

A Reflection upon the Digital Copyright Laws in India

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Received: 22 October 2019; accepted: 26 January 2020

In this digital age, where everything is available at one place, to everyone, at all times, the vulnerability of copyrighted works has increased manifold. With high speed internet, peer-to-peer networks, excellent technologies facilitating rapid reproduction without loss of quality, fast and easy dissemination and high density storage devices, the copyright violation is becoming an effortless task. Though the traditional notion of copyright still remains the same i.e., protection from piracy, however, the mode of operation has and is undergoing a systematic change in the wake of technological development. The performance of rights in typical analogous copyright set-up is extremely different from the performance of such rights at digital platform. Further, ubiquity of internet coupled with various technical obstacles has made it extremely difficult for copyright holder to exactly locate and implicate the infringer/s, which in many cases may be located in different parts of the world. Now with the advent of artificial intelligence, creation of copyright subject matter by machines with very less or no human intervention is potentially raising question as to the authorship of such works. It is clear from the history of copyright laws that it has always responded in affirmation to the technological advancements by amending the existing systems to keep in tune with the changes taking place and to combat the challenges threatening its smooth and effective functioning. In this backdrop, this article presents an analysis of the phenomenal impact of digital technologies over copyright regime, its advantages and disadvantages, the protection of rights of copyright holder and the liabilities of intermediaries etc. Further, this article shall also explore the digital copyright laws available in India to combat the myriad challenges posed by the ever advancing digital technology and to find out their sufficiency.

Keywords: Copyright, Digital Rights Management (DRM), Artificial Intelligence, World Wide Web, The Copyright Act, 1957, Internet Treaties, peer-to-peer networks, circumvention measures, digital environment, digital library, internet service provider

Intellectual property rights (IPR) are those exclusive rights which are granted to the authors/creators/inventors for the purpose of protection of intellectual property which is the valuable outcome of their intellectual labour. The legal protection of IPR mainly serves twofold purpose, firstly, it encourages the creator community to produce more intellectual property (IP) by according exclusive rights of its exploitation in their favour and secondly, it promotes the social welfare as all IP comes into public domain after a fixed tenure which can be freely utilized for further development and public good. The laws relating to intellectual property rights are the best example establishing relationship between law and science and technology. The advancement in the technology has definitely increased the importance of IPR today. The effects of digitalization can be best seen in copyright regime. Internet is undoubtedly the easiest way to retrieve and disseminate information and this is where the problem

begins. Digital piracy of copyrighted works is becoming a regular phenomenon. Concepts like protection of computer programs, digital rights management, technological circumventions, etc. are assuming importance.

The new technologies, from revolutionary printing press to Xerox machines to World Wide Web, all have been constantly expanding the scope and subject matter of copyright. As a consequence of which revisions to the copyright laws are made to keep the same in tune with the changing technologies and to combat the challenges posed by it.

Worldwide it is recognized that copyright piracy is a serious crime which not only adversely affects the creative potential of the society by denying the creators their legitimate dues, it also causes economic losses to all those who had invested their money in bringing out copyrighted materials in various forms for use by end-users.¹ The advancement of technology, specially the internet services, has not only made the copyright piracy an extremely easy task but has also been posing potential threats to the

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copyrighted works through caching and mirroring, linking, framing, archiving, peer-to-peer networks, etc. This article aims to address these aforementioned issues and the legislative response in India.

Copyright Regime-Traditional View

Copyright plays a key role in the cultural and economic development of a country. The rich cultural heritage of a nation heavily depends upon the level of protection afforded to literary, dramatic, musical and artistic works, cinematograph films and sound recordings. The more efficient copyright system, more encouragement is afforded to the author community to create more intellectual creations and thus, greater the nation's renown. In India, the important role played by the copyright in national economy has been highlighted in the Study on *Copyright Piracy in India*¹ thus:

“Besides protecting creative potential of the society, copyright contributes to a nation on economic-front as well. The copyright based industries together generate huge employment in the country of its origin. The national exchequer benefit from the contribution made by these industries in the form of excise duty, sales tax, income tax etc. from the production and sale of copyrighted products. Given the natural demand for such products from across the national boundaries exports help consolidate country's foreign exchange reserves position.”

