



AN ANALYTICAL STUDY ON COPYRIGHTABILITY OF GRAFFITI AND STRUCTURED DNA SEQUENCES

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ABSTRACT: The concept of non-Conventional copyrights is and constantly evolving and dynamic area of Copyright law as well as intellectual property law which encompasses a wide range of creative works that might not fit exactly into the definition of the term work as specified in the act, but there are numerous traditional works and other emerging works which are presently not protected under the copyright act, 1957. With the advances in technology, the scope of non-conventional copyrights continues to expand and includes new forms of expression such as virtual reality, artificial intelligence, art forms like graffiti, street art, tattoos, engineered DN sequences, machine-generated works, etc. Though these works may not fall exactly under the definition of the work as provided in the act, they cannot be left alone, as it is very important to protect the non-conventional copyrights as it helps in fostering the national heritage, culture, contributes to the economy, encourages creativity in the market and many more.

There are many ongoing debates and discussions pertaining to the eligibility of these non-conventional works and their protection under the copyright act. Like other forms of IP, it is important for the non-conventional works and effort of the authors in creating such work to be protected and commercialized. At the same time, non-conventional copyrights also offer opportunities for innovation and creativity, providing new avenues for artists, designers, and other creators to express themselves and reach audiences. As technology continues to evolve, the scope of non-conventional copyrights will likely continue to expand, presenting new legal and practical challenges for those working in the field of IP law. Ultimately, the development of effective legal frameworks for non-conventional copyrights will be crucial in promoting creativity and innovation in the digital age. This paper aims at analyzing the copyrightability of the works of Graffiti and Structured DNA sequences.

Keywords: Copyright, Non-Conventional Copyrights, Graffiti, Structured DNA Sequences, Intellectual Property Law.

INTRODUCTION:

In India, the history of Copyright enroute its genesis to the laws of the UK which were incorporated and modified to suit the needs of the society. The first statute relating to Copyright was enacted in the year, 1847 during the regime of the East India Company which had its inspiration from the Statute of Anne, 1710 which created a drastic change in the copyright world. In 1914, the first modern copyright law of India was enacted which was the replica of the Copyright Act, of 1911 of the UK made in compliance with the Berne Convention. Later, after the independence, the Copyright Act of 1957 was enacted which substituted the 1914 act by introducing the controller of the registrar, copyright office, and mechanism to deal with copyright disputes. Till date several amendments made, but still there exist lacunas in the law which secluded non-conventional copyrights. This paper discusses the importance of non-conventional copyrights and in particular, graffiti and engineered DNA sequences.

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NON-CONVENTIONAL COPYRIGHTS:

The term conventional in general means something which is normal or adheres to accepted standards. In the legal scenario, conventional copyrights include those works which are capable of being copyrighted as specifically provided in adherence to the Copyright law. As the term 'conventional' is not defined in the copyright act, theoretically speaking, the Non-Conventional Copyrights include other new works which have the probability of being considered as copyrighted works, but not provided in section 13 of the act. Some of the non-conventional copyrights include conceptual art, graffiti, tattoo work, culinary work, typefaces, engineered DNA sequences, etc.

IMPORTANCE OF PROTECTION OF NON-CONVENTIONAL COPYRIGHTS

Non-conventional copyrights refer to different forms of creative expression that may not fit exactly into the traditional categories such as literature, music, artistic works and other works as specifically provided in the copyright act. These may include things like graffiti, structured DNA sequences, Tattoos, digital art, video games, etc. As the act dates back to 1957, many new developments had taken place later. Despite many amendments later, there still exists works that though may fall under the broad interpretation of the works and are not protected under the copyright law as they do not specifically come under the defined category of work.

It is very important to protect non-conventional copyrights for various reasons, some of which includes, encouraging innovation and creativity, promoting economic growth, preserving cultural heritage, and maintaining a fair and level playing field.

