersecurity/cyberspace-evolving-technologies> (last visited Aug 18, 2023).

⁴ Uche Mbanaso & Professor Dandaura, *The Cyberspace: Redefining A New World*, 17 JOURNAL OF COMPUTER ENGINEERING (IOSR-JCE 2278 (2015).

⁵ Producer, *William Gibson On Coining The Word “Cyberspace,”* (2018), <https://www.kuow.org/stories/william-gibson-coining-word-cyberspace/> (last visited Aug 18, 2023).

⁶ Introduction To Cyberspace – Definition, Cyber Laws and Cyber Security, VEDANTU, <https://www.vedantu.com/commerce/introduction-to-cyberspace> (last visited Aug 18, 2023).

⁷ Cyberspace, <http://pespmc1.vub.ac.be/CYBSPACE.html> (last visited Aug 20, 2023).

The book caught the imagination of many writers and in 1986, major English language dictionaries introduced the word 'cyberspace'. According to the New Oxford Dictionary of English, 'CyberSpace' is the notional environment in which people communicate over computer networks.¹ Because cyberspace is a virtual environment, it lacks physical boundaries, mass and gravity. It simply describes the space in which computers and other networks are interconnected. During the 1990s, the term "Cyberspace" was used to represent the location where individuals connected on the internet. In the twenty-first century, cyberspace has evolved into a forum for people to express their views on various issues.

Cyberspace is the dynamic and virtual space that such networks of machine-clones create. In other words, cyberspace is the web of consumer electronics, computers, and communications network which interconnect the world.² It refers to the virtual computer world, and more specifically, an electronic medium that is used to facilitate online communication. Users can utilise cyberspace to share information, socialise, swap ideas, play games, participate in conversations or social forums, do business, and produce intuitive media, amongst other things. In many respects, cyberspace is shaped by human societies. We envision cyberspace existing wherever virtual meeting rooms are set up. It can be said that wherever the Internet is used, a cyberspace is created. The widespread usage of computers and cell phones to connect to the internet indicates that the cyberspace is expanding.

According to many IT specialists and experts, including F. Randall Farmer and Chip Morningstar, cyberspace has gained popularity as a medium for social interaction, rather than its technical execution and implementation.³ This elucidates how societies opted to create cyberspace. In India the cyberspace plays a vital role for the general public. Now – a – days all peoples including illiterate and literate are using the face-book, twitter, Instagram, YouTube to share the share information, interact between more peoples, swap ideas between another, play games with one another, engage in discussions or social forums, conduct business and create intuitive media, among many other activities. There are three major components of physical network, logical network, and cyber- persona.⁴

1. RELEVANCE OF INDIAN CONSTITUTION IN THE DIGITAL AGE

The Indian Constitution is profoundly relevant in the digital age because it provides the core framework for guiding the nation's governance, protecting individual rights, and tackling the problems and opportunities posed by the fast-expanding digital landscape. The ensuing points highlight the significance of the Constitution in the context of the digital era -

