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Intellectual Property Rights in the world of NFT's and the Metaverse

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This paper aims to study the application of intellectual property rights in the context of growing technological advancements, specifically non-fungible tokens (NFTs) and the metaverse. First, the paper attempts to explain the underlying blockchain technology that is involved in these systems, and the concepts of NFTs and the metaverse: their meaning and purpose. Once that has been outlined, it explores how intellectual property rights play out in a virtual space, and whether their real-world application translates similarly to the internet. It asks the question of what one acquires when one buys an NFT, and whether one acquires the associated IPRs in the assets. It also discusses whether only the owner of the copyright would have the rights to sell an NFT of their asset, or can any third person do the same. It further proceeds to outline the possible hypothetical outcomes of cases that are being brought up in the field in the absence of substantial existing litigation. The paper then introduces the concept of the metaverse and lays out the role of NFTs within the metaverse. It studies the vision for IPRs in this increasingly complex situation of NFTs being used for trading within the metaverse: who owns the IPRs to the software, and who owns them to the art, real estate, and miscellaneous goods created in the metaverse. The paper concludes by saying that until targeted legislation is introduced for the field, existing legislation will have to be interpreted accordingly to accommodate technological progress. While it is certain that NFTs do not automatically come with IPRs, only subsequent judgments will guide how IPRs function in the virtual space (including the metaverse) as regards the other questions.

Keywords: *metaverse, intellectual property rights, NFT, virtual space, blockchain.*

INTRODUCTION

The world of technology moves in tandem with time. It waits for no one, is dynamic, and constantly evolving into a more complex being. It moves fast, leaving no choice for the rest of the world but to catch up, adapt and accommodate the increasingly fast-paced technological changes within the existing social institutions. The world of law is no exception to this. With every new technology comes a new legal challenge. However, most Courts can exercise flexibility in interpreting existing legislation to accommodate advancements in technology till new legislation can be enacted.

This paper aims to explore how intellectual property rights adapt in the world of such technological progress, particularly in the context of NFTs and the metaverse, which are still developing concepts. We are quickly moving towards a future of an alternate truth, living our lives online as much as offline, if not more. We are using digital money for buying and selling goods all around the world, all while sitting in the comfort of our homes. We have apps for practically everything, ordering food, cabs, services, you name it. With the coming of ideas such as the metaverse, the line between reality and virtuality will be more blurred than ever. People are buying NFTs using cryptocurrencies, a new species of digital assets to build their portfolios. This raises a multitude of questions. It is crucial to first understand these technologies before one dives into answering the legal questions of the rights and liabilities that come with them. What is a blockchain, the technology behind NFTs and cryptocurrencies? What is an NFT and what exactly is it that you get when you buy one? How closely would the metaverse imitate the real world? The aim is to understand these questions, and then explore how intellectual property rights would fit in this structure of virtual reality and of a life that is going to be lived increasingly on the internet.

WHAT IS A BLOCKCHAIN?

The word 'blockchain' has seen an exponential upsurge in its use over the past couple of years. It is often heard when people talk about cryptocurrencies, and it has swiftly taken over the fin-tech sector. The first question that needs to be answered, therefore, is what exactly one means

by blockchain technology. In layman's terms, a blockchain is simply a ledger, a digital database to record important information.¹ It is the technology behind cryptocurrencies such as bitcoin and ether, and it differs from a standard database in the way it stores information. For this paper, it will suffice to know that a blockchain stores data in such a form to eliminate the need for an external third party, thereby significantly reducing the risk of the data being tampered with or hacked into. Every piece of new information is encoded into a separate 'block,' and all the blocks connect to form a chain. If a single block is altered, none of the other blocks is affected and the point of interference can easily be located. It thereby provides a secure and transparent network for numerous digital transactions, such as dealing in cryptocurrency, smart contracts, or NFTs. A blockchain can store tokens, which are digital assets that represent the location of the block within which is contained a digital authenticity certificate for the actual asset. Thus the tokens themselves are not the asset, they simply represent one.²

WHAT IS AN NFT?