- **Encouraging innovation and creativity:** By providing legal protection to non-conventional works, creators are incentivized to produce new and unique forms of expression. This, in turn, contributes to a more diverse and dynamic creative landscape.
- **Promoting economic growth:** Many non-conventional works, such as software and video games, are major contributors to the economy. Protecting their copyrights ensures that creators can profit from their work, which encourages investment and innovation in these industries.
- **Preserving cultural heritage:** Non-conventional works can be important cultural artifacts that reflect the values, beliefs, and traditions of a particular community or time period. Protecting their copyrights helps to ensure that these works are preserved and made available for future generations to study and enjoy.
- **Maintaining a fair and level playing field:** Without copyright protection, it becomes more difficult for creators to compete with larger, established companies that may have more resources to copy or steal their work. Protecting non-conventional copyrights helps to ensure that all creators have an equal chance to succeed and profit from their work.

Thus, it emphasizes the significance of protecting non-conventional copyright.

RESEARCH PROBLEM:

Non-conventional copyrights refer to works that do not fit into traditional categories of copyrightable subject matter. The major problem is that works of non-conventional copyrights are not protected and recognized, also some of the works have copyrightability criteria. This can lead to legal uncertainty in dealing with non-conventional copyright works.

RESEARCH OBJECTIVES:

- To understand the importance of protecting non-conventional copyright works
- To analyse the copyrightability of Graffiti and Structured DNA sequences
- To ascertain the requirements to be satisfied for obtaining protection under the Copyright Act, of 1957.

RESEARCH HYPOTHESIS:

This paper assumes that there are a few non-conventional copyright works which are capable of being protected under the Copyright Act, 1957 when the provisions are interpreted contextually with the purpose of justifying the intention of the copyright law.

RESEARCH QUESTIONS:

- What are non-conventional copyright works and what is the main discrepancy concerning their protection?
- Whether the works of Graffiti and Structured DNA sequences be protected under the Copyright Act, of 1957?
- What are the requirements to be satisfied by these works to be protected under the copyright act, of 1957?

LITERATURE REVIEW:

1. **Enrico Bonadio** - the research paper entitled "Graffiti, street art and copyright" it focuses on whether unsanctioned street and graffiti art deserve legal protection.
2. **Irving kayton** , "Copyright in living genetically engineered works." it focuses on detailing the living genetical works and its subject of copyright.
3. **Enrico Bonadio and Nicola Lucchi**, "Non-conventional copyright: Do New and Atypical works deserve protection? " it focuses on the new spaces for copyright i.e., whether modern copyright law should be more flexible as to whether new or unconventional forms of expression - including graffiti, tattoos, land art, conceptual art and bio art, engineered DNA etc.

Chapter 1: Graffiti and Copyright

The term 'Graffiti' derives its origin from the Italian word *Graffito* which means incised inscriptions. Graffiti is art in the form of words, markings, and drawings that are spray-painted³ or fixed on the walls, or any other surface usually in a public area. The concept of graffiti is not new in India, as this art traces its origin to the ancient human civilization where the people would draw, write and mark on the walls of caves and monuments. Though the existence of the art is not denied, the law did not consider this act to be protected under the copyright act, of 1957. The first-ever graffiti movement was started in Philadelphia and New York City and evolved as a proper art form.

In the contemporary world, with the growing significance of art, the issue of protecting street art and graffiti often arises. Graffiti in recent times is viewed as attractive for advertising, fashion names, and enhancing the cityscape rather than considered as vandalism. Even the government sometimes hires persons to present graffiti work on the old walls, highways, and other empty streets which enhances the beauty of the underrated place. Graffiti can be used for creating awareness and social activism to educate people through a creative art form. Street art includes many murals of which, graffiti is one of the prominent and most renowned artists. Moreover, street art has grown in popularity. Owing to their rising popularity, well-known street painters like Banksy frequently have their works on items as varied as posters, clothing, bags, mugs, and other household items, furniture, canvases, and prints are all available online and in well-known street markets. They are also more frequently commissioned and utilized as the background for TV shows, commercials, music videos, and product advertisements.⁴