The prime object of copyright law is to provide encouragement to authors with a view to induce them to create more original works by rewarding them with the exclusive rights over their creations for a limited period leading to reproduction of the works for the ultimate benefit of the public. Generally speaking, copyright gives the creators, be they songwriters, filmmakers, authors, artists, poets, computer programmers or broadcasters, the right to control the use of the copyrighted work.² They can say yes; they can say no. They can limit the use to certain times, certain days, certain geography. They can license the work for many different kinds of uses; to reproduce or make a copy of the work, to distribute it, to display it publicly and to perform it publicly.²

The copyright as we understand it today is essentially an outcome of modern civilization beginning with the advent of printing press. Before this the works of literature and art were created primarily to attain fame. The law relating to the protection of copyright in original works began to

develop only after the invention of the printing press which made it possible to produce copies of a work, particularly literary work, in large numbers at a low cost.³ To deal with the unauthorized reproduction of the author's work, for the first time, the republic of Venice granted privilege to print books. Around the end of 17th century, the first recognizably modern copyright, the 'Statute of Anne', was passed in 1709 taking effect in 1710. For the first time via this Act the rights of 'author' being the 'owner' of the copyright in the work were recognized and fixed terms of protections were also carved out. Since then, there have been lots of activities in the form of various conventions, treaties, conferences etc. at the international level to foster law with respect to copyright. In India, the current copyright regime is governed by a statute called 'The Copyright Act, 1957', a successor of the Copyright Act, 1914 which was heavily based on the UK Copyright Act of 1911. The main objective of revision of the erstwhile Copyright Act, 1914 was to fulfill the international obligations and to combat the challenges posed by the advancement to technology and the means of communication like broadcasting, litho-photography and television etc.

As per current laws, the subject matter of copyright is the original literary, dramatic, musical and artistic works; cinematograph films; and sound recordings.⁴ Performer's rights are also included within the ambit of copyright.⁵ The Act of 1957 recognizes two kinds of rights viz., (i) economic rights⁶ and (ii) moral rights⁷ with respect to the work. The rights under section 14 of the Act are exclusive rights which can only be exercised by the owner of the copyright and these rights are 'work' specific as copyright being a bundle of rights. The protection to these economic rights facilitates the exploitation thereof and help earning economic benefits to the author. Further, the moral rights are granted to the author protecting his right to claim authorship of the work and to maintain the integrity of his work. 'Work' is the brainchild of the author and every author has a right to claim paternity to his work and to protect his work from distortion and mutilation. The copyright is not perpetual in nature, it has temporal limitations attached to it which is, in general, life of the author plus 60 years thereafter. The exclusive rights under Section 14 of the Act are transferable in nature. There exist elaborate provisions for the assignment⁸ and licensing⁹ of the copyright in the work by the owner.

The Act makes provisions for the infringement of the copyright and provides for the civil and criminal remedies for the same. Apart from rendering the protection to the rights of the authors', the Act also recognizes the right of public to make use of copyrighted material in certain circumstances, which is termed as 'fair dealing with the work'.¹⁰

As we know, the copyright is a property right that is given by law to authors/creators and the owners of copyright (cases where ownership is taken from authors) to control the exercise of the exclusive rights regarding their intellectual creations i.e., ('works'). Traditionally, the copyright arose out of lobbying of publishers preventing primarily the 'piracy of the printed books' which became a painless task owing to advent of printing press. The advancement in the field of science and technology, specifically the digital technologies are intensely affecting the existing legal paradigm of copyright however, the traditional notions of the subject matter still remains the same i.e., protection from piracy. The growth of new technology has revolutionized the creation, dissemination, and consumption of the copyrighted material which has both pros and cons. The next section shall be elaborating on the same in details.