- **Safeguarding Fundamental Rights** - The Constitution of India guarantees and preserves fundamental rights such as right to privacy, freedom of speech and expression, etc. which have taken new dimension in digital age.
- **Balancing Free Expression and Regulation** - The digital age has resulted in an explosion of information transmission via the internet, and the Constitution's protection of free speech is important here; nonetheless, there is a need to police hate speech and strike a balance between freedom and responsible cyberspace behaviour.
- **Guaranteeing Freedom of Assembly and Association** - Online platforms enable virtual gatherings, dialogues, and movements. Online activism expresses constitutional ideals of free assembly and association, but problems concerning the governance of online space arise.
- **Freedom of Assembly and Association** - Online platforms enable virtual gatherings, discussions, and movements. Constitutional principles of freedom of assembly and association find expression in online activism, but questions about the regulation of online spaces arise.
- **Ensuring Digital Inclusion** - The Constitution emphasizes on the principles of equality and non-discrimination. In the digital era, this principle is extended by ensuring that everyone, even marginalised communities, has access to digital resources and benefits from technical breakthroughs. Bridging the digital divide and encouraging digital literacy are consistent with the goal of social justice and inclusion enshrined in the Constitution.
- **Digital Governance and Right to Information** - In the digital age, the right to information empowering citizens to seek information from public authorities intersects with e-governance initiatives, making government information and services more accessible online. The Constitution's emphasis on transparency and accountability finds resonance in the realm of digital governance.
- **Protecting Personal Data** - As data breaches, online spying, and data monetization grow more common, the principles of protecting individual privacy in the Constitution take on new meaning. Although the right to privacy is not officially recognised in the Constitution, the Supreme Court has maintained it as a fundamental right. The adoption of data protection regulations is consistent with the Constitution's commitment to protecting citizens' interests.
- **Addressing Regulatory Issues in Cyberspace** - Traditional legal jurisdictions face issues when cyberspace transcends geographical borders. Because of the Constitution's adaptability, legal concepts can be interpreted and extended to handle online offences, cybersecurity concerns, and cross-border digital difficulties.
- **Ensuring Digital Citizenship and Civic Engagement** - The Constitution promotes active citizenship and democratic involvement. This includes digital citizenship and online civic engagement in the digital era. Digital petitions, social media activism and online campaigning are consistent with the spirit of democratic engagement embodied in the Constitution. In essence, the Indian Constitution remains highly relevant in the digital age by providing a constitutional foundation for addressing the opportunities and challenges presented by cyberspace. It serves as a guiding document to ensure that the benefits of digital progress are harnessed while upholding constitutional values and protecting citizens' rights in the digital realm.

¹ Introduction to Cyberspace, *supra* note 2.

² *Id.*

³ Cyberspace, TECHOPEDIA (Jun. 26, 2023), <https://www.techopedia.com/definition/2493/cyberspace> (last visited Aug 18, 2023).

⁴ Dr Karthick, Sp Mathiraj Subramanian & Nithyakarpagam A., *AN OVERVIEW OF CYBERSPACE IMPORTANCE IN SOCIOLOGY WITH REFERENCE TO INFORMATION TECHNOLOGY ACT -2000* (2022).

1.1 Intersection of Cyberspace with Constitutional Rights and Principles

The intersection of cyberspace and constitutional rights refers to how the digital environment, defined by interconnected internet and computer networks, interacts with and effects the fundamental rights and values entrenched in a country's Constitution. This intersection is noteworthy because it presents complicated legal, ethical, and societal problems about the application of conventional Constitutional ideals in the digital age. The confluence of cyberspace and Constitutional rights and principles demonstrates the necessity to adapt established legal rules to the digital setting. It also prompts debate about striking a balance between protecting individual rights and addressing issues brought by the digital realm. Legislative frameworks and judicial interpretations are critical in navigating this complicated junction and assuring the preservation of Constitutional principles in the digital era. Because of technology breakthroughs, digital innovations, and changing user behaviours, cyberspace, which is defined by interconnected computer networks and the internet, is continually evolving. New platforms, applications, and communication channels emerge on a regular basis, changing the way people connect and exercise their rights online. It is vital to delve into the dynamic and fast changing digital environment and comprehend how these developments affect the existing principles of Constitutional rights and governance.

2. CONSTITUTIONAL GUARANTEES RELEVANT TO CYBERSPACE

Constitutional Guarantees in the cyberspace refer to the application of Fundamental rights to the digital realm, including individuals' online connections, communication and activities. Fundamental rights must be respected as people interact in cyberspace while tackling the specific problems and opportunities posed by the digital world. Below are some of the significant fundamental rights which are relevant in the realm of cyberspace -

Right to Freedom of Speech and Expression - Article 19(1)(a)

2.1.1 Freedom of Speech and Expression in Cyberspace

The Indian Constitution provides its citizens a number of fundamental rights. Right to freedom is one such vital right guaranteed under Article 19 of the Constitution. Article 19(1)(a) guarantees that all the citizens have the right to freedom of speech and expression.¹ Freedom of speech and expression means the right to express one's own conviction and opinions freely by means of words of mouth, writing, printing, picture or any other mode. It thus includes the expression of one's idea through any communicable medium or visible representations such as gesture, signs and the like.² The expression also implies publication and also includes freedom of press.

