



## Research Article

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# Legal Issues About NFTs

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### Abstract

*This paper investigates some of the legal issues related to non-fungible tokens, i.e. NFTs. The main feature of non-fungible tokens is their uniqueness together with the possibility of representing any digital resource on a blockchain, thus making it demonstrable and economically evaluable. From a legal point of view, this kind of instrument is alluring even though many look at it with uncertainty. As with any emerging technology, NFTs also present legal issues which need to be addressed as the market continues to grow. These problems deal with the legal nature of NFTs arising the doubt if they are securities or not. One more issue is the potential applicability to non-fungible tokens of the first sale rule. Furthermore, the problems involved also extend to other areas of law. In fact, both issuers and buyers need to be protected. Regarding issuers, the issue of an NFT may require the drafting of an additional contract with a specialised entity. On the other hand, buyers must be adequately informed of the purchase transaction. It follows that all the parties must be aware of the legal challenges involved and work towards establishing best practices and industry standards to address them. Additionally, it is necessary to issue specific legislation that regulates every aspect of the purchase.*

**Keywords:** blockchain; NFTs; IP; legal nature

## 1. Introduction

As is known, digital tokens are a set of rules codified in a smart contract, i.e. a self-executing contract. The terms of the agreement between the parties are written into lines of code. The code and the agreement exist across a decentralised blockchain network. The code controls the execution of the contract. Transactions are both trackable and, importantly, irreversible. One advantage is that trusted agreements can be carried out between many parties. There is no central authority, external enforcement mechanism, or legal system. In short, smart contracts could help parties exchange money, property, shares, or anything of value, securely and transparently, and with the advantage that they do not need to pay a third party. In other words, transaction costs are reduced. However, if there are bugs or vulnerabilities in these smart contracts, disputes may arise regarding the performance of the contract.

With reference to blockchain technology, it must be underlined that blockchains can be defined as a network of identical ledgers shared and synchronised across multiple sites, bodies or geographies, which can record the transactions performed in multiple places at the same time

(WIPO, 2022). Blockchain applications can create an immutable record of transactions, connected to the participants. Because of the characteristics of the technology on which the record is based, there are no opportunities for fraud. In fact, anyone wishing to carry out a fraudulent transaction or alter the blockchain would need an incredible amount of computing power, so that the attempt would be at least uneconomical.

Digital tokens use an encryption system to store information in unique “chunks”, which cannot be replaced. The information is stored in a decentralised registry, where one block is concatenated with subsequent blocks. Any attempt to modify a block would create a discrepancy in the system and would make the transaction invalid. Among the various types of tokens, it is possible to identify the non-fungible ones (NFTs), which have been in existence for about ten years and have spread widely in recent years. In fact, in 2014 Kevin McCoy created the first NFT called «Quantum».

The main feature of non-fungible tokens is their uniqueness together with the possibility of representing any digital resource on a blockchain, thus making it demonstrable and economically evaluable. Each NFT corresponds to a smart contract which is replicated and distributed on all the servers of the blockchain. Further peculiarities of NFTs are their indivisibility and the fact that they cannot be exchanged with other tokens of the same type, since the asset they represent is unique and non-fungible. This makes them different from fungible tokens, such as cryptocurrency, which: 1) are interchangeable; 2) have the same characteristics as a digital currency; 3) have the same market value; 4) are divisible. It follows that an NFT is a unique and inimitable virtual object of its kind (Grilli, 2021).

The advent of NFTs had a significant impact especially in the world of art, where it made it easier to disclose the works created and facilitated transparency on the authenticity and origin of the purchases made (Fisher 2019); in fact, NFTs have had particular importance in the sale of digital artwork, music tracks, even Tweets and Gifs. In other words, it can reasonably be stated that almost every work of authorship, be it a painting or a song, can be directly incorporated into a token and become an NFT. The purpose of some NFTs is to replace certificates of authenticity of paintings or sculptures, while others digitally incorporate rights over physical and digital piece of art. Through NFTs it is possible to control all transactions without fearing that the information acquired is not true, precisely because it is guaranteed by the blockchain technology (Fernandez and Gustafsson and Lakoubay, 2019).