Copyright in Digital Age

The advancement in technologies has been consistently impacting the operation of copyright laws and expanding its scope and subject matter. For the copyright owners, although digital technology has provided them with the high quality of digital copies and the increased ability to copy and distribute works, the same technology has jeopardized their ability to enforce their rights in the cyberspace.¹¹ The unprecedented acceleration provided by the advancing technologies to the dissemination and reproduction of digital content with great speed, accuracy and no loss of quality is commendable. However, the digitization has simultaneously made alteration, mixing and manipulation of the same piece of information more or less an effortless task which is a big threat to the copyrighted work. In cyber space, everything is available at the click of a button easing the task of not only retrieving information but also storing it and further distributing it with precision and that too at a very low price, escalating the unauthorized use of copyrighted work.

Advantages of Digital Technologies in Copyright Regime

Ease of Dissemination

The digital technologies facilitate the simple, speedy and global dissemination of work without loss of quality and at a very less price. Once information from a single source reaches the recipient/s, digital networks allows the recipient/s to further disseminate the same to multiple recipients. Consumers do not face traditional hurdles of disseminating the copyrighted work by using online mediums.

Faster Access to Digital Material

The ubiquitous nature of internet facilitates the easy and faster access to the material at digital platform to the consumers who require such creations for their benefit.

Ease of Storage

Digital medium offers excellent and dense mode of storing copyrighted content as compared to the traditional ones. CDs, pen drives or hard disks are capable of storing the entire library.

Easy Reproduction

Digitization of the copyrighted materials renders its reproduction a painless task. Owing to the magnificent advancement in related technologies, it is now easy to reproduce of the digital contents with precision in quality at a faster rate. In this manner, one single copy can cater to the needs of millions with the help of relevant software and the high speed internet.

Time Effective

When everything is available at a single click at one place, time is bound to be saved. Digital technologies have made the dissemination of copyrighted contents a time saving task for both the stakeholders, i.e., the authors as well as the consumers of such work. It enables authors to make available their creations online, thus, saving their time in searching appropriate market for the same. Further, consumers' time in going places to search the material, which by digitalization is available at a single click, is also saved.

Cost Effective

The digital technologies are proving not only time effective but extremely cost effective too, for both creators of copyrighted contents as well as consumers of the same. Dissemination and consumption of copyrighted material through digital medium reduces the economic cost of the same owing to the

omnipresence of internet and less expenditure on reproduction set-ups and search costs.

Facilitation of Direct Publication by Authors

The digital medium offers an open platform to authors to directly disseminate their works without intervention in the form of traditional publishers. The traditional way of dissemination of work involves intermediaries in the form of publishers etc. to provide an adequate platform for dissemination of the work, however, in digital media authors can directly make available their work to the targeted audiences with intermediaries playing fewer role.

Platform for Creation of New Kind of Works

The advent of digital technologies has given rise to completely new set of 'works' like multimedia works, computer software, databases etc. adding stars to the entertainment industry and revolutionizing the work culture of almost all the fields using information and communication technologies.

Challenges Posed by Digital Technologies to Copyright Regime

Ease of Replication and Dissemination of 'Work' to the Disadvantage of Copyright Holder

The core notion of copyright is to prevent copying of 'work' without permission of the copyright holder. As already discussed above, digital medium facilitates easy dissemination of copyrighted work, however, for want of strict regulation its copies are created effortlessly and disseminated to millions of users causing economic loss to the copyright holder. Digital platform allows mass distribution of the copyrighted work making it extremely difficult for the copyright owners to identify, and bring actions against the number of individuals who are involved in the infringement of their works.

Plasticity of Digital Media

In digital medium, the users can easily alter, adapt, modify, or manipulate works. This flexibility and plasticity offered by the digital media where altering or modifying a digital content is painless task raises concerns for the authors/owners as to how their original work shall be dealt with. Any unwanted and unauthorized addition or deletion in the original content has the potential to change the entire meaning which may not be the intent or desire of the creator.