There are two kinds of tokens: fungible and non-fungible (NFT). If a token is fungible, all of its units are equal in value, and therefore, they can be used as a medium of exchange. Every non-fungible token, on the other hand, is unique and therefore cannot be used interchangeably.³ NFTs leverage blockchain technology to record and authenticate the ownership information of assets, which often comprise digital art, such as songs, digital paintings, or cartoons, or a digital representation of physical art, such as scans of photographs or paintings, etc. The first few

¹ Adam Hayes, 'Blockchain Facts: What Is It, How It Works, and How It Can Be Used' (*Investopedia*, 27 September 2022) <<https://www.investopedia.com/terms/b/blockchain.asp>> accessed 04 November 2022

² Farah Mukaddam, 'NFTs and Intellectual Property Rights' (*Norton Rose Fullbright*, October 2021) <<https://www.nortonrosefulbright.com/de-de/wissen/publications/1a1abb9f/nfts-and-intellectual-property-rights>> accessed 04 November 2022

³ Elizabeth Ferrill et al., 'Demystifying NFTs and Intellectual Property: What You Need to Know' (*Finnegan*, 10 May 2022) <<https://www.finnegan.com/en/insights/articles/demystifying-nfts-and-intellectual-property-what-you-need-to-know.html>> accessed 04 November 2022

documented NFTs included a set of digital cat cartoons called 'CryptoKitties,' minted and sold by Dapper Labs⁴, and another set of pixelated images called 'Cryptopunks.'⁵

NFTs are essentially unique tokens that provide authentic and verifiable proof of ownership over an asset, containing the metadata associated with the asset encoded within a smart contract that forms part of the NFT. The copy of the asset/artwork is included within the NFT through a link or a digital copy. The smart contract further contains all the relevant information about the asset that the NFT represents, along with any rules and rights that come with it, and any agreement of royalties accruing to the seller on the resale of the NFT.⁶ Since they use blockchain technology, they are secure and cannot be edited, and therefore make perfect ownership proof.

However, owning an NFT does not equate to ownership of the asset as well, unless the seller specifies otherwise. They have often been said to resemble limited edition artwork, signed physically by the artist and containing a unique print ID. The NFT here acts like the artist's digital signature, and the code within the smart contract is the unique print ID that grants it its authenticity. What the buyer buys is essentially a copy of the artwork which is unique, or the metadata associated with it, as no other authenticated copy quite like the one exists.⁷ Valuable, the NFT platform that minted Jack Dorsey's first tweet, stated thus: "Owning any digital content can be a financial investment, hold sentimental value, and create a relationship between collector and creator. Like an autograph on a baseball card, the NFT itself is the creator's autograph on the content, making it scarce, unique, and valuable."⁸

NFTs AND INTELLECTUAL PROPERTY RIGHTS

A person's labour of the mind is governed by their intellectual property rights. Any creative work, invention, or idea that originates from them belongs solely to them according to the

⁴ Farah Mukaddam (n 2)

⁵ Andres Guadamuz, 'Non-fungible Tokens (NFTs) and Copyright' (*World Intellectual Property Organisation*, December 2021) <https://www.wipo.int/wipo_magazine/en/2021/04/article_0007.html> accessed 04 November 2022

⁶ *Ibid*

⁷ Farah Mukaddam (n 2)

⁸ *Ibid*

principles of natural justice, and they may license it out for use by others. These rights include copyrights, trademarks, patents, etc. which one acquires over their intellectual property, and are generally widely accepted internationally. Since these creative works are now increasingly being dealt with in the form of NFTs, it begs the question of which of these rights, if any, get transferred to the buyer when they buy an NFT which represents some kind of art or creation.