From a legal point of view, this kind of instrument is alluring even though many look at it with uncertainty. As with any emerging technology, NFTs also present legal issues which need to be addressed as the market continues to grow. The uncertainty regarding the rules applicable to non-fungible tokens may raise many doubts that scholars and courts will certainly resolve over time. Among all the uncertainties, the protection of intellectual property comes first and foremost, since the need to guarantee both the quality of the work and especially its authenticity is crucial. Another question is that relating to the value of the asset and in particular whether it is temporary or whether it lasts over time; in the latter case, it is possible to hypothesise that IT security also comes into play. One more particularly problematic aspect concerns the identification of the legal nature of NFTs and, consequently, the protection afforded to buyers. The novelties related to this type of instrument have their inevitable counterbalance in the lack of specific sector legislation and, consequently, in the lack of knowledge by the operators of the technical and legal aspects connected to it.

The aim of this piece of writing is to focus on some legal issues connected to NFTs. Therefore, in the next paragraphs it will be described their legal nature and their characteristics. As it will be shown, NFTs are innovative digital assets which will require specific legislation.

The paper is organised as follows. Section 2 deals with the uniqueness and authenticity of NFTs, Section 3 illustrates the legal nature of non-fungible tokens, Section 4 is related to the right of first sale and Section 5 draws some conclusions.

## 2. The Uniqueness and Authenticity

Purchases made through NFTs are subject to very specific rules, partially different from those concerning tangible goods. When there is a purchase, the object of alienation is not the good itself, which can remain in the possession of those who created or previously purchased it, but only its identification token (Macleod N.A, 2019). Put simply, the purchaser of an NFT does not acquire the work itself, but only the possibility of demonstrating the existence of a right over it (Moro Visconti, 2021). If the piece of art is digital, the asset is embedded within the smart contract.

NFTs have the clear advantage of having introduced the concepts of authenticity and effective digital ownership into the digital world and in particular into the blockchain system. The use of a non-fungible token provides proof of the existence of a right over the asset reproduced in digital format, whether it is artwork or not, and of its authenticity, as well as demonstrating its uniqueness.

An NFT is a virtual unique asset, not replicable or mutually interchangeable with another token, as it is endowed with peculiar characteristics, such as replacing a certificate of identity or incorporating rights over physical assets. In fact, NFTs allow their owner to possess the (digital/virtual) representation of a unique object unequivocally associated to their wallet or user in the virtual space (WIPO, 2022). It follows that only a specific person can be deemed to be the owner of the asset and, although this is accessible to anyone, the proof of its ownership is ensured by an NFT (Fisher, 2019).

As a consequence of being unique, NFTs are also indivisible and scarce. In fact, an NFT cannot copy nor it can be a copy of another NFT. Artists can create a limited amount of NFTs, so that the value of digital assets is higher. Artificial scarcity refers to the uniqueness of the NFT as determined by its code, or the specifics of its issuance (European Blockchain Observatory and Forum. Demystifying Non-Fungible Tokens (NFTs)). Making an NFT of artwork would allow to control any access to the digital asset after the authentication of the applicant within the blockchain. From the buyer's perspective, this means that they can access to a unique digital file even though they are not buying a digital artwork (Behzadi, 2022). Furthermore, NFTs are not all the same, meaning that different types of tokens perform different functions and have heterogeneous characteristics so that the set of rules applicable vary from time to time.

With reference to the specific issue of authenticity, it is not sure the extent to which intellectual property laws apply. On this topic, a look at the Italian legislation may show that article 64 of Legislative Decree January 22, 2004, n. 42 (Cultural Heritage and Landscape Code) provides for the obligation for anyone who sells, exhibits or brokers piece of art or works of historical or archaeological interest to deliver to the purchaser a certificate of authenticity to be affixed, where possible, on a photographic copy of them. However, no regulation establishes the procedures for obtaining this certificate. Thus, many problems may arise regarding breach of contract and counterfeiting. NFTs seem to provide a solution to these problems. In the case of digital works, the association with NFTs makes it possible to certify the issued copies as authentic and to trace the related exchanges, since, once registered, the tokens are immutable. In this way, digital works are placed on the same level as traditional ones, without the need for a third party to certify their origin and authenticity (Anderson, 2018). Furthermore, their transfer is facilitated in the same way as for tangible goods.