Cyberspace has evolved into a crucial forum for free speech and expression. People all across the world can share their thoughts, ideas and opinions through websites, blogs, social media and online forums. The creation and development of cyberspace has given this right a new expression, i.e. the Internet freedom. Some scholars have specifically structured the Internet freedom into (a) freedom of expression on the Internet; (b) freedom of access to the Internet and (c) freedom of communication on the Internet.³

2.1.2 Balancing Free Speech with Reasonable Restrictions in Cyberspace

The right to communicate and spread information in cyberspace is consistent with constitutional principles of free expression. However, there are difficulties in policing fake news, hate speech, online harassment and damaging information while upholding the right to free expression. This right also necessitates appropriate online behaviour, combining free expression with respect for others and avoidance of injury or disinformation. In the virtual world, freedom of speech is a critical issue that needs to be addressed. With the increase of online platforms, social media, and digital communication, the right to freedom of speech and expression in the virtual world has become even more significant.⁴ The Constitution of India guarantees the right to freedom of speech and expression, subject to reasonable restrictions in the interests of sovereignty, integrity, and public order.⁵

Right to Privacy - Article 21

2.1.3 Right to Privacy in Cyberspace

The right to privacy becomes crucial in the context of digital surveillance, data collection, and online interactions. Privacy means "the condition or state of being free from public attention to intrusion inter or interference with one's acts or decisions."

Right to Privacy means:

- Right to personal autonomy
- Right of a person and person's property to be free from unwarranted public scrutiny or exposure.⁶

Even in India, the right to privacy is not explicit in the Constitution of the country, but was brought under the purview of fundamental rights by the instrument of judicial interpretation.⁷ Now Right to Privacy is a fundamental right and an intrinsic part of Article 21 that protects life and liberty of the citizens and as a part of the freedoms guaranteed by Part III of the Constitution.⁸ This pivotal ruling was established in the case of Justice K.S. Puttaswamy v. Union of India⁹, the Apex court

¹ Freedom Of Speech And Expression, <https://legalserviceindia.com/legal/article-77-freedom-of-speech-and-expression.html> (last visited Aug 19, 2023).

² *Id.*

³ Valori, *supra* note 1.

⁴ Ganesh Vajrapu, "The Digital Age and Free Speech in India's Virtual Realm": *Perspectives from India's Constitution Framework*" (2023).

⁵ *Id.*

⁶ Diva Rai, *Know the Right to Privacy in India: Its Sanctity in India*, IPLEADERS (Jun. 12, 2020), <https://blog.ipleaders.in/know-the-right-to-privacy-in-india-its-sanctity-in-india/> (last visited Aug 20, 2023).

⁷ Right to Privacy in Digital Era: A Study with Indian Context, <https://legalserviceindia.com/legal/article-5404-right-to-privacy-in-digital-era-a-study-with-indian-context.html> (last visited Aug 20, 2023).

⁸ *Id.*

⁹ Justice K.S. Puttaswamy and Anr. vs. Union of India (UOI) and Ors. (2017) 10 SCC 1.

unanimously affirmed that the right to privacy is a fundamental right under the Indian Constitution. The verdict ended a Constitutional battle that had begun almost exactly two years ago, on August 11, 2015, when the Attorney-General for India had stood up during the challenge to the Aadhaar Scheme, and declared that the Constitution did not guarantee any fundamental right to privacy. Justice D.Y. Chandrachud, while delivering the main judgment, on behalf of the Chief Justice J.S. Khehar, Justice R.K. Agarwal, himself and Justice S. Abdul Nazeer has held that privacy is intrinsic to life, liberty, freedom and dignity and therefore, is an inalienable natural right. The Right to Privacy safeguards the personal realm of individuals against intrusion from both governmental and non-governmental entities, enabling individuals to make self-directed life decisions.

2.1.4 Privacy Challenges Posed by Digital Communication and Data Collection

With the rapid growth of technology comes a surge in its misuse, which is mostly unavoidable and is exacerbated by the growing use of the internet for the interchange of sensitive and commercial information. Massive volumes of personal data are collected and processed in the digital landscape. Individuals' online activities, conversations, and behaviours are tracked and analysed, which has serious ramifications for their right to privacy. This calls into question traditional concepts of privacy and sparks debate over how much control individuals have over their digital trails.