Logic dictates that a buyer would not acquire any intellectual property rights that the creator would have. This is because when a person buys an NFT, it is not the asset that they buy, but more so a digital, albeit unique, copy of it, or the data associated with it. The rights will still accrue with the original creator or owner of the work. For example, Twitter's former CEO Jack Dorsey sold his first-ever tweet for USD 2.9 million, but the copyright remained with him. The buyer did not acquire any rights to reproduce the tweet on any merchandise or use it in any other form whatsoever.⁹

Technically, the rights themselves can be represented by an NFT if the owner so wishes, but it is yet to be decided whether such a form of transferring one's rights would be legal or not.¹⁰ For example, in India, under the Copyright Act, a copyright owner may transfer their rights in two ways: by assigning it, or by licensing it. According to Section 18 of the Copyright Act of 1957, the assignee, once assigned the copyright or certain rights associated with the copyright, is treated as the owner of the copyright in respect of those rights.¹¹ Section 19 of the Act lays down the method of assigning these rights and says that it will only be valid if the rights are transferred in writing and signed by the owner or his agent.¹² Further, Section 30 also states that the owner may grant a license to exercise the copyright in writing by him or his duly authorized agent.¹³ Similarly, in the US and the UK also, the copyright can only be transferred if it is in writing and signed by the owner or on behalf of them by their duly authorized agent.

⁹ *Ibid*

¹⁰ Andres Guadamuz (n 5)

¹¹ Copyright Act 1957, s 18

¹² Copyright Act 1957, s 19

¹³ Copyright Act 1957, s 30

Amid these legal provisions, it cannot be determined whether the rights can be transferred through an NFT or not. The legislation, if taken literally, negates this view. However, if it were to be interpreted in the context of technological advancements, a case could be made that if an owner themselves encoded within the smart contract that they wished to transfer their intellectual property rights to the buyer of the NFT, it could amount to their digital signature, a counterpart of what is demanded under Sections 19 and 30 of the Copyright Act, 1957. However, by itself, the NFT does not come with the intellectual property rights associated with it, as the asset ownership still rests with the creator/owner.

Another aspect that comes into play is that if the NFT does not itself come attached with the rights, and if someone else other than the owner of the work mints it as an NFT and puts it up for sale, whether it would infringe the copyright of the owner or not. Anyone with sufficient technical prowess can mint an NFT nowadays, and there have been numerous instances of art being turned into an NFT and put up for sale without the artist's knowledge. This question was highlighted in April 2021, when an NFT of a Basquiat drawing titled 'Free Comb With Pagoda' was presented for sale, and the sellers had offered that the buyer would have the right of destroying the physical copy of the drawing once a digital copy had been obtained. Since the drawing was still protected under the copyright laws of the US, wherein taking a photograph of a work intrudes on a person's copyright, the NFT could have potentially been a copyright infringement.¹⁴

The infringement of copyright works along certain set principles, more or less, around the world. Summarily, the infringer must have used a considerable portion of the copyrighted work without the authorization of the owner for commercial purposes i.e. trading it to the detriment of the owner. Section 51 of the Copyright Act of 1957 lays down the criteria for copyright infringement and sums up that any person who, without a license or against the conditions of the license, acts in a manner that violates the exclusive rights of the copyright owner, for

¹⁴ Nicholas O'Donnell, 'No, You Probably Can't Sell Your Basquiat As An NFT' (*Apollo*, 12 May 2021) <<https://www.apollo-magazine.com/basquiat-nft-intellectual-property-copyright/>> accessed 04 November 2022

commercial or trading purposes, or communication of the work to the public, would be liable for copyright infringement.¹⁵

