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## DIGITALISATION AND COPYRIGHT TRENDS

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### ABSTRACT

One of the best inventions of the human mind is the development of digital technology. A vast range of opportunities in industries including media, entertainment, communication, advertising, and education have been made possible because of technology. Technology today has merged into our daily lives and can no longer be considered independent. We now have access to a wide range of amenities, including entertainment, education, advertising, and communication. A new age with new dimensions and objectives has been made possible by digitalization, and this new era will bring about a huge shift in how people live.

The introduction to a digital era comes with its own pros and cons. With the internet providing an ease of accessing information of any kind by anyone, it can also possess a threat to the protection of the sources of such information. The ease of access to materials on the Internet has raised serious concerns about copyright infringement. One of the most significant intellectual property rights, known as copyright, refers to the ownership rights that authors and other creators of creative works have. It encompasses creations from, to name a few, novels, paintings, computer programmes, movies, databases, and maps. Without the owner's consent, it has become much simpler thanks to digitalization to copy, duplicate, and sell another person's creative works for profit, and it is more challenging to catch such violations. The rights of the copyright owners or artists have been seriously threatened by this.

One of the biggest dangers to copyright since long has been the Internet. There are many levels of copyright protection for the information that is accessible on the internet. Online news, stories, photos, graphics, e-books, screenplays, videos, etc. are all examples of copyrighted works. It might be difficult to tell whether a work is a copy or a duplication of a protected work due to the abundance of information available on the internet. The idea that information obtained online and in the public domain can be freely copied is a widely held misconception. However, this is not always the case,

depending on whether the government has made the material public, the copyright's term has passed, or the owner has given up their claim.

The internet and technology breakthroughs have many benefits, but they also have drawbacks that cannot be ignored. Copyright infringement has become a simple operation that can be completed in no time or less as a result of technological advancements and easy access to the internet. Technology advancements throughout the digitalization era have put the material and the rights of the copyright owner in danger.

## **INTRODUCTION**

The development of copyright law is a result of technological breakthroughs and the digital age. The transmission and free flow of information or work have become simple and quick thanks to technological innovation. As a result of the internet's numerous legal concerns, the copyright owners face an impending challenge in defending his copyright on a digital platform. Keeping copyright and the internet in balance is one of the biggest issues.

Internet poses a danger to copyright because it is now simple to copy or duplicate information that has been put online. It has become more challenging to distinguish between the original work and the copy due to the development in digitization.

Global access is now simple, quick, and economical thanks to the digital age and technical development. It has benefits that are undeniable, but it also has drawbacks that are equally important to consider. Nowadays, everyone has access to the internet, thus there are no barriers or restrictions imposed on reaching the public thanks to technological advancement. In the modern era, where everything is available online, including computer software, literature, multimedia, and artistic creations, etc, anyone can readily access and download any content that is available on the internet for free. With advancing technology comes along a rise in copyright infringement concerns. Due to their complexity and the fact that the internet poses a danger to and challenge to copyright law, copyright infringement cases have grown more challenging to resolve.

And therefore, it can be said that with the advent in technology, copyright protection faces three major setbacks that it needs to deal with-

The first and the primary problem with the Copyright laws is that it does not contain any meaningful sanctions for dealing with the increasing online infringement of intellectual works

that will occur in the digital age. Online copying is still widely accepted by the public, privacy interests, and legal restrictions, making it challenging to identify. Thus, both possibilities will make it even harder to enforce copyright laws.

The Copyright laws allowance of fair use is the second significant problem with the digital age. Under the fair use framework, it authorises copying of the work for personal use. As a result, it will be possible for anyone to copy copyrighted works for fair use and to publish them online illegally, making it much more challenging for the Copyright laws to prevent such unauthorised use.

The third and most serious problem with the current copyright system is that the copyright laws give a limited definition of a copyrighted work. This means that neither internet protection for copyrighted work nor protection for copyrighted work through court pronouncements exists or is provided.

Therefore, if these problems aren't fixed, the system of intellectual property will be undermined.