Caching and Mirroring

Caching (sometimes known as "mirroring," usually when it involves storage of an entire site or

other complete set of material from a source) means storing copies of material from an original source site (such as, a Web page) for later use when the same material is requested again, thereby obviating the need to go back to the original source for the material.¹² The purpose of caching is to speed up repeated access to data and to reduce network congestion resulting from repeated downloads of data.¹² This storage of material is temporary in nature though the time may vary from few minutes, to hours to days. Caching poses potential threat to copyrighted material as the same is copied and stored for future reference thereby negatively affecting the interests of copyright holders.

Linking and Framing

Linking and framing, generally speaking, is a technique of connecting documents in online medium. In linking, a link¹³ is used which has embedded electronic address of another website pointing towards the same. When a person clicks on that link it takes the user to a destination site and enables him/her to view the contents which that site offers. Framing is a kind of linking, where the linked content is displayed on the host site within "frames". Both linking and framing pose challenges to copyright holders of digital contents where the linked content is a copyrighted material and the permission of the right holder has not been obtained.

Maintenance of Digital Library and Archiving

It is another area challenging the copyright regime in digital age on the front of balancing the two conflicting interests of copyright holder on one side and right to access to information on the other. Further, the various digital technologies employed by the academic institutions maintaining the digital libraries and the institutional repositories in acquiring, using and disseminating the copyrighted work raises significant copyright issues like downloading, display, multiple uses, storage, and access to contents coupled with hefty fee charged from the users specially in academic set-ups, etc.

Peer-to-Peer Networks

Peer to peer networking¹⁴ involves computer systems connected to each other *via* special software enabling a computer system to locate file/ data on another networked computer system and transfer a copy of the same to its own directly without interference of any mediating server. This technology, today, is often used to reproduce and disseminate

the copyrighted content without authorization of right holders.

Establishing Liability

Fixing liability for copyright infringement in traditional copyright set-up is relatively easy with well settled laws than in digital medium which is extremely dynamic in nature and having cross-border operations. Further, the digital copyright involves the key role played by “internet service provider” (ISP) or the operators/organizations providing digital forum for transmission of copyrighted works. Owing to the extensive operations and technical and financial constraints, the ISP is considered to be the best possible choice to be utilized to check copyright infringement by disallowing unauthorized exploitation of copyrighted works on their platforms and bear the liability of copyright infringement, if any, taking place on their network. However, in the backdrop of no direct law in copyright regime on the subject at hand, fixing the liability of ISP is no easy task.

Jurisdiction Issues

The cyberspace has no real location in actual sense. It is everywhere yet nowhere. Though, the relevant equipment like modem, PC (system), router etc. may be present in one jurisdiction however, the person using them may be sitting in another jurisdiction and the effect may be taking place in some third jurisdiction. The cross-border operations of digital media, often comes in direct tussles with the strict copyright regime which is territorial in nature. The jurisdictional issue often crops up before the court where the infringer is situated outside the territorial operations of a particular copyright statute.

Works Created by the Machines: Use of Artificial Intelligence

Creation of ‘work’ which is subject-matter of copyright by the machine using artificial intelligence (AI) is at very nascent stage, the very idea of awarding authorship of such work to machines is unconceivable to many nevertheless a potent one in times to come. There are ongoing discussions and deliberations on the grant of ‘authorship’ in case of copyrighted work created by AI with one side supporting the authorship to machines to another side opposing the same and favoring the programmer/organization to be the author. Traditionally speaking, the ownership of ‘works’ created using computers were never debated as in such creations computer software were used as mere

‘tools’, simply carrying out the commands of programmers. However, with the advent of AI, ownership of such creations has become a debatable issue where the result has been produced with very less or no human intervention.