Two views, therefore, could be taken as to the legality of an NFT being put up for sale by someone who does not own the copyright of the asset. The seller wishes to publicize or communicate the work to the public, or at the least, includes a link within the NFT that takes the buyer to an authenticated digital copy of the asset. The seller further makes money off of that copy of the asset, albeit indirectly, not to say an exorbitant amount of it since NFTs are notoriously known to be sold at unreasonably high prices. For example, a digital artist named Beeple sold his work titled 'Everyday: The First 5000 Days' for a whopping sum of USD 69 million. The digital copy of the asset could count as the reproduction of the copyrighted asset, and under copyright law, only the copyright owner has the exclusive right of reproduction, or to grant a license for the same. All these facts combined could account for the infringement of the owner's copyright. This view has recently been favoured by the Chinese courts. In April 2022, a cartoon of a tiger receiving a vaccine shot was minted as an NFT and sold. The original creator of the NFT had exclusively licensed the art to the plaintiff in the case. A third person, who did not have any rights over the cartoon, minted the NFT and put it up for sale. The plaintiff (licensee) sued the defendant company, which was the platform that had allowed an unverified with no rights over the art to mint and sell the NFT via their website, before the Hangzhou Internet Court. The Court ruled that NFT platforms would be liable for copyright infringement if it allows a non-licensed party or someone who does not hold the copyright of the asset to sell an NFT of the same on its platform. It was further held the right of selling the NFT of a copyrighted work rests with the copyright holder only.¹⁶

The other case to be made is that granted the fact that the seller profits through the sale of the NFT, at the end of the day, an NFT is not an asset at all, but simply a string of code. The buyer acquires no rights in the actual asset, and the exclusive rights of sale or reproduction remain

¹⁵ Copyright Act 1957, s 51

¹⁶ Xuemin Lu, 'China Copyright Infringement Case: China Issues First Court Ruling on NFTs' (*Questel*, 6 June 2022) <<https://www.questel.com/resourcehub/china-copyright-infringement-case-china-issues-first-court-ruling-on-nfts/>> accessed 05 November 2022

with the copyright owner. When the asset itself is not what has exchanged hands, it technically does not amount to copyright infringement. The code could, at best, be viewed as the reproduction of the asset, and even then not significant enough to count as copyright infringement.

One of the primary exceptions of copyright infringement is the fair use of the art. Fair use, in its turn, has been defined differently in different countries. For example, in India, Section 52(a) of the Copyright Act states that it shall not be an infringement of copyright if there is a fair dealing with any work, other than a computer programme, for personal or private use such as research, criticism or review of the work or any other work, or the reporting of current affairs.¹⁷ Similarly in the US, Section 107 of the Copyright Act, of 1976 states that reproduction of the work for purposes such as criticism, commentary, reporting of news, teaching, research, etc. shall not be an infringement of one's copyright. The factors that guide whether an unlicensed use of copyright shall constitute its infringement or not include the purpose for which the work was recreated, whether it is used for profit or non-profit, the extent to which it is reproduced, etc.¹⁸ On 5 April 2021, the United States Supreme Court in the case *Google LLC v Oracle America, Inc.* held that the replication of a few lines of code by Google to create a new and transformative program constituted fair use of the code under copyright law.¹⁹ What counts as fair use, however, will depend on the facts of each case. Therefore, it can't be said for certain whether an NFT can escape the liability of copyright infringement under the guise of fair use.

THE INTERSECTION OF THE METAVERSE, NFTs, AND INTELLECTUAL PROPERTY RIGHTS

The metaverse, unlike NFTs, is still more of a concept and is continually developing. It is a complex network of 3D, virtual worlds that come together to emulate the real world as we know it.²⁰ Theoretically, anything that a person would be able to do in the physical space, they would

¹⁷ Copyright Act 1957, s 52(a) (India)

¹⁸ Copyright Act 1976, s 107 (USA)

¹⁹ *Google LLC v Oracle America, Inc* [2021] 593 US [SC]

²⁰ Andy Ramos, 'The Metaverse, NFTs and IP Rights: To Regulate or Not To Regulate?' (*World Intellectual Property Organisation*, June 2022) <https://www.wipo.int/wipo_magazine/en/2022/02/article_0002.html> accessed 05 November 2022

also be able to do in the virtual space through the metaverse, and much more conveniently too, right from the comfort of their homes. They would be able to interact with other virtual players, visit places, buy land and other things, and build an entire virtual life for themselves. While the existing virtual reality technology is mostly utilized in video games or isolated simulations, the vision for the metaverse is quite a lot bigger than that. What is aimed for is a whole new world, for people to develop a sort of dual life, which implies that the metaverse would come with all that makes life function smoothly in the real world: including the law, the rights, duties, and liabilities of people, other social and administrative institutions, etc. While the structure of such institutions may differ largely from those we see around us, the purpose will remain the same.