Since nothing is permanent and is prone to change, technology has advanced greatly from analogue to digital. In contrast to analogue systems, which take a long time to download and transmit data, users of digital technology now have a growing number of alternatives for recording, downloading, and transmitting data of higher quality in less time as a result of the arrival of the digital era. As a result, more and more works protected by copyright would be vulnerable to infringement, which would be less expensive and harder to stop.

In the 1980s, digital technology largely supplanted analogue technology. While sales of Compact Discs were at an all-time high, sales of analogue photo albums were beginning to decline. Thus, compared to analogue log of transmission in the form of television, radio, and fibre optic cable, digital log of transmission of data was becoming more widespread.

And the primary drivers for this abrupt shift from analogue to digital transmission were the improvement in quality, the reduction in transmission costs, and the rapid capture and transmission of data.

The quick development of technology has had an ongoing effect on how copyright laws operate, as well as broadening their application and subject matter. Although digital technology has given copyright holders the best possible digital copies and expanded their capacity to

duplicate and distribute the works, it has also put their ability to enforce the rights in the online world in jeopardy. It is laudable that developing technologies have allowed for an unparalleled increase in the speed, accuracy, and quality of the distribution and reproduction of digital content.

### **1.1 WHAT IS COPYRIGHT?**

The legal right of the owner of intellectual property is referred to as copyright. The right to copy is the simplest definition of copyright. The only people who have the sole right to reproduce a work are the original authors of that work and anyone to whom they grant permission. Copyright law gives creators of original material the exclusive right to further use and duplicate that material for a given amount of time, at which point the copyrighted item becomes public domain.

A product that is considered creative and that needed a lot of mental effort to make is considered intellectual property and has to be protected against unauthorised replication. Computer programmes, works of art, poetry, graphic designs, musical lyrics and compositions, novels, films, innovative architectural designs, website material, etc. are examples of unique inventions. Copyright is one measure that can be taken to legally preserve an original creation.

A work is considered original under copyright law if it was produced by the author using only original ideas without any copying. A work of this kind is referred to as an Original Work of Authorship (OWA). Anyone who has written an original work immediately owns the copyright to it, barring others from exploiting or copying it. The original owner of the copyright has the option to voluntarily register it if they want to have a stronger role in the legal system should the necessity ever arise.

Not all kinds of work are protected by copyright. Ideas, discoveries, concepts, or hypotheses are not covered by copyright laws. Titles, domain names, slogans, and brand names are not covered under copyright legislation. An original work must be in physical form in order to be protected by copyright. This means that in order for any speech, discovery, musical composition, or idea to be protected by copyright, it must be physically recorded.

The original owner or creator of any work of intellectual property is granted copyright, which is a legal shield that allows them to be protected from the entire world. Legislators thus promote creativity and shield the creator's original work by providing this shield.

Depending on the jurisdiction, a copyright's public law lifespan usually ends 50 to 100 years after the creator's passing. While some nations demand specific copyright formalities before establishing copyright, others accept copyright without a formal registration in any completed work. When a work's copyright expires, it becomes public domain.

## **1.2 HISTORY OF COPYRIGHT**

After the printing press was introduced in Europe in the 15th and 16th centuries, the idea of copyright emerged. Since there was no copyright legislation at the time the printing press was invented, anyone could buy or rent a press and print any text, greatly reducing the cost of producing works. Printers required a steady supply of fresh content since competitors quickly re-set and re-published popular new works. The hefty author fees for new books served as a considerable financial supplement for many academics.

Deep social changes were brought about through printing. The demand for reading material rose dramatically as literacy rates rose across Europe. Because reprints were inexpensive, the public as a whole was made up of a wide range of income levels. Before the introduction of copyright, technical works, like popular fiction, were inexpensive and widely accessible in German-language markets; it has been hypothesised that this contributed to Germany's industrial and economic success.

The low-cost mass market evaporated, and fewer, more expensive editions were published once copyright law was established (in 1710 in England and Scotland, and in the 1840s in German-speaking areas); circulation of scientific and technical information was significantly curtailed.