*Naruto v Slater*¹⁵ is the first famous case wherein the judicial interpretation by the court was called upon as to non-human authorship of ‘work’ in copyright regime. This case is famously known as the ‘monkey selfie case’ wherein a selfie was clicked by a monkey using camera which was left unguarded. The main issue before the court was whether copyright in image so clicked belongs to the monkey (who clicked it) or the photographer (owner of the camera so used). The court in its decision awarded authorship to a human and not to “animal” as the animal failed to be “author” within the copyright regime. Though in this case, the non-human entity was ‘animal’ this is completely different from creation of work by artificial intelligence without human intervention. However, the view has always been to recognize ‘human’ authorship in copyright regime.

In the said context, it is important to discuss the recent case wherein Shenzhen Nanshan District People’s Court (China) has recognized authorship of AI in work created by artificial intelligence (AI) software *Dreamwriter*. In this case, the Court found the article in question, written by *Tencent Dreamwriter AI*, belonging to plaintiff-Shenzhen *Tencent Computer System Co., Ltd.* was original and worthy of copyright. As per facts, the article in question was first published by plaintiff wherein *Tencent* personnel used the *Dreamwriter AI* to draft the said article. The defendant-*Shanghai Yingmou Technology Co. Ltd.* disseminated the same article through its website without permission. The Court ordered the defendant to compensate the plaintiff for economic losses by such dissemination.¹⁶

Protection of Authors’ Rights in Digital Medium

Digital Rights Management

Digital Rights Management (DRM) refers to the technological and management tools employed by the right holders to protect the copyrighted works in the digital medium. It is important to note that DRM technology does not enforce copyright laws rather it is simply a tool of checking unauthorized access and use of protected contents online. In terms that are more formal DRM has been described as ‘a way of addressing the description, identification, trading,

protection, monitoring and tracking of all forms of rights usages over tangible and intangible assets, including management of rights holders' relationships.¹⁷ Owing to advancement in computer technologies, increase in storage capacity of devices used in digital medium and high speed internet, the online copyrighted contents have become highly vulnerable to piracy which calls for the employment of measures allowing the copyright holder to prevent users from using the online protected content beyond a desired limit. The DRM, in Copyright regime, has following two functional aspects:

- a) The protection and maintenance of "Rights Management Information" (RMI); and
- b) The management and protection of "Technological Protection Measures" (TPM).

RMI includes information as to identification of 'work', its owner, the rights possessed by him with respect to the 'work', terms and conditions of usage of such rights etc. To protect the 'work' from illegal copying, unauthorized access and usage, the online copyrighted contents are usually coupled with TPM. These TPM could be in the following form:

- a) Digital Water marking and finger printing;
- b) Enabling passwords;
- c) Cryptography;
- d) Digital signature;
- e) Authentication;
- f) Private/public keys;
- g) Digital certificates; etc.

Since DRM allows copyright holder to protect the copyrighted content on digital platform in strict sense, it tends to result in denial of access to information/material to users. Copyright is now a tool used against individual end-users, trying to prevent them from using copyrighted material beyond boundaries set by right holders.¹⁸ Users who access online material must click accept licensing terms in contracts of adhesion that often run 10, 20, 30 pages or more and often limit their right to use the material, and may contain waivers of exceptions such as fair use, fair dealing or private copying.¹⁸

Moral Rights of Author in Digital Age

The moral rights or the special rights of authors are the non-economic and personal rights associated with the copyrighted work. The copyright regime recognizes these rights because it is believed that the copyrighted work embodies the personality and character of its author which must be accorded

appropriate protection. Moral rights in the context at hand includes following:

- a) Paternity right (i.e, right of author to claim authorship to the work);
- b) Integrity of the 'work' against distortion, mutilation and modification of the same;
- c) Right to withdraw;
- d) Right against imputations;
- e) Right of publication;
- f) Right to reply to criticism; etc.

It is noteworthy that not all jurisdictions recognize all kinds of authors' moral rights.