Concerning intellectual property, it must be noted that Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society (so-called InfoSoc Directive) creates a high level of protection for authors, allowing them to obtain an adequate compensation for the use of their artwork. This means that EU legislation aims to protect the freedom of any artist to decide the ways they deem most convenient to make a profit from their creation. On the same standpoint, Directive 2019/790/EU makes it clear that the purpose of European legislation, and therefore of national laws, is the liberalisation in the management of IP rights.

It seems undeniable that the purchaser of a non-fungible token acquires the right to display the underlying asset, but does not acquire the authorship of the work; consequently, this will involve a

willingness of issuers to control strictly the use by buyers of any rights associated with an NFT. In any case, nothing prevents the parties from establishing something different, so that the buyer can also enjoy other rights. As well as any agreement, the terms on which NFTs are offered for sale to purchasers must be set out clearly. In fact, an NFT buyer acquires the ownership of something depending on the codes contained within the token itself or on the conditions of sale agreed upon, if the parties have entered into a traditional contract. However, as it will be shown, it seems difficult to hypothesize that the intellectual property rights of the issuer of the token could be deprived.

### 3. The Legal Nature of NFTs

The spread of NFTs and their use lead to wonder about the legal nature of these instruments. The first step to be taken in dealing with this topic is the consideration that, currently, there is no definition of NFTs. This means that non-fungible tokens are ruled by the parties and, consequently, their discipline may vary occasionally.

In the world of art, a piece of art does not coincide with an NFT; on the contrary, the file containing the artwork is embedded in the NFT, which in turn embeds a URL pointing to the original file. While the separate URL embedded in the NFT contains a link to a copy of the artwork, it is not itself a copy of that piece of art.

From a legal point of view, a non-fungible token may not be a creative work that conveys the original expressive form of the author, but only a set of metadata. Put simply, an NFT is not a physical object and it does not contain a reproduction of a tangible good. An NFT would just be a token which authenticates the source of the content (Behzadi, 2022). According to this interpretation, NFTs are not copies and thus not subject to copyright infringement.

However, it seems reasonable to state that the rules on copyright are applicable to NFTs. In fact, non-fungible tokens usually lead to a digital file, which may be copyrighted. It follows that the unauthorised creation of an NFT will expose creators to copyright liability. When an NFT is sold, it is usually the ownership of that specific token that changes hands on the blockchain and not the copyright of the content itself. The purchaser of the NFT gains ownership of the token, but they may not be entitled to reproduce, distribute, or publicly display the original content without the explicit permission of the copyright owner.

Furthermore, NFTs may be considered as an encrypted digital receipt of artwork, which leads to a property claim on the work itself. Nevertheless, traditional rules regarding the right to property are not always applicable in the digital world because making copies of an asset does not deprive the original owner of their rights over the asset itself; additionally, this procedure is not expensive and has no consequences on the quality of the original copy.

With reference to the market value of NFTs, it must be underlined that they are exchanged by persons attracted to their uniqueness. The blockchain technology has created a market for the sale and resale of NFTs and related assets. Every NFT transaction involves many parties. These parties are the creator of the NFT, the blockchain, the marketplace and the blockchain wallet (Behzadi, 2022). As a consequence, the person who sells an NFT is not the only one benefiting from the sale. However, the legal framework regarding the purchase of NFTs is poor and this situation leaves artists' work susceptible to exploitation. The creator of the piece of art or the third-party seller can retain the right to copy, distribute, modify, and display the artwork to the public.