The idea of copyright originated in England. The Licencing of the Press Act 1662, which required all intended publications to be registered with the government-approved Stationers' Company and gave the Stationers the authority to control what material could be printed, was enacted by the English Parliament in response to the printing of "scandalous books and pamphlets."

Copyright laws permit the preferred exploitation and subsequent financial reward of the results of creative human endeavours, such as literary and artistic output. It is believed that different cultural attitudes, social structures, economic theories, and legal systems are to blame for copyright's development in Europe rather than, say, Asia. Due to the general relations of production, the unique organisation of literary output, and the importance of culture in society,

there was generally no concept of literary property in the Middle Ages in Europe. The latter relates to oral societies' propensity to consider knowledge as the creation and expression of the group rather than as an individual's possession, such as that of mediaeval Europe. However, because to copyright rules, intellectual production is now viewed as a person's product with associated rights.

The biggest takeaway is that copyright and patent rules stimulate the expansion of the universe of creative human activities that can be made into commodities. This is similar to how capitalism caused the commercialization of many parts of social life that did not previously have a direct monetary or economic value.

Not simply literary works but also other types of creative work like sound recordings, films, photos, software, and architecture are affected significantly by the concept of copyright, which has grown to influence almost every modern sector.

The British Statute of Anne of 1709 granted publishers rights for a predetermined time after which the copyright lapsed, and is frequently regarded as the first true copyright law. The statute also made reference to the artist's individual rights. "Whereas Printers, Booksellers, and other Persons, have of late frequently taken the Liberty of Printing... Books, and other Writings, without the Consent of the Authors... to their very great Detriment, and too often to the Ruin of them and their Families:" was stated in the opening. It is said that there is a right to financial gain from the job, and that there is also a right to govern the work, including the right to ensure that its integrity is upheld, according to court decisions and legislative decisions. In certain nations, copyright rules grant the creator of a work an unassailable right to recognition.

In the United States, copyright had to be specifically requested and had a 14-year lifespan at first. The work entered the public domain after the first 14 years, allowing others to use it and build upon it. If the creator so desired, they might apply for a second 14-year monopoly grant.

The history professor Eckhard Höffner contends that the absence of copyright laws in the early 19th century encouraged publishing, was profitable for authors, resulted in a proliferation of books, improved knowledge, and ultimately played a significant role in Germany's rise to power during that century. Copyright laws were relatively late to be enacted in German states. The exogenous differential introduction of copyright in Napoleonic Italy, however, provided empirical evidence that "basic copyrights increased both the number and quality of operas, measured by their popularity and durability."

### **1.3 INTERNATIONAL TRENDS IN DIGITAL COPYRIGHT**

#### **Berne convention for the protection of literary and artistic works, 1886:**

The Berne Convention, which establishes the minimal requirements of protection, is the oldest international convention in the subject of copyright. It is necessary to assemble this convention when creating laws governing literary and artistic works because it lays out essential ideas that are applicable to all people in a way that is fair to all parties interested in the right.

Furthermore, this convention, which has undergone periodic revisions with the most recent revision occurring on September 28, 1979, serves as a model law, prescribing minimum standards of protection relating to author rights and the length of protection and is thus required by the WTO agreement, Agreement On Trade-Related Aspects Of Intellectual Property Rights (TRIPS), for its signatories.

The definition of literary and artistic works, the protected works and the requirements for their protection, the criteria for eligibility for protection, the potential limitation of the protection of certain works by nationals of certain countries outside the union, the right to enforce protected rights, infringing copies, special provisions regarding developing countries, etc., are some of the main provisions of the Berne Convention that must be taken into consideration.

#### **Universal copyright convention 1952:**

The Universal Copyright Convention was first adopted in 1952, and on July 24, 1971, protocols to the Convention were completed in Paris. This Convention aims to promote greater international understanding and facilitate the transmission of works of the human mind.

According to the preamble of this convention, it was reached upon the agreement of the contracting states that a system of copyright protection suitable for all countries and expressed in a universal convention, in addition to, and without compromising, existing international systems, will ensure respect for individual rights and promote the advancement of literature, sciences, and the arts.