³ Seres Lu, The struggle between graffiti and street art, QUARTZ, Graffiti vs. Street Art (columbia.edu)

⁴ Enrico Bonadio, Nicola Lucchi, Non-Conventional Copyright - Do New and Atypical Works Deserve Protection?, (Edward Elgar Publishers, 2018)

The above transition of graffiti art into commercialized work emphasizes the importance of its protection and, the skill & hard work of the authors creating such magnificent art. The Copyright Act, of 1957 and the International Berne Convention is primarily concerned with protecting the work and the interests of the author creating the work. But, as per section 13 of the copyright act, the work of graffiti is not protected as other works. Even the countries signatories to the Berne Convention have different opinions on protecting graffiti and street art under their respective copyright laws.

GRAFFITI AND COPYRIGHT: INDIAN CONTEXT

The Copyright law in India is governed through the Copyright Act of 1957 which derived its significant context from the UK laws and was modified according to the needs and requirements of Indian society. Though copyright law is evolving through the game of the technical world, there still exist a few rigid parameters in terms of the works for which the copyright is granted. Most of the laws in India are replicas and improvised versions of the pre-existed UK laws, but laws relating to the copyright which protects the work of the nation should stand rooted in its history and culture.

The present copyright act, 1957 provides protection only to those works as specified in section 2(y)⁵ which includes literary, dramatic, musical, artistic, cinematograph film, and sound recording. Now, to protect graffiti under copyright law, it has to fall into any of the above-mentioned categories. The nature of graffiti can be categorized as an artistic work, but to consider graffiti as an artistic work, it has to comply with the definition of artistic work as provided under section 2(c) of the act.

Before looking into the parameters of section 2(c), it is important to check whether the work fulfils the basic criteria of the copyright laws which include originality, skill and labor, and fixation into a tangible medium.

(i). Originality:

The primary requirement for any work to get the protection of copyright is the originality of the work. Though the term originality is not expressed or defined in the act, it is understood through the judicial interpretation provided in *Eastern Book Company and Ors. vs. D.B. Modak and Ors.*⁶, where the Supreme Court explained that, for a work to be considered original it must originate from the author himself and should not be copied from any other work. It also clarifies that for a work to be original, it is not required to be in novel form, but rather the original expression of the work by the author.

The work of graffiti by the author performed on the walls or any other medium generally contains different expressions. Though the theme of the work could be similar, the way it is presented has to be different in order to avail the protection as a copyrighted work. Thus, the graffiti work has to be originally made by the author himself.

(ii). Skill and Labour:

The Copyright law considers skill, labor, and time invested by the author as the one the important aspects in granting the protection of the work. As explained by the court in *Fiest Publications Inc. vs. Rural Telephone Service Co.*⁷, the work should contain the skill and labor invested by the author, the work has to be independently made by the author himself, and it should possess a minimal degree of creativity in the work.

Similarly, as in the case of graffiti, the author invests some sought of skill, labor, and time in creating the work, because the art involves drawings, marks, and words through the way of paint sprayers which cannot be made without possessing the minimum skill, creativity, and labor. Thus, graffiti satisfies the criteria of involving skill and labor in creating the work.

(iii). Fixation:

The fixation of the work is given prominence because it assists in determining if there exists originality or if the work can be fixed into any tangible medium to communicate the work to the public. In graffiti, the art is fixed to the walls of the streets, roads, etc. As sometimes the work is presented on the walls which might be removed by the respective owner of the wall, making the work too short life in its medium. But this ephemeral nature of the work shall not act as a hindrance in protecting the work.

⁵ Copyright Act, 1957, section 2(y), No. 33, Acts of Parliament, 1957 (India)

⁶ Eastern Book Company and Ors. v. D.B. Modak and Anr. (2008) 1 SCC 1.