Since the domain of intellectual property rights is not some tangible object but the fruits of a person's thoughts and brainpower, they should logically operate in much the same way in the metaverse as in the real world. Therefore any art created in the metaverse, any businesses or brands, any inventions, etc. must be governed by intellectual property rights, and thus be owned by whoever creates them not in the real world, but in the virtual world. Therefore, while the copyright of the software and the computer program will remain with the programmers who build the metaverse, the copyright of what users create within the metaverse must remain with them.

Within this paradigm, NFTs will have a huge role to play in the trading of goods. Since each NFT is unique and provides an authenticated certificate of ownership, with almost no risk of fraud and interference by third parties, assets within the metaverse such as real estate, paintings, etc. can be sold as NFTs. This NFT will act as proof of ownership, and the exclusive right to that place or thing will be held by the owner of the NFT.²¹ Because NFTs leverage blockchain technology, once a sale is recorded, it cannot be edited, which makes it the perfect tool to verify ownership in the metaverse. As regards the intellectual property rights associated with these NFTs, they should work in the same way they do in the real world. An NFT is not an asset, but merely a unique digital copy that represents that asset. The intellectual property rights to those

²¹ Lokesh Rao, 'Metaverse Basics: How to Enter, Importance of NFTs and Future Use Cases You Should Know' (*Financial Express*, 21 March 2022) <<https://www.financialexpress.com/blockchain/metaverse-basics-how-to-enter-importance-of-nfts-and-future-use-cases-you-should-know/2466336/>> accessed 05 November 2022

assets must remain with the original creators. Say someone creates a painting within the metaverse. If someone were to buy that painting, they would buy it as an NFT, which will act as proof of ownership. While NFTs can't be duplicated, the buyer would be the only person to hold that asset within the metaverse, but the intellectual property rights associated with the painting will remain with the user who created the painting.

CONCLUSION

Even as this is being written, the understanding of NFTs and their role in the metaverse is being expanded. There is as of yet a dearth of objective legal opinions on the matter as the ongoing litigation in the field has not yielded any definite answers. As with much of the field itself, the legal questions are also dealing with hypotheticals right now. Yet this much is clear: when you buy an NFT, you do not automatically gain the intellectual property rights associated with the asset, since what you buy is not the asset (unless otherwise specified), but the metadata associated with it. If the seller wishes to transfer the rights as well, it needs to be done in writing, duly authorized by them or their agent, according to most intellectual property law requirements around the world.

The goal of the metaverse, on the other hand, is to emulate the real world. The builders of it seek to create almost an escape, a parallel universe, so to say, which has all the qualities of a person's real life, except for the sole factor of it being not real, thereby providing users with the liberty to do as they please. Therefore, the structures that govern the real world must stay intact in the metaverse as well, implying that all creations within the metaverse will also come with intellectual property rights as creations in the physical space, especially since IPRs deal with a person's labour of the mind which remains the same in both the physical and the virtual space. The NFTs, which will be used to buy and sell things in the metaverse, will function just as they do out in the real world. To sum it up, however, things function in the real world, so they will in the metaverse. To conclude, until legislation specifically for the field can be enacted, the existing laws will have to be interpreted to accommodate these technological leaps. And since there haven't been many court rulings regarding the issues, it can only be hypothesized how it will play out in the legal arena. Only time will tell how the world of NFTs and the metaverse

will intersect with the well-established principles behind the intellectual property rights of human beings.