The terms of protection, national treatment of nationals of other contracting states with respect to their citizens published and unpublished works, and effective protection of the rights of authors and other copyright owners in literary, scientific, and artistic works, including writings,

musical, dramatic, and cinematic works, paintings, engravings, and sculpture, are all covered by this convention.

### **The WIPO treaties:**

The WIPO Copyright Treaty (WCT), 1996, and the WIPO Performances and Phonograms Treaty (WPPT), 1996, sometimes referred to as the Internet Treaties, make it illegal to get beyond the technological safeguards put in place by writers to protect their works.

A specific arrangement that Berne Convention contracting countries may sign without impairing the Berne Convention is the WIPO Copyright Treaty (WCT), 1996. WCT mandates that the following be covered by copyright in the nations of the contracting parties in addition to requiring that contracting parties apply the provisions of the Berne Convention *mutatis mutandis* with regard to the protection given by WCT:

- Computer programmes, regardless of their mode or form of expression, and
- compilations of data or other material (databases), in whatever format, that are considered intellectual inventions because of the way their contents have been chosen or arranged.

The WCT's Articles 11 and 12 represent significant steps towards more effective copyright protection. The obligation to provide legal remedies against the circumvention of technological safeguards used by authors in the exercise of their rights as well as against the removal or alteration of information, such as specific data that identifies the work or its authors, necessary for the management of their rights, is imposed on the contracting parties by these agreements.

The requirements relating to technological measures and rights management information in connection to the rights of phonogram makers and performers are covered by WPPT articles 18 and 19.

These two agreements fortify the foundation for:

- The outlawing of infringements and attempts to evade technological controls on access to a work protected by intellectual property; and
- the protection of the data's integrity related to copyright management.

The title of the work, the author's name, the name and identifying information of the copyright owner, the information contained in the notice of copyright, the terms and conditions for using



the work, etc. are all examples of copyright management information. In order to hide their actions, infringers provide misleading information to copyright management.

**The TRIPs agreement:**

The most significant and comprehensive international agreement on intellectual property rights is the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). TRIPs were created at the 1994 Uruguay Round of the General Agreement on Tariffs and Trade ("GATT"), which was run by the World Trade Organisation. The most important aspects of TRIPs are its requirement that member nations implement and uphold basic standards for preserving intellectual property rights and its first-ever connection of intellectual property rights to trade in a global intellectual property agreement.

The Berne, Rome, and Paris Conventions are partially adopted by the TRIPS Agreement as it lays out standards for intellectual property legislation. According to this argument, only expressions should be covered by the copyright; not ideas, operational processes, or pure mathematical notions. With the exception of Article 6 bis, which states that "members shall not have rights or obligations under TRIPs Agreement," Article 9 requests that the member nations abide by Articles 1 through 21 of the Berne Convention. Computer programmes and data compilations are discussed in Article 10 as being protected by copyright as literary works.

**Rome convention:**

The Rome Convention, which was signed in 1961, broadens the scope of the Berne Convention by ensuring the rights of performers, sound recording producers, broadcasters, and many other parties in addition to safeguarding literary, artistic, and cinematic works. Together with the International Labour Organisation (ILO) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the World Intellectual Property Organisation is currently in charge of overseeing the convention's administration.

The agreement gave performers, sound recording producers, and broadcasting organisations who are not the creator but have a close connection to a copyrighted work for the first time protection against copyright-related rights. The treaty has 96 contracting parties as of August 2021, with a party being defined as a State that has agreed to be bound by the treaty and for which it is in effect.

In response to new technology like tape recorders that enabled the recording of sounds and

images easier and less expensive than ever before, nations created the Convention.

#### **1.4 DIGITAL COPYRIGHT LAW TRENDS IN INDIA**

The accessibility of materials on the internet has raised serious concerns about copyright violation. The original works of a copyright owner can now be copied, duplicated, and sold without his consent thanks to digitalization, and it is nearly hard to catch such infringement. The downloading and uploading of content to a computer's hard drive as well as the combination of two or more software to generate a derivative work are all examples of copyright violations in cyberspace. Hot-linking is a practise that violates copyright laws since it involves displaying an image on a website by creating a link to the domain that hosts the picture. One of the main causes of copyright violations is software piracy. It entails the unlawful duplication, distribution, rental, and sale of hardware devices that come pre-loaded with illegal or copyrighted software.