Privacy is not always absolute and is subject to various limitations. But as more data is being digitized and more information is exchanged online, more importance is being attached to privacy. Data has to be regulated according to its perceived significance as people have a lot at stake when it comes to the privacy of their information.¹ Nevertheless, India has not introduced any dedicated legislation concerning data protection as of now. In an era of diverse cultural and social norms, and especially in a society like ours, privacy is one of the most crucial rights to be secured and recognised as a fundamental right. The legislature should take the necessary steps to ensure that its citizens' privacy is not infringed. The right to privacy guaranteed by the Constitution becomes important in protecting persons from unwarranted intrusion into their digital lives.

Only a limited number of factors, such as national security, hold a higher significance than individual privacy, thereby validating the notion that privacy is not an absolute right and is subject to reasonable constraints. The progression of technology necessitates more sophisticated legislation, and there is an expectation that the impending enactment of the Personal Data Protection Bill will bridge the current disparity between technology and the legal framework upon its implementation.

2.1.5 Informational Privacy

The desire to keep personal information private is represented by informational privacy. The concept of "informed consent" becomes particularly important in this context. Data distribution is regarded as one of the most serious misconducts of privacy since it deprives a person of his or her right of self-determination. Data manipulation and its usage without the approval of the person inhibits decision-making.²

Right to Information -Article 19(1)(a)

The right to information is a fundamental right under Article 19 (1) of the Indian Constitution. In 1976, in the *Raj Narain vs the State of Uttar Pradesh*³ case, the Supreme Court ruled that Right to information will be treated as a fundamental right under article 19. The Supreme Court held that in Indian democracy, people are the masters and they have the right to know about the working of the government. Thus, the government enacted the Right to Information act in 2005 which provides machinery for exercising this fundamental right.⁴

Governments become more transparent, accountable, and responsive as citizens have access to information, critically analyse policies, and actively participate in civic affairs. This virtuous loop helps to enhance democratic institutions and the collective advancement of society. Cyberspace has transformed access to information. With governments and institutions sharing data online, the digital era provides unprecedented access to information. This has consequences for the right to information, as citizens now have new methods to access government records, public services and interact with appropriate authorities. People can get a lot of information online, and governments are also digitising their data and services. Analyzing the difficulties and possibilities that digital platforms present for accessing and disseminating information is crucial as they become an increasingly important part of information exchange. On the one hand, digital data transmission has the potential to improve the openness, usability, and effectiveness of public information dissemination. On the other hand, it presents particular difficulties like the veracity, dependability, security, and privacy of digital data.⁵

In addition to these prominent rights, there exist certain other Constitutional rights that hold relevance within the realm of cyberspace and includes the following -

➤ **Right to Equality and Non-Discrimination** - Article 14⁶ of the Indian Constitution guarantees Right to Equality. While cyberspace can offer equal access to information and opportunity, it also highlights the digital divide—unequal access to technology and digital resources. Making certain that technological improvements do not exacerbate existing disparities has become a constitutional concern. Equal access to digital resources is a component of the right to equality. Bridging the digital divide, in which some people have greater access to technology and online information than others, has become a constitutional priority in order to prevent discrimination and promote equitable possibilities in cyberspace.

¹ Right to Privacy in Digital Era, *supra* note 18.

² A Nagarathna & Namrata Behera, *UNDER THE SUPERVISION OF*:

³ 1975 AIR 865

⁴ Right to Information - Objectives, Provision, Significance, Criticism, BYJUS, <https://byjus.com/free-ias-prep/right-to-information-rti/> (last visited Aug 20, 2023).

⁵ DIGITAL DATA TRANSMISSION AND RIGHT TO INFORMATION - Legal Vidhiya, <https://legalvidhiya.com/digital-data-transmission-and-right-to-information/> (last visited Aug 20, 2023).

⁶ 14. Equality before law.—The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.

- **Freedom of Assembly and Association** - Virtual gatherings, movements and discussions can all take place in cyberspace. People can associate, organise, and participate in activism online, which is consistent with the right to free assembly and association.
 - **Right to Education** - The digital environment promotes education and information sharing, both of which are necessary for personal development and society progress. This right includes access to online educational resources, research materials, and open-source information.
 - **Cultural Rights** - Digital spaces make it possible to promote and preserve cultural variety and knowledge. Individuals can use online platforms to share and celebrate their cultural languages, heritage and traditions.
 - **Right to Constitutional Remedies** - The digital age necessitates procedures to remedy online infringement of basic rights. Individuals should have access to appropriate remedies, including legal action, if their rights are violated in cyberspace.
- Overall, the extension of fundamental rights into cyberspace acknowledges that the digital environment is an integral part of contemporary life where Constitutional values must be upheld. This ensures that individuals can freely express themselves, engage in online activities, access information, and participate in the digital age while enjoying the protections and rights guaranteed by their constitution.

