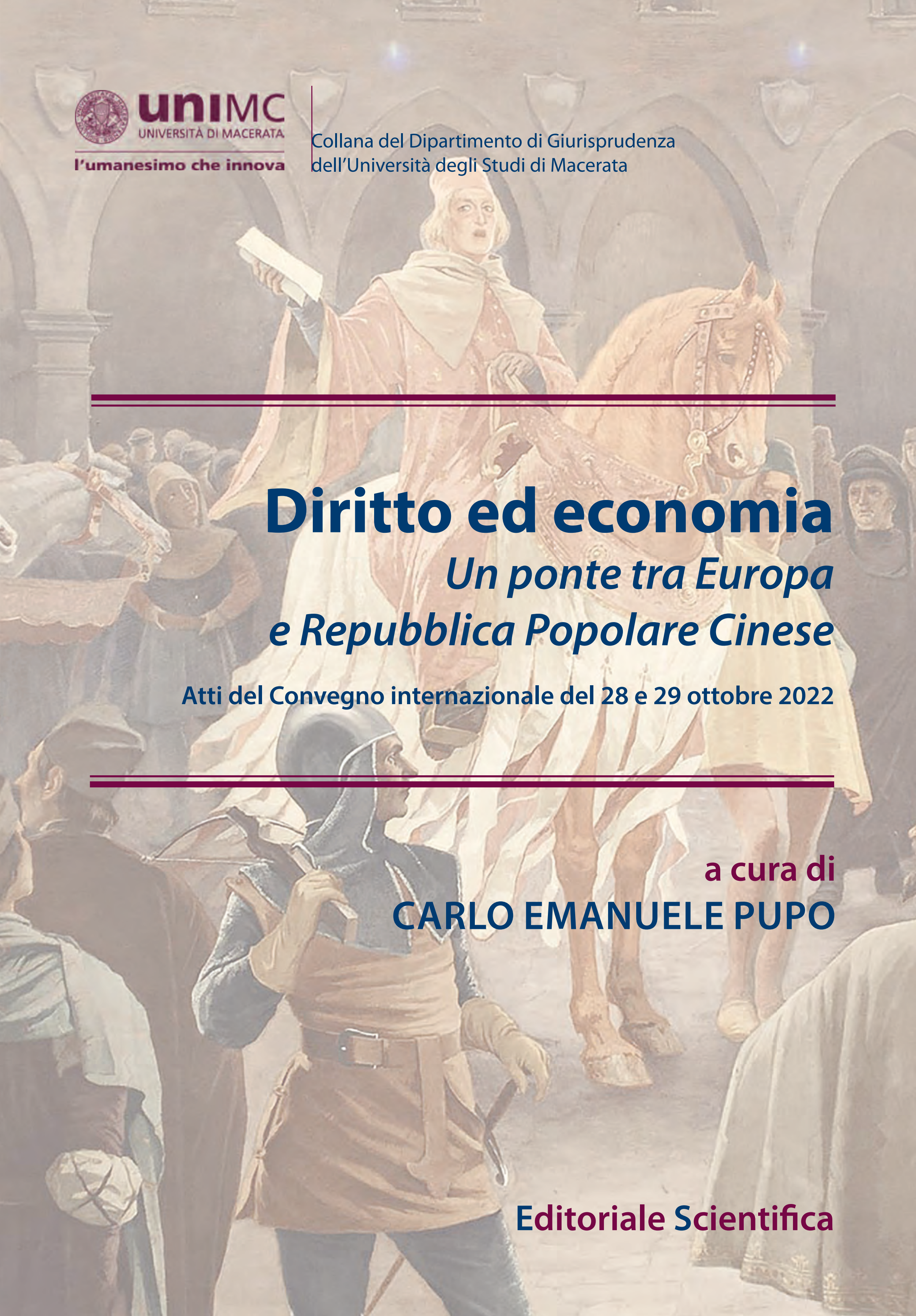

UNIMC
UNIVERSITÀ DI MACERATA
l'umanesimo che innova

Collana del Dipartimento di Giurisprudenza
dell'Università degli Studi di Macerata