The Copyright Act, 1957, which governs copyright in India, has undergone numerous revisions throughout the years to reflect societal changes and to further assure the protection of authors' works. In response to technological advancements in communication tools like broadcasting and telecasting as well as the introduction of new technologies like computer software, the Amendment Act of 1994 was put into effect.

The 1999 modification was made in order to bring the Act into compliance with the copyright standards outlined in the TRIPs agreement. This Act's primary goal is to prevent unauthorised and illegal exploitation of the works of authors and copyright holders. The 2012 revision, which was made to bring the Indian copyright law into compliance with the WIPO treaties of 1996, has since come into effect.

The WIPO Copyright Treaty and WIPO Performance and Phonograms Treaty are both aligned with the Copyright Amendment Act of 2012, which also broadens its provisions to address threats to copyright protection in the digital era. The revised law includes technological protection measures and specific fair use rules that ensure fair use endures in the digital age.

Many author-friendly changes, specific provisions for the disabled, changes easing access to works, and other changes streamlining copyright management have all been enacted as a result of the adjustments. The author of the work is granted special rights under Section 57 of the Act. Second, the right to prevent or seek damages for any distortion, mutilation, modification, or other act related to the said work if such distortion, mutilation, modification, or other act

would be detrimental to his honour or reputation ("Right Against Distortion"). First, the right to assert ownership.

The rights in question are often known as moral rights. Another clause added by the 2012 Amendment is that these moral rights, which were previously excluded, can now be asserted by the author's legal representatives. The Copyright Act's Section 52 was passed in accordance with Article 10 of the WCT, which deals with restrictions and exceptions.

The fair handling of a literary, dramatic, musical, or artistic work (excluding a computer programme) for the purpose of private and personal use, including research, criticism, or review, and the making of copies or adaptations of a computer programme by the lawful owner of a copy of such computer programme from such copy in order to: (1) utilise the computer programme for the purposes for which it was supplied; or (2) make backup copies are all expressly permitted under Indian law.

Along with the improvements made to the copyright legislation, additional author-friendly changes have also been made, including the implementation of specific provisions for people with disabilities, streamlining the copyright administration procedure, improving performance rights, and many others. Without even formally ratifying the WIPO mandate, India achieved one of its key victories by making the necessary changes to comply with the treaties. The Indian judicial system has also taken a distinctive role in defending copyright holders' rights in the digital sphere.

Another piece of legislation that addresses violations of digital copyright is the Information Technology Act of 2000. Online distribution of copyrighted works is a crime under Section 66 of the Act, which carries a maximum sentence of three years in prison and a maximum fine of two lakh rupees.

The "John Doe" order is a relatively recent step that the Indian courts have made to lower the number of instances of digital infringement there. John Doe orders only ask for a very limited amount of information on the accused, whose name is not known at the time the petition is filed. According to Order 39, rules 1 and 2 of the Code of Civil Procedure, 1908, Indian courts have the authority to order "John Doe" with an injunction. All of the aforementioned laws and decrees support the protection of authors' and other right holders' interests in India by dealing with threats made against protected content.

## **1.5 DIGITAL TECHNOLOGY**

The importance of copyright is expanding at the same rate as the quickly expanding technology sector. The most crucial component of legislation for safeguarding technological progress is copyright. Copyright is additionally referred to by some as a technological legacy. It has undergone deliberate modifications to protect the public's interest in innovation, resourcefulness, and creativity while taking into account the kind, extent, and field of technology in question. Its main objective is to provide writers and creators of diverse copyright works with the proper incentives while also making these works available to the broader public.

The harmony that copyright must preserve in order to reward those who come up with inventions and make them available to the general public. And as technology has advanced, this role has grown more challenging because anyone looking for knowledge may now find it with just one click. Since the internet enables both worldwide, lightning-fast distribution and almost instantaneous, high-quality duplication of copyrighted content.