⁷ Fiest Publications Inc. vs. Rural Telephone Service Co., (1991) 499 U.S. 340

Moreover, as the nature of fixation is not specifically determined, the temporary fixation of the work does not devoid the probability of the work getting copyright protection.

Graffiti satisfies all the three important requirements of a work to be copyrighted, now in order to get protection under the Copyright Act, of 1957 it should fall under any of the works as mentioned in section 2(y) of the act. With clear reference to the nature of the work, it can be considered artistic work, but it should comply with section 2(c) of the Copyright Act.

Section 2(c) of the Copyright Act, 1957:

The Copyright Act defines the term ‘artistic work’ under section 2(c)⁸ of the act which includes painting, sculpture, drawing, engraving, photograph, architecture work, or any other work of artistic craftsmanship. The definition does not include the work of graffiti or any street art. But the last part of the definition mentions any other work of artistic craftsmanship, which is not explained clearly as to what artistic craftsmanship is or what falls under it.

Graffiti is one such art form finding its roots in ancient civilization which definitively includes the skill and craft to make such work. Though the artistic merit is not given much prominence, the originality and minimum level of creativity are satisfied in graffiti. Though there were no serious contentions raised for providing copyright for graffiti, the growing significance clearly emphasizes the need of protecting such artwork.

➤ Any other work of artistic craftsmanship

The last part of section 2(c) mentions that any other work of artistic craftsmanship shall also be considered under artistic work. As the statement is not clearly defined and is inclusive in nature, it demonstrates the intention of the legislature to include other forms of art apart from what is specifically provided. By applying the contextual rule of understanding, it is inferred that the legislature intends to protect all forms of art which include craftsmanship. Graffiti is an art form that requires a lot of craftwork; thus, it possesses a great chance of falling under section 2(c) of the act.

Hence, with all due explanation above, it is evident that, though graffiti is non-conventional copyright and not expressly provided in the copyright act, it is impliedly inferred to fall under the category of any other work of artistic craftsmanship, which provides the probability of graffiti being protected under the copyright act, 1957.

Chapter 2: Structured DNA Sequences and Copyright

In the recent world scenario, technological advancement has brought numerous changes, especially in the field of biotechnology. Intellectual property and Biotechnology are closely interlinked as it often involves the creation of new systems, process, and products that are required to be protected through different forms of intellectual property rights. The most discussed IPs relating to biotechnology are patents and copyright. The stand of India on patenting biotechnology is complex and continuously evolving as it aims at striking the balance between the interests of the invention and public policy. This field involves great public interest; hence it is important to regulate distortion or manipulation of biotechnological works.

Genetic Engineering is highly emerging and is also popularly called recombinant DNA technology involving different methods and techniques to restructure different genetic material from biological species and create a hybrid DNA that can be introduced into organisms. When these works are new inventions, they can be protected under patents. This paper analyses the protection of these structured DNA sequences by way of copyright instead of patents. Though the concept of protecting DNA sequences through copyright is not new, it was first put forward in 1982 in a review article published in George Wahington Law Review.

⁸ Copyright Act, 1957, Section 2(c), No. 33, Acts of Parliament, 1957 (India)

Structured DNA sequences⁹ refer to regions of DNA that have a particular arrangement of nucleotides that give rise to a specific structure. These structures can have important functional roles in various biological processes, such as gene regulation, DNA replication, and DNA repair. Overall, the structural diversity of DNA sequences allows for a wide range of functional roles and understanding these structures can provide insights into biological processes and disease mechanisms.

Different countries have contradicting opinions relating to the copyright protection of engineered DNA sequences. Though the Berne Convention unites all the foundational principles for granting the copyright, this area of genetic engineering and DNA sequences is not much dealt with by the way of copyright law until the 1980s. Until then, the field of technology was more inclined towards protection under patent law, and not much emphasis was given to its copyright protection. In the US, with the judicial interpretations of reversing the protection of patent law, a wider scope for granting copyright protection to genetic engineering was observed.