The plasticity of digital media, as discussed earlier in this section, permits modification, adaptation, distortion and mutilation of copyrighted work once exposed on digital platform. This facility for modification, distortion and manipulation coupled with easy replication, storage and dissemination allows one to easily temper with the original work and share the tempered copy with millions of users, infringing the author's moral rights. Further, when the author does become aware of alterations to his work and wishes to object to them by asserting his moral right of integrity, he confronts technological and regulatory obstacles.¹⁹

Protection of Digital Copyright

With the advent of digital technologies and the internet the very core of the copyright has been challenged on legal front. The invention of printing press i.e., with a change in technology a need was felt to accord adequate protection to the rights of the authors' over their creations. Since then the copyright laws have travelled a wonderful journey of systematic protection to the rights of authors' combating the challenges posed by new technologies. This century has witnessed a tremendous growth in the digital technologies that it can safely be termed as 'digital age', easing out various tasks which were relatively strenuous in nature; improving lifestyles and at the same time posing various challenges. The invention of printing press, television, broadcasting, computer programs, phonograms, radio and satellite transmission and World Wide Web etc. all have re-structured copyright laws time and again.

International Scenario

The well-structured journey of copyright laws, at international level, began with the Berne Convention for the Protection of Literary and Artistic Works, 1886, where the foundations of existing copyright

regimes were laid down. Till date, Berne Convention has undergone various revisions²⁰ to keep its provisions in tune with the changing scenarios in the copyright field. After Berne Convention, the copyright regime has witnessed various instruments harmonizing and governing multiple aspects of copyright laws at international level. In the context at hand, two treaties WIPO Copyright Treaty (WCT) and WIPO Performances and Phonogram Treaty (WPPT) are noteworthy. The two treaties together are known as “Internet Treaties”, the objective of which are to lay down the international norms preventing unauthorized access and use of copyrighted works on the digital platform.

WIPO Copyright Treaty

WIPO Copyright Treaty (WCT) was adopted on 20 December 1996 in Geneva and came into force on 6 March 2002. The treaty recognizes the phenomenal impact of digital technologies on copyright and aims to lay down new international rules and clarify already existing ones to combat the challenges posed by modern developments. The relevant portion reads thus:

“Recognizing the need to introduce new international rules and clarify the interpretation of certain existing rules in order to provide adequate solutions to the questions raised by new economic, social, cultural and technological developments,

Recognizing the profound impact of the development and convergence of information and communication technologies on the creation and use of literary and artistic works”

Computer programs²¹ and databases²² have been included in the realm of literary works under copyright. Via Article- 1(4) this treaty mandates contracting parties to comply with the Articles 1-21 of Berne Convention. The agreed statement concerning the said Article of WCT clearly makes storage of protected work in digital form in an electronic medium a ‘reproduction’ according to Article 9 of Berne Convention. The relevant text reads thus:

“The reproduction right, as set out in Article 9 of the Berne Convention, and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention.”

This treaty duly recognizes the authors’ various rights such as right of distribution, right of rental, and

right of communication to public etc. with respect to their work. Article 11 and 12 provides for the protection of TPM and RMI respectively. An obligation is casted on contracting parties to provide adequate legal protection against the circumvention of technological measures employed by the authors to protect their works at digital platform. It is also the duty of the contracting parties to provide for adequate legal remedies against persons tempering with the RMI i.e., “rights management information”. According to this treaty, RMI means “information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public.”²³

WIPO Performances and Phonogram Treaty

WIPO Performances and Phonograms Treaty (WPPT) was adopted on 20 December 1996 in Geneva and came into force on 20 May 2002. The primary focus of this treaty is upon the adequate, effective and uniform protection of the rights of performers and producers of phonograms from the threats posed by the developing information and communication technology. Article 2 of this treaty is the definition clause defining various crucial terms like performers, phonograms, fixation, producer of phonogram, etc. precisely. The moral rights of performers (i.e., the right to claim to be identified as the performer of his performances and right to object to any distortion, mutilation or other modification of his performances that would be prejudicial to his reputation) have been recognized under Article 5 of this treaty.