Digitization is one of the most important technological developments in recent years. This is the process of converting compositions into a language understandable by computers. The ability to store compositions in a binary format (a collection of ones and zeros) that can be preserved and shared is referred to as digitization.

Digital technology is the most cutting-edge development in the field on a worldwide scale. Digital media has an impact on copyright work development, transmission, and protection in general. Digitization has made it simpler than ever to modify, replicate, and distribute protected works. The Internet is ushering in yet another age of the digital Age, which is the symbol of the current century. This turning moment is significant in many ways in the long and turbulent history of copyright. Digital content is easy to integrate, alter, mix, and manipulate.

Due to its ability to produce perfect replicas of works protected by copyright at a low cost, digital technology runs the risk of disrupting distribution systems and encouraging the unauthorised use of intellectual property.

## **1.6 CHALLENGES TO COPYRIGHT IN THE DIGITAL WORLD**

Copyright and the internet, multimedia work, social media, and software are the four primary issues in the digital age:

Copyright and internet: For a very long time, the Internet has been one of the biggest challenges

to copyright. On the internet, there are a variety of products that are protected by copyright, including news, stories, pictures, graphics, e-books, movies, and many more. It is challenging to assess whether the work is a duplication or copy of the protected work because of the wealth of information available on the internet. The idea that information obtained through the internet can be freely duplicated is untrue. But this is not the case unless the government releases the data, the copyright's term has passed, or the owner of the copyright has given up his claim.

**Multimedia work:** Text, sounds, music, photos, graphics, presentations, live films and performances, and a host of other categories make up the broad and self-contained idea of multimedia work. The copyright protection is available to multimedia under literary works under software programmes, artistic works including images, cinematographic films, which include films or videos, dramatic plays, sound recordings, which include musical works, and photographs. As a result, the protection of creators' rights under the umbrella of copyright is challenging due to the variety of rights available to copyright owners.

**Social media:** Social media platforms are the most well-known means of bringing people together around the world. On this platform, content that might be protected by copyright is shared. Copyright violations have occurred as a result of the practise of sharing materials on social media, such as photos and photographs. A major factor in these infringements is the fact that all of the incorrect information that is uploaded and made available on social media is free and that people are unaware that such works are protected by copyright. On social media platforms, copyright violations can take the form of: reposting, saving, or sharing materials that are copyright protected without the owner's consent.

**Software:** Software is a collection of computer programmes, instructions, and documentation that assists computer systems in carrying out their functions. The primary cause of copyright infringement, which involves the unauthorised copying and distribution of copyrighted software, is software piracy. Software Piracy includes making a copy and selling it, renting the software, selling computer hardware units with pirated software pre-installed or pre-loaded, and CD-R technology-based software copying.

## **1.6 ADVANTAGES OF DIGITAL TECHNOLOGY IN COPYRIGHT REGIME**

**Easy Reproduction:** The copyrighted items have been digitally transformed, making it simple to reproduce them. But because of the amazing development in these associated technologies, it is now quite simple to duplicate digital data accurately and quickly. With the aid of the

appropriate software and high-speed internet, one copy may thus meet the needs of millions of people.

**Cost Effective:** Digital technologies are proven to be quite affordable for both consumers and the authors of copyrighted information, saving both time and money. Due to the ubiquity of the internet and the low cost of reproduction setups and search prices, the distribution and consumption of copyrighted information through digital media lowers the economic cost of the same.

**Platform for Creation of New Kind of Works:** The development of digital technologies has resulted in the emergence of an entirely new class of "works," such as "multimedia works, computer software, databases, etc.," adding such celebrities to the entertainment industry and revolutionising the work culture of almost all fields using such information and communication technologies.

**Facilitation of Direct Publication by Authors:** With no interference from traditional publishers, the digital medium gives authors a free platform to share their contributions directly. However, in the digital media, authors can directly make their work available to targeted audiences with the intermediaries playing a smaller role than in the traditional method of work dissemination, which involves an intermediary in the form of publishers etc. to provide an adequate platform for the dissemination of the work.