3. BALANCING CONSTITUTIONAL PRINCIPLES AND CYBER REGULATION

It is necessary to harmonize the fundamental rules that shape a nation with the need for rules in the digital world. It becomes essential to create regulations for the online realm while ensuring that they align with the core values enshrined in a country's Constitution. The delicate balance between Constitutional Principles and cyber regulations involves navigating issues such as digital rights, privacy, freedom of expression, and security in a rapidly evolving cyber landscape.

Constitutional Considerations in Content Regulation

The principles specified in a country's Constitution are referred to as Constitutional considerations. Constitutions are foundational documents that establish the core norms and framework of a country's governance. These considerations include freedom of expression, privacy, due process, equality, and other individual and society safeguards. The oversight and control of material disseminated on multiple platforms, including the internet, is referred to as content regulation. The goal of content regulation is to ensure that the information broadcast adheres to legal and ethical norms, while also preserving public safety, order, and societal values. When regulating content in accordance with a nation's Constitution, it is vital to strike a balance. While addressing any problems or abuses that may emerge in the digital realm, content regulation must respect and protect Constitutional rights and ideals. For example, while deciding whether to prohibit or remove certain online content, regulatory agencies must consider Constitutional principles such as freedom of speech and expression. The difficulty is to strike the correct balance between preventing harm (such as hate speech or misinformation) and protecting individuals' rights to express themselves.

Censorship and Regulation of Online Content

Censorship on online content is restricting and monitoring what content should be publicised or viewed by the people globally on the world wide web. Internet censorship is essential to keep a check on the harm that can be or is being caused on the internet through the content to the people. There are a lot of crimes being carried away on the internet platform, to monitor and register all of that internet censorship is important.¹ In early 2019, the NGO Justice for Rights Foundation petitioned the Delhi High Court and the Supreme Court for the development of government norms governing streaming of content on online platforms such as Netflix, Hotstar, and others. Although no government intervention in this sphere exists yet, there has been some development with respect to self regulation of content displayed on these online platforms or OTTP (Over the top service providers) since then.² Offensive content such as hate speech, incitement to violence and child pornography pose a challenge to the dignified use of online space.³ Ensuring that content is carefully reviewed, controlled, and supervised before its dissemination on the internet is crucial. This is because there's a widely held belief that once harm is caused on the internet, rectifying it becomes extremely challenging or even impossible in some cases.

4. CRIMES IN CYBERSPACE

Cybercrimes are nothing but real-life crimes perpetuated in digital medium and thus there is little distinction between the concept of a crime in the cyber world and the real world. The only difference is medium of crime. Cybercrime is 'transnational or international' – there is no border in cyber world.⁴ Broadly cybercrime means an act or omission, which committed on through internet connectivity, may be directly or indirectly, this is forbidden by any statute, and for which corporal and/or monetary punishment is given.⁵ Cybercrime is a series of organized crimes that attack both cyberspace and cyber-security.⁶

Cyber Crimes and Cyber Security

Cybersecurity refers to the practises, technologies, and strategies used to safeguard digital systems, networks, data, and devices against cyber threats and attacks. It includes recognising and responding to incidents, identifying vulnerabilities, applying preventive measures, and assuring the overall integrity, availability, and confidentiality of digital assets. Antivirus software, firewalls, encryption, intrusion detection systems and incident response plans are examples of cybersecurity measures.

¹ Censorship On Online Content, <https://legalserviceindia.com/legal/article-6625-censorship-on-online-content.html> (last visited Aug 20, 2023).

² Censorship on online platforms: Understanding India's Self Regulation Model, NYAAYA, <https://nyaaya.org/guest-blog/censorship-on-online-platforms-understanding-indias-self-regulation-model/> (last visited Aug 20, 2023).