The purchase may occur on many online stores and operating systems so that it is not a difficult procedure. NFTs have often reached high values and digital artworks have been sold for millions of dollars. This means that the market of NFTs has been characterised by some speculation and price volatility. NFTs value can fluctuate significantly over time depending on demand, cultural trends and the awareness of the artists or works. It is important to underline that the market value of NFTs is subjective and may depend on the interest and trust of the community that supports them. It follows the market of NFTs is variable and may be subject to drastic changes, affecting both creators and buyers.

The question may arise as to whether a purchase transaction cannot be reduced to simply being such, but can also be deemed to be an investment of a financial nature; therefore, it is reasonable to ask whether NFTs should be considered in the same way as securities, which can be traded and, consequently, give their holders the right to participate in the profits produced by whoever “issued” them or if, on the contrary, they are only “assets” subject to common rules on the subject of trading.

In the search for a solution to the problem, the investment component underlying the operation seems to be decisive. It can be argued that those who choose to buy a non-fungible token, even spending a considerable amount of money, hope to make a profit in the event of a subsequent sale. The fact that when the purchase is made there is the possibility of making a profit in the event of subsequent sale of the token, could lead one to believe that the NFTs are real securities, with the consequent attribution to the purchaser of a credit right against the issuer. NFTs may be considered securities, especially when they promise future financial returns or are sold as part of an investment scheme. In these cases, they could fall within the scope of securities regulations, and the issuers may need to comply with securities laws, including registration and disclosure requirements.

However, whoever buys an NFT does not participate in the economic activity of the issuer and, consequently, does not seem to be entitled to the distribution of the profits produced, nor can they be equated to whoever subscribed to a security which gives a credit right (Hacker and Thomale, 2017). Not agreeing with this theory would inevitably lead to distorting the transaction carried out and to assimilating the purchase of NFTs to a contribution to a company or the subscription of bonds.

In light of the foregoing considerations, it can be deduced that where the issuer’s business is flourishing, the only financial advantage recognised to NFTs holders is that of being able to benefit from the increase in the value of the tokens themselves and, consequently, to obtain a profit in the event of their subsequent sale. Non-fungible tokens cannot be assimilated to securities, because their legal nature appears different and there is a lack of any form of information on the financial situation of the issuer. This conclusion appears acceptable even where the purchase of NFTs is carried out for eminently speculative purposes, i.e. where the purpose of obtaining a profit deriving from their subsequent sale characterizes the entire operation.

#### 4. NFTs and the Right of First Sale

Another topic that comes to mind regarding NFTs is the potential applicability of the first sale doctrine, also known as the right of first sale or the first sale rule. According to this doctrine, there is a limit to the rights of an IP owner to control the resale of products embodying its intellectual property. Regarding NFTs, the application of this doctrine becomes complex due to the nature of the technology and the underlying copyright considerations.

On the one hand, the distribution right entitles the artist to make a profit of the use of their artwork; on the other hand, the right of first sale allows the purchaser to use a digital copy of the artwork as if they were the owner of the piece of art. This means that the purchaser is entitled to enjoy and dispose of the asset fully and exclusively, within the limits of and observing the obligations established by law. Being this true, it follows that any buyer may sell a copy of a piece of art, thus creating a secondary market for artwork. These transactions may be subject to specific regulations, such as consumer protection laws and anti-fraud measures. This is why it is important for secondary market platforms to take adequate measures in order to protect buyers and sellers. However, the first sale doctrine does not work homogeneously and depends on the type of artwork, having effects also on NFTs (Spedicato, 2016).

It could be argued that disposing of digital artwork does not deprive their creator of any IP right. This would mean that digital artwork cannot be distributed, but only made available to the public. As a consequence, the first sale rule would not be applicable to any digital sale and the artist would be allowed to decide how their piece of art can be made available to consumers and which restrictions may be adopted (Romano, 2001).

However, a different perspective would lead to the conclusion that the online sale of a digital copy of artwork falls within the scope of the distribution right, so that the buyer becomes the new owner of the asset. In fact, the above mentioned InfoSoc Directive does not exclude the applicability of the first sale rule also to online sales, making it clear that anybody who downloads a work on their computer is not allowed to communicate that work to the public (Von Lewinski, 2010).