**Ease of Distribution:** Digital technology makes it easy, quick, and affordable to distribute work globally without sacrificing its quality. When information from a single source reaches the recipient(s), the recipient(s) can then spread the information to more recipients using digital networks. When employing internet distribution channels for copyrighted content, users encounter no conventional barriers.

**Faster obtain to Digital Content:** Since the internet is so pervasive, anyone who needs such creations for their own use can quickly and easily obtain them on digital platforms.

## **1.7 DISADVANTAGES OF DIGITAL TECHNOLOGY IN COPYRIGHT REGIME**

**Holder:** The main goal of copyright is to stop "work" from being copied without the owner's consent. As was said above, the digital medium makes it very simple to distribute works protected by copyright; nevertheless, in the absence of tight control, copies of these works are easily made and distributed to millions of users at the expense of the copyright owners. Because

it is so difficult for copyright owners to track down and take legal action against the multitude of people involved in the violation of their copyrighted works, the digital platform enables widespread circulation of the copyrighted works.

**Flexibility/plasticity:** Digital media is flexible, allowing users to easily alter, adapt, modify, or manipulate those works. These digital media's flexibility and plasticity make it seem easy to change and adapt the digital content, but this raises questions for the creators and owners about how their original content will be handled. Any such unauthorised and unwelcome addition or deletion of the original content has the ability to modify its entire meaning, which may not have been the author's intention or goal.

**Caching and Mirroring:** Caching, also known as "mirroring," refers to the practise of saving copies of content from an original content source site (such as a Web page) for later use when the same content is repeatedly requested, eliminating the need to visit the original content source in order to obtain that content. "To speed up repeated access to data and reduce network congestion resulting from repeated downloads of data" is the goal of caching. The duration of this temporary storage of this substance can range from a few seconds to several days. The copyrighted material is potentially in danger from caching because the copyright holders' interests are harmed when the material is duplicated and stored for future use.

**Linking and framing:** In general, linking and framing is a method of connecting documents in an online medium or platform. A link that has "embedded electronic address of another website pointing towards the same" is used while linking. When a user clicks on a specific link, the user is taken to the destination site and is also given the option to view the contents that the site has to offer. Linking that uses "frames" to show linked material on the host website is known as framing. When the linked content is protected by a copyright and the owner of the copyright has not given their consent, the two linking and framing present issues to those owners.

## **1.8 CONCLUSION**

It is undeniably true that technology has helped artists develop and project their works more successfully, but it has also put a threat to the safe transmission and publication of the works. The laws couldn't compete with the internet's limitless capabilities.

However, numerous initiatives have been made at the national and international levels to get beyond the obstacles the internet and other technological tools have erected in the way of copyright protection in cyberspace. Even while recent amendments have brought the copyright

laws more in line with current practises, there are still certain issues that need to be resolved if copyrighted information is to be protected. A society that is aware of copyright and its regulations, tight collaboration with international organisations, and a supportive relationship with the court are all necessary in the current context.

When purchasing content, consumers should exercise caution regarding the author's originality. The attitude of the crowd matters a lot. Given the current situation, customers accept products that are of somewhat lower quality but are offered at a lower price because they are less picky about uniqueness. Due to the accessibility and low cost of this information, whether it be digital or physical, consumers avoid going to court and reporting it. They worry about the drawn-out legal process as well.

The copyright laws need to pay more attention to the digital environment. The author's and the creator's perspectives are somewhat dissimilar as a result of the laws and the real-world circumstances. The speed of technological development makes it impossible for laws to keep up with the infraction. The primary agreement for the reproduction of works and the agreement for their assignment are distinct. The work for hire doctrine did not provide the status of the assigner and assignee of the work, which resulted in infringement of the work. In a similar vein, the open-access of the copyright dubbed copyleft doctrine to some extent face the worrying issue.

Therefore, these issues must be taken into account in order to benefit the general public in the digital space. The major goal is to safeguard the original work despite technological innovation and digitalization since this will make it easier for researchers, students, teachers, authors, and others to identify the original work and obtain the owner's permission to use it.