³ IASbaba, *Online Content Regulation*, IASBABA (Sep. 29, 2022), <https://iasbaba.com/2022/09/online-content-regulation/> (last visited Aug 20, 2023).

⁴ Concept of Cyberspace and Types of Cyber Crimes In India - Ignited Minds Journals, <http://ignited.in/1/a/305051> (last visited Aug 20, 2023).

⁵ *Id.*

⁶ Sunil Pawar, R. Mente & Bapu Chendage, *Cyber Crime, Cyber Space and Effects of Cyber Crime*, INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN COMPUTER SCIENCE, ENGINEERING AND INFORMATION TECHNOLOGY 210 (2021).

Cybercrime and cybersecurity are in a perpetual state of challenge and adaptation. The development of innovative cybersecurity solutions and tactics is driven by attempts to prevent cybercrime and protect digital safety. This dynamic interaction emphasises the significance of keeping aware, proactive, and cooperative in the face of emerging digital dangers.

Cyber security, a relatively nascent project in India, has not kept pace with the growth of the IT sector; cyber-crime was categorised as a punishable offence only as late as 2008, when the government promulgated the IT Act 2008.¹ Cybercrimes may include crimes like phishing, data breach, hacking, identity theft, ransomware, cyberbullying, malware, online fraud, cyber espionage, online scams, child exploitation, etc. Each of these cybercrimes offers unique hazards to individuals, organisations, and society as a whole, emphasising the importance of strong cybersecurity safeguards and effective regulatory frameworks.

5.2 Cybersecurity and National Security Concerns

The practise of securing computer systems, networks, and digital data from threats, attacks, and unauthorised access is referred to as cybersecurity. It entails putting in place safeguards to prevent, identify, respond to, and recover from cyber incidents that could jeopardise the confidentiality, integrity, and availability of data and systems. Defence, intelligence, law enforcement, and foreign relations are all aspects of national security. These are the concerns and issues associated with protecting a country's sovereignty, citizens, resources, and interests from a variety of dangers, including military, political, economic, and technical threats. The internet and digital technology play a crucial role in a country's entire security landscape. As countries become increasingly interconnected and reliant on digital infrastructure, the potential risks posed by cyberattacks and online threats have increased. National security issues increasingly extend beyond physical borders into the internet arena.

When malevolent actors, such as cybercriminals, hackers, or state-sponsored organisations, target digital systems and networks to jeopardise a country's security, cybersecurity and national security concerns collide. The concerns may include threat to essential infrastructure like energy, water, transportation, etc., cyberwarfare, data breaches, intellectual property theft, economic espionage, attacking defence system, etc. Given these difficulties, governments invest in strong cybersecurity measures to safeguard national security interests. Developing cyber defence strategies, building cyber response teams, fostering international collaborations, and crafting policies that strike a balance between security demands and individual rights are all part of this. The goal is to limit dangers in the digital age while respecting constitutional ideals and protecting citizens.

5. CONSTITUTIONAL IMPERATIVES AND DIGITAL DIVIDE

Digital Literacy and Access to Cyberspace

Addressing digital literacy and fair access to cyberspace is critical in India to fostering inclusive progress in the digital era. Despite tremendous progress, inequities in digital literacy and internet access persist, affecting rural and marginalised people disproportionately.

5.1.1 Digital Divide and its Impact on Fundamental Rights

The digital divide is a term that refers to the gap between demographics and regions that have access to modern information and communications technology (ICT), and those that don't or have restricted access. This technology can include the telephone, television, personal computers and internet connectivity. The digital divide refers to disparities in access to and usage of digital technology, particularly the internet, among various groups or communities. It includes differences in both physical access to technology (such as computers and broadband internet) and the skills and knowledge required to use digital tools successfully. Factors such as socioeconomic class, geography, age, education, and infrastructure availability can all have an impact on the digital divide. This divide can prevent individuals and groups from fully participating in the benefits of the digital age, such as access to information, educational possibilities, job opportunities, and civic and political participation.

The digital divide has significant ramifications for constitutional requirements. Access to digital technologies and the internet has become vital in many modern nations for exercising many Constitutional rights. When a sizable segment of the population lacks access to these technologies, it might result in unequal enjoyment of Constitutional rights, violating the concept of equality before the law.