Although the InfoSoc Directive may lead to the non-applicability of the first sale doctrine, it must be borne in mind that this piece of legislation was issued more than twenty years ago when the newest technological developments had not occurred yet. As a matter of fact, there was no digitalisation of artwork at all and the idea of their incorporation into distributed digital instruments through a decentralised recording system was unimaginable. Nowadays, the economic and social realities are different and even though the first sale doctrine seems to be still not applicable, new hypotheses can be suggested. As NFTs become more prevalent and mainstream, it is likely that courts and national regulators will deal with these issues trying to provide more clarity and certainty for all parties involved.

On this point, a solution might be resorting to smart contracts and to the incorporation into them of specific clauses which deal with the topic under examination. For example: 1) it could be stipulated that an NFT cannot be transferred until some conditions are not performed; 2) furthermore, the parties to a contract may agree that immediately after the purchase, the NFT is automatically cancelled from the electronic wallet of the seller; 3) additionally, the buyer may be not entitled to sell again the artwork (Muciaccia and Lopopolo, 2022); 4) lastly, it might be possible to incorporate a term regarding the rights of the artist, such as the right to receive a percentage of future sales of the artwork. In other words, the issuer of NFTs may be granted an automated ongoing payment of royalties or commissions on any sale of the tokens. This would provide an ongoing income stream to the creator of the artwork, even after the initial sale of NFTs. However, the enforceability of such royalty clauses may vary depending on jurisdiction and the terms of the smart contract.

Moreover, an important role is played by buyers too, who are required to read carefully the terms and rights associated with the NFTs they are purchasing. Platforms may also implement measures that respect copyright holders' rights while ensuring a fair and transparent secondary market for NFTs.

## 5. Conclusions

Based on what has been said so far, it seems possible to state that NFTs can be considered as innovative digital assets which are totally changing many areas of social life and, consequently, of law. At least in the immediate future, the NFT market seems destined to increase and expand further. The rules applicable are unceasingly evolving and bring new issues regarding, in particular, the legal nature of non-fungible tokens. As the technology and its applications continue to develop, legal frameworks will likely be adapted to address these issues more comprehensively. However, it must be remembered that different countries may have varying regulations and interpretations. It follows that all the participants in the NFT space must be aware of the legal challenges involved and work towards establishing best practices and industry standards to address them. In other words, these persons will need to cooperate in order to ensure the responsible growth of the NFTs market and the protection of participants' rights and interests.

Especially in the intellectual property sector, NFTs can be a useful tool in the fight against counterfeiting. In fact, the uniqueness that characterises them is an indication of the authenticity of the goods and, consequently, sets itself as a limit to possible violations of IP rights. However, it is doubtful if the potential of non-fungible tokens may not be fully exploited and if they turn into a speculative bubble rather than a real investment opportunity.

In any case, the problems involved are not only those summarily highlighted, but also extend to other areas of law. The use of this tool and the methods in which the purchase operations are carried

out imply the need to protect both issuers and buyers. Regarding issuers, a relevant profile is that according to which the issue of a non-fungible token may not be carried out directly by the issuer, but by a third party to whom the latter addresses. In other words, the issue of an NFT may require the drafting of an additional contract with a specialised entity. If this is true, it follows that an NFT “creation” contract must specifically indicate the object of the agreement, but must also guarantee protection of the intellectual property rights of the issuer and of all information of which the contracting party could become aware. In this perspective, it seems preferable to also indicate the conditions under which the NFTs will be offered for sale.

Regarding buyers, the problem of their information arises; in fact, they must be adequately informed of the purchase transaction they are about to carry out and of the potential repercussions that may derive from it. This information seems to acquire more importance if we consider that the purchase of an NFT can be a “point of no return”, as it does not seem possible to exercise the right of withdrawal; this is because the structure of the blockchain does not allow the chain to be modified backwards.

All the problems that can arise from the use of NFTs and the consequent need to protect the interests involved make it appropriate not only to issue specific legislation that regulates every aspect of the purchase, but also to collaborate between individual national regulators and NFT platforms to increase the protection of the parties involved.

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