STRUCTURED DNA SEQUENCES AND COPYRIGHT: INDIAN CONTEXT

Structured DNA sequences are one of the important components in genetic engineering which are composed of a particular arrangement that gives a specific modified DNA structure. This seems to be concerned more with the process and result i.e., the product, and hence is generally presumed to be protected under patent law. But there is also a significant amount of debate surrounding the ethical and social implications of genetic engineering. As such, certain restrictions and regulations may apply to the development and commercialization of genetic engineering technologies in India.

Moreover, looking at the history of India in dealing with the patenting of health care as in the case of *Novartis AG vs. Union of India*¹⁰, shows the priority of the public interest. However, the intellectual property and the interests of the persons creating it cannot be ignored and, the work of Molecular biologists and Genetic engineers should be protected.

Though the concept of protecting DNA sequences through copyright is not new, it was first put forward in 1982 in a review article published in *George Washington Law Review*. In India, copyright laws are governed through the Copyright Act, of 1957 which provides the criteria for the grant of copyright and specifies the works to be protected under the copyright. Therefore, the structured DNA sequences should fall under any of the work as specified under section 2(y) of the act which includes Literary, dramatic, artistic, musical, sound recording, and cinematograph film. When all the components of genetic engineering are ascertained, it can be possibly fitted into literary work, provided under section 2(o) of the copyright act. Apart from section 2(o), it is important to check whether the work fulfils the basic criteria of the copyright laws which include originality, skill and labour, and fixation into a tangible medium.

(i). Originality:

The copyright law clearly states that work to get copyright protection should be original. Any work which is copied from other copyrighted work is considered an infringement, hence the notion of originality as a criterion for copyright protection becomes important. As there is no particular standard for determining the originality of the work, the court explains that the work has to originate from the author himself and not be copied from anywhere. In *R.G. Anand vs. Deluxe Films and Ors.*¹¹, the court held that copyright protection can only be granted to works that are original and not copied from other sources. It was also held that copyright is not granted to ideas, but only to the expression of those ideas.

Here, the structured DNA sequences made by the microbiologist or genetic engineer involve the combination and synthesis of different genetic materials to create a new DNA sequence that can further be embedded into an organism. This work involves originality in creating such new work. Hence, structured DNA sequences satisfy the criteria of originality.

(ii). Skill and Labour:

The Copyright Act recognizes the importance of skills and labor that go into creating such works and provides for the protection of the rights of the creators. the law considers skill, labor, and time invested by the author as the one the important aspects in granting the protection of the work. As explained by the court in *Satyam Infoway v. Siffynet*

⁹ Benjamin R. Jack, Sean P. Leonard, Predicting the Genetic Stability of Engineered DNA Sequences with the EFM Calculator, *ACS Synth. Biol.* 2015, 4, 8, 939–943

¹⁰ *Novartis AG vs. Union of India*, (2013) 6 SCC 1

¹¹ *R.G. Anand vs. Deluxe Films and Ors*, AIR 1978 SC 1613

*Solutions*¹², the database compilations are original works and are entitled to copyright protection. The court recognized that the creation of a database required considerable skill, labor, and investment and that unauthorized use of a database amounted to infringement of the owner's rights.

In the present case, the DNA sequences involve the creative decision to be taken by the synthetic biologist regarding which the core components must be modelled and redesigned to satisfy the required performance criteria which involve great skill, labor, and time being invested in the work thus satisfying the component of skill and labor.

(iii). Fixation:

The criteria of fixation of the work become highly significant as it helps in communicating the work to the public because when the work cannot be expressed in any tangible form, it is impossible to determine whether it falls under any of the copyrightable criteria. The fixation requirement should also be easily met by designed DNA sequences as DNA is composed of these four chemical nucleotides and "possesses definite sequences of nucleotides that can easily be determined; copies of DNA may be synthesized routinely and in practically unlimited quantities; and molecular DNA. All these are in writing and these specifications noted instruct the cells to work accordingly.