5.1.2 Bridging the Digital Divide

Governments may link their activities with Constitutional imperatives by closing the digital divide, ensuring that all citizens have an equitable chance to realise their rights and potential in the digital age. This method adheres to the fundamental principles of justice, equality, and inclusion contained in a country's Constitution. Governments may be compelled by their Constitutional mandates to take steps to bridge the digital divide, such as enacting policies to provide affordable internet access, promoting digital literacy programmes, and ensuring that marginalised communities have the tools they need to fully participate in the digital society.

The government of India has initiated various programs aimed at enhancing digital literacy, expanding internet infrastructure, and ensuring citizens' meaningful participation in the digital landscape which includes the following -

1. The BharatNet project was initiated in 2011 to connect India's villages and connect 0.25 million panchayats via an optical fibre (100 MBPS).
2. The National Digital Literacy Mission and the Digital Saksharta Abhiyan were established by the government in 2014.
3. The government announced various programmes as part of its Digital India campaign in 2015, to connect the entire country.
4. The PM Gramin Digital Saksharta Abhiyan was launched in 2017 to bring digital literacy to 60 million rural Indian families.

¹ Digital Divide In India: Meaning, Implications & Initiative To End It, <https://www.hercircle.in/engage/get-inspired/achievers/digital-divide-in-india-meaning-implications-amp-initiative-to-end-it-2623.html> (last visited Aug 20, 2023).

5. Owing to the importance of digital literacy, India's Supreme Court has declared the ability to access the Internet as a basic right, incorporating it within Article 21 of the Constitution's right to privacy and right to education.
6. The National Education Policy, 2020 aspires to make "India a worldwide knowledge superpower" by implementing a number of improvements in the Indian education system from elementary school to college level, with a focus on digital education.
7. Google India and Tata Trusts jointly established the Internet Saathi Program in 2015. The goal of this project is to help rural Indian women become more digitally literate.
8. The National Optical Fibre Network (NOF-N) is a project that aims to provide broadband access to over two lakh (200,000) gram panchayats across India.
9. DIKSHA (Digital Infrastructure for Knowledge Sharing) platform is a national platform for school education that was established in September 2017 and is open to all states and the federal government for grades 1 to 12. DIKSHA is India's 'one nation; one digital platform' for school education, as part of PM eVidya, which was introduced as part of the Atma Nirbhar Bharat program.
10. Unnati Project—Hindustan Petroleum Corporation Limited (HPCL), which aims to close the digital divide in schools by providing computer education to rural pupils from low-income families.
11. Gyandoot is an Intranet-based Government to Citizen (G2C) service delivery initiative that began in Madhya Pradesh's Dhar district in January 2000 with the dual goals of providing relevant information to the rural population and serving as a conduit between the district administration and the people.
12. Digital Mobile Library: The government of India, in partnership with the Centre for Advanced Computing (C-DAC) in Pune, is working to bridge the digital divide on a broader scale.
13. Massive Open Online Course (MOOC) On the SWAYAM portal, MOOC courses related to NIOS (open schooling grades 9 to 12) have been uploaded; around 92 courses have begun, with 1.5 crore students enrolled.
14. Radio broadcasting is used for children in distant locations who are not online on Air Shiksha Vani, DAISY by NIOS for differently-abled, and e-PathShala (especially for grades 1 to 5).
15. E-pathshala: Provides study resources to pupils in rural and urban areas.¹

6. CONSTITUTIONAL REFORMS AND POLICY CONSIDERATIONS

The revolutionary impact of the digital era on every element of society necessitates the updating of Constitutional frameworks to handle cyberspace concerns. Constitution is the fundamental legal instrument that guide a country's governance and protect individual rights. However, the rise of cyberspace has brought with it enormous complications that traditional legal systems may not be able to adequately address. In an era of rapid technological innovation, updating Constitutional frameworks to handle cyberspace concerns assures that the rule of law remains applicable. These revisions have the potential to harmonise ancient values with contemporary realities, assuring the protection of citizens' rights while also promoting a secure, inclusive, and innovative digital society. There are several significant reasons that underscore the requirement for revising Constitutional frameworks which includes -