Chapter 2 and 3 of this treaty provides for various rights of performers and the producers of phonograms respectively. The various rights such as right of reproduction, distribution, right of rental, etc. have been provided for to do away the confusion as to the scope and limitation thereof. An agreed statement concerning Articles 7, 11 and 16 of this treaty is worth referring to in the context of digital copyright as it extends the application of aforementioned provisions to digital environment. The relevant text reads thus:

“The reproduction right, as set out in Articles 7 and 11, and the exceptions permitted thereunder through Article 16, fully apply in the digital

environment, in particular to the use of performances and phonograms in digital form. It is understood that the storage of a protected performance or phonogram in digital form in an electronic medium constitutes a reproduction within the meaning of these Articles.”

Article 18 provides for the protection against circumvention of technological measures employed by the performers and producers of phonograms to prevent unauthorized use of their performances or phonograms. Article 19 obligates contracting parties to provide effective legal remedies against infringement of “rights management information”.

National Scenario

In India, it is the Copyright Act, 1957 which governs the copyright regime. It grants exclusive rights,²⁴ strictly statutory in nature and having temporal limitations attached to it. The formally structured copyright laws began its journey from the Copyright Act, 1914 which was based upon the U.K. Copyright Act, 1911. To keep copyright laws in tune with the technological developments taking place and to fulfill international obligations, a need for a new Act was felt and consequently the present Copyright Act, 1957 was passed. Till date there have been 7 amendments²⁵ to this Act, amending the provisions thereof to meet the modern day challenges. The 2012 amendment to Copyright Act, 1957 is a celebrated move by the legislature so far the context at hand is concerned. Following are some of the points that reflect upon the digital copyright protection under the Copyright Act, 1957:

- a) The Act acknowledges the computer generated work as it recognizes a person who causes such work to be generated as the author of the said work. However, it nowhere defines as such what “computer generated” work is. Further, with AI gaining momentum, the ownership of AI-generated work has become a debatable issue which needs effective settlement.
- b) The definition clause defines “broadcast” meaning communication to the public by any means including a re-broadcast. Broadcast being a technological development assisting in communication of work to public using electronic medium.
- c) Section 2(ff) defines “communication to the public” as making any work or performance available for being seen or heard or otherwise enjoyed by the public directly or by any means of display. Though this definition can be extended to cover within its ambit the dissemination of work in digital form yet a lucid definition dealing with digital dissemination of work is need of the hour considering the ease with which work can be disseminated to millions of users online with a single click with attached perils.
- d) Copyright protection is accorded to the computer programmes, and databases as literary work. Sections 2 (ffb) and (ffc) define “computer” and “computer programme” respectively.
- e) The reproduction of literary, dramatic, musical or artistic work otherwise than in the form of a cinematographic film is considered an “infringing copy”. Reproduction in digital medium is something though easy yet difficult to locate owing to technical obstacles. Further, the reproduction of copyrighted work in digital form, due to technicalities and functionalities of the concerned media sometimes is inadvertent, for example storage of copy of work in temporary memory of a system. The Copyright Act needs to address the issues where incidental storage owing to technological process is resulting into loss to creator/author of the content.
- f) The rights of the copyright holder with respect to computer programme have been specifically enumerated along with various other rights relating to other kind of works. These various other rights with respect to other subject matters (for e.g., right to distribution, performance in public, communication to public, etc.) are required to be well explained in the context of digital media.
- g) Chapter VIII of the Act deals with the rights of broadcasting organizations and the performers. This chapter provides for various rights which the broadcasting organization and the performers have in respect of broadcast and performances respectively.
- h) The Copyright Act does not provide for ISP liability directly. Though, Section 51 (a) (ii) may be extended to cover the same. The Delhi High Court, in case *MySpace Inc. v Super Cassettes Industries Ltd.*²⁶ has elaborated upon the fixation of ISP liability and website owners as:

“Section 51(a)(ii), in its first part states that when anyone permits for profit any place for communication of copyrighted work to the public he/she is liable for infringement. MySpace owns a

website where third party users upload and view content. In a sense the appellant is provider of a place, albeit virtual, to communicate various kinds of works. MySpace does enter into a contract with users, but for a limited purpose. The contract does not specify the kind of works users would upload. Users are free to upload whatever content they wish to, without specifically informing MySpace about it. It provides the space freely, and users choose their content for communicating it to the public. What MySpace does is insertion of advertisements through automated processes without going through the content itself. Thus, it cannot be doubted that MySpace permits a place for profit as it definitely generates revenue” (emphasis supplied)

Though, Section 51 (a) (ii) may be used in fixation of ISP liability yet the infringement of copyright in digital forum needs specific and clear provision fixing the liability of ISP as performance of rights in digital media is different in operation as compared to performance of rights in analogous copyright system. The “space” in the basic design of internet has different connotations and contours than “space” in physical sense wherein control over ongoing activities is much more and easier. Further, Section 52(1) (b) of the Act grants immunity to the ISP as intermediaries dealing with “*transient or incidental storage of a work or performance purely in the technical process of electronic transmission or communication to the public*”. Section 52(1) (c) grants similar immunity, however, with exception i.e., “*the person responsible is aware or has reasonable grounds for believing that such storage is of an infringing copy*”. In the digital world, such awareness on the part of ISP is extremely difficult, if not impossible, to prove conclusively.

TPM and RMI have been provided for in the Act, however not in much detail. The Act provides for criminal liability for circumvention of technological measures and tempering with RMI. The maintenance of digital library and multiple uses of copyrighted contents by the users of such libraries on one hand and strict DRM on the other needs to be addressed thoroughly.

Conclusion

The copyright laws, since its inception, have always responded to the technological developments taking place in the society in order to render adequate protection from infringements. The digital

technology, today, poses myriad threats to copyrighted works that it has become imperative not only to screen the copyright in digital forum but also to sound the existing legal system to guard against such ill-effects and fix the liabilities. The operation of copyright in digital environment is completely different from the operation in analogous copyright set-up owing to the technicalities involved in various activities like reproduction, dissemination, storage, etc. and the role played by the intermediaries in such activities.

In this digital age, where digital piracy is becoming a regular phenomenon, it has become absolutely necessary to thoroughly revamp the legal system in India. The analysis of the concerned provisions clearly shows the inadequacy to address the various issues raised by the modern day technological developments. From elaboration on rights of copyright holders in digital medium to ISP liability and now with momentum in robotics, machine learning processes and artificial intelligence issues pertaining to non-human author under copyright regime need to be addressed appropriately. The current copyright structure in India, which has been framed keeping in focus the analogous copyright, despite amendments to incorporate digital elements by and large is still using the old regulatory set-up to combat the new challenges posed by technology. Restructuring the copyright laws to keep it in tune with advancing digital technologies is need of the hour.

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- 6 Section 14 of the Copyright Act, 1957.
- 7 Section 57 of the Copyright Act, 1957.
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- 13 Words/phrases usually underlined or colored differently.
- 14 Examples are Napster, Gnutella, Kazaa, etc.
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- 20 Amended in years 1908, 1914, 1928, 1948, 1967, 1971 and 1979.
- 21 Article 4 of WCT.
- 22 Article 5 of WCT.
- 23 Article 12(2) of WCT.
- 24 Opening lines of Section 14 to Copyright Act, 1957.
- 25 Amendments to Copyright Act, 1957 through the Copyright Act (Amendment) Act in the years 1983, 1984, 1992, 1994, 1999, 2012 and through the Finance Act, 2017.
- 26 236 (2017) DLT 478.