Hence, as the Structured and engineered DNA sequences are fixed in a tangible medium, they are capable of being protected under the copyright act, of 1957.

Section 2(o) of the Copyright Act, 1957:

The Copyright Act defines the 'literary works' under section 2(o)¹³ of the act which includes computer programs, tables, and compilations including computer databases. The definition is comprehensive in nature and all kinds of databases.

There are three possible interpretations for including the structured DNA sequences under the literary work¹⁴, the first one tries to draw an analogy between the computer programs and DNA sequences as the genetic information encoded in the form of a biological computer program. As computer programs are considered literary works, even the so-considered biological computer program has greater viability to be protected under literary works of the act.

Secondly, as the process of genetic engineering include the proper selection, combination, and arrangement of the gene sequences, it is to be considered an original work under the category of 'Compilations' which is a literary work.

Thirdly, the structured or engineered DNA sequences can be considered as general literary work as it includes a proper set of instructions in writing which are given to a biological machine and hence is eligible for copyright protection.

With the purposive interpretations of the terms, computer databases, and compilations the scope of the works to be included in it can be expanded. Though in the current practice, genetic engineering and DNA sequences are not protected under the copyright law, it has a huge possibility to fall under the category of 'literary work' of the Copyright Act, of 1957.

CONCLUSION:

In this paper, the importance of non-conventional copyrights, and the analysis of the copyrightability of graffiti and structured DNA sequences are discussed. Intellectual Property and Non-conventional Copyrights are continuously evolving and transforming which denotes the growing significance of protecting these works. One of the key challenges with non-conventional copyrights is that they can be more complex than traditional copyrights, as they often involve questions of ownership, derivative works, and fair use. Because these forms of expression are relatively new, there are often few legal provisions and precedents to follow and apply the same for their treatment under copyright law. As a result, there is ongoing debate and litigation surrounding the protection of non-conventional copyrighted works. Despite

¹²Satyam Infoway v. Siffynet Solutions, 2004 (3) AWC 2366 SC

¹³ Copyright Act, 1957, section 2(y), No. 33, Acts of Parliament, 1957 (India)

¹⁴ Enrico Bonadio, Nicola Lucchi, Non-Conventional Copyright - Do New and Atypical Works Deserve Protection?, (Edward Elgar Publishers, 2018)

these challenges, non-conventional copyrights are an important and evolving area of intellectual property law, as they reflect the changing nature of creative expression in the digital age.

Graffiti is one such art with its origin being from the ancient human civilization, and the temporary nature of the fixation of the work and social stigma attached to it had undervalued the work and no protection is provided as other artistic works. But when the provision of section 2(c) i.e., artistic work of the act is interpreted as per contextual understanding, it provides scope for the graffiti to be included in the purview of art for which the copyright act grants the protection. Similarly, structured DNA sequences which are properly understood as genetic engineering is one such debatable work for which the usual interpretation of the provision is devoid the protection.

Rather, section 2(o) i.e., the literary work should be understood by applying the purposive interpretation, wherein the DNA sequences can be fitted into either computer databases or compilations of the literary work.

Hence, the judicial interpretations should emphasize the importance of protecting the non-conventional copyrights and provide a way ahead by interpreting these works to include other works which serve the purpose of enacting such Copyright Act.

SUGGESTIONS / RECOMMENDATIONS:

- The Copyright act can be amended as to provide wide scope for the non-conventional copyrights to be included under this act.
- All the traditional arts and modern art should be recognised through flexible provisions and liberal interpretation of the act.
- The work of graffiti and street art can be included under the purview of section 2(c) of the Copyright act, 1957.
- To include the Structured DNA sequences as a part of section 2(o) and recognise them as the literary work.

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