- Digital Rights and Privacy - The digital era has introduced new threats to personal privacy and data security. Constitutional amendments can ensure that individuals' digital rights are properly defined and safeguarded, including issues like as data breaches, spying, and the right to be forgotten.
- Connectivity - Cyberspace crosses borders, creating jurisdictional issues. Constitutional amendments can create frameworks for international collaboration and legal processes to address cross-border cybercrime and conflicts.
- Cybersecurity Threats - The increase of cyber threats and attacks necessitates the inclusion of national security laws into Constitutional frameworks. These laws can give governments the authority to take reasonable steps to defend their digital infrastructure and citizens.
- Digital Inclusion - The digital gap has the potential to worsen societal inequities. Constitutional amendments can emphasise the importance of digital inclusion by ensuring that all citizens have equal access to technology and digital resources.
- Regulation of Harmful Content - The delicate balance between free expression and the prevention of dangerous online content necessitates serious constitutional examination. While retaining free speech principles, new sections can combat hate speech, misinformation, and online harassment.
- Economic Implications - The digital economy has created new economic challenges, such as e-commerce, intellectual property, and taxation. Constitutional amendments can provide a legislative environment that encourages innovation while also addressing these economic dimensions.
- E-Governance - Constitutional amendments can recognise citizens' rights to access government information, participate in digital governance, and get transparent and efficient services as governments increasingly deliver digital services.
- Technological Development - Constitutions should be adaptable to future technologies like as artificial intelligence, blockchain, and quantum computing to ensure that legal frameworks remain relevant and effective.
- Evolution of Communication - The digital sphere has transformed communication, allowing for real-time global exchanges. Constitutional protections for free expression, privacy, and speech must evolve to include new digital platforms and forms of communication, such as social media and encrypted texting.

¹ *Id.*

Recommendations and Future Directions

When it comes to Cyberspace, there are various issues which needs to be addressed including online profiling of marginalized groups, censorship, biometric concerns, online surveillance, etc. Following are some of the potential reforms which might be helpful in addressing the emerging challenges and in striking a balance between cyberspace and the Indian Constitution –

- Development of Infrastructure - The Atmanirbhar Abhiyan, which fosters the development of indigenous information and communication technology, has the potential to be extremely beneficial.
- Amendment of the Constitution – Constitutional Amendment and addition of new provisions will be helpful in order to ensure protection and promotion of fundamental rights of people in the digital realm.
- Collaboration - Collaborative efforts between governments, industry and civil societies can be helpful in spreading awareness about cyberspace and the risks involved. Collaborative and adaptive approach to ensure that cyberspace aligns with Constitutional principles while fostering innovation and progress should also be adopted.
- Promoting Digital Literacy - Digital literacy requires special attention in schools and colleges. The National Digital Literacy Mission should prioritise the teaching of fundamental digital literacy in all government schools, as well as advanced digital literacy in higher grades and institutions. Increased digital literacy will increase computer hardware usage across the country. Furthermore, when these pupils educate their family members, the impact will be multiplied.
- Cybersecurity - A comprehensive cyber-security framework will be required for data security, secure digital transactions, and complaint resolution.

7. CONCLUSION

The cyberspace is currently facing multiple challenges which need to be overcome collectively in shortest possible timeframe to allow the development of a safe, secure, transparent and rule-based domain, which is seamlessly available across all corners of the planet and beyond 24×7×365.¹ The first challenge is that currently there are no common rules and norms that govern this important domain.² The relationship between cyberspace and the Indian Constitution is continuously evolving and it is important to balance rights, governance and technological advancements. Traditional legal jurisdictions face issues when cyberspace transcends geographical borders. Because of the Constitution's versatility, legal concepts can be interpreted and extended to handle online offences, cybersecurity concerns, and cross-border digital difficulties. It becomes necessary to regulated online activities while preserving individual's rights. Balancing the need for cybersecurity and preventing abuse with protecting freedom of expression and privacy becomes a governance challenge which can be addressed by striking a balance between various Constitutional Rights, ensuring free expression while combating misinformation, protecting privacy while enabling digital innovation, and addressing cybersecurity while upholding civil liberties.

¹ ASHISH CHHIBBAR, NAVIGATING THE INDIAN CYBERSPACE MAZE: GUIDE FOR POLICYMAKERS (2020).

² *Id.*