Diritto ed economia

Un ponte tra Europa e Repubblica Popolare Cinese

Atti del Convegno internazionale del 28 e 29 ottobre 2022

a cura di
CARLO EMANUELE PUPO

Editoriale Scientifica

DIRITTO ED ECONOMIA. UN PONTE TRA EUROPA E REPUBBLICA POPOLARE CINESE

ATTI DEL CONVEGNO INTERNAZIONALE
DEL 28 E 29 OTTOBRE 2022

A cura di **Carlo Emanuele Pupo**

Editoriale Scientifica

La pubblicazione del presente volume usufruisce di fondi del Dipartimento di Giurisprudenza dell'Università degli Studi di Urbino e della Cattedra Jean Monnet retta dal Prof. Alessio Bartolacelli

via San Biagio dei Librai, 39 - 80138 Napoli
www.editorialescientifica.com info@editorialescientifica.com
ISBN 979-12-5976-898-8

INDICE

Arianna Alpini* - Jia Wang (王佳)**

THE CREATION AND DISTRIBUTION OF ARTWORK IN DIGITAL MARKET

Introduction

The platform economy is the tendency for commerce to move increasingly towards digital platform business models. Platforms are underlying computer systems that can host services allowing consumers, entrepreneurs, businesses and the general public to connect, share resources or sell products. Blockchain technology can support immutable and trustless transactions in a distributed and disintermediated way among various users. The trustless environments that blockchains have created enable peer-to-peer (P2P) sending and receiving transactions, smart contract agreements, and more. On the blockchain platform, tokenisation is used to transform ownerships and rights of particular assets into a digital form.

Tokenisation in blockchain opens up multiple new possibilities for businesses and individuals. Non-fungible tokens (NFTs) are widely adopted by the token owner in the form of a record and hash codes that show ownership of the unique token associated with a particular digital asset. Transactions are executed on smart contracts, sequences of computer codes that automatically execute pre-established instructions. Each block has a set amount of storage capacity, and once it is

* University of Macerata.
** Durham University.

filled, it is 'chained' to the previously filled block. Most NFTs exist on the Ethereum blockchain, with permanent digital records of all cryptocurrency transactions. Blockchain technologies and platforms inspired the creation of 'crypto art', that is, to tokenise artwork digitally and trade the tokens on the platform. Crypto art is disruptive to the traditional market of artwork in many ways. First, it solves the chronic problem of the piracy of artworks. NFTs enable authors to have exclusive control of their works stored in unique blocks with a private key, thus re-creating 'digital scarcity' of the works. The transaction of NFTed artwork occurs within a more decentralised power structure (Storey 2022). Second, NFTs make fine art investment more accessible and democratic. On the one hand, it enables a smaller investment of a fraction of an artwork. On the other hand, artwork can also be directly accessible from mobile phones and laptops without requiring storage space or the use of special equipment, which thus allows trade to be conducted more seamlessly (Hashtag Investing 2022, Hamilton 2022). Third, it enables direct transactions between the rightsholder and consumer without involving middlemen such as curators, galleries and art dealers (Drobitko 2022). Lastly, transactions of NFTed artwork increase liquidity and allow for higher transparency of data. Blockchain transactions are often completed in milliseconds, reducing the waiting time when selling NFTed artwork and allowing artists to be paid more quickly, thus increasing liquidity (Storey 2022). Not only are NFTs generally sold and traded in full public view (Storey 2022), but each transaction can also be traced and followed, as each NFT and its blockchain entries contain proof of current and past ownership, and all transactions involved (Storey 2022). While NFTs look promising in many respects in trading artworks on digital platforms, legal risks must be addressed in order to capture the benefits of NFTs fully. When buying an art piece, one does not purchase its copyright, which would have to be transferred separately. According to international copyright law, to own a piece of artwork does not necessarily entail the subsequent right to display the work in a public place and collect copyright royalties paid for the use of the work. The right to display and receive royalties remains with the author or the rightsholder.

In this chapter, we explore the legal nature of NFTed artwork. When purchasing an NFTed artwork, what rights and interests does the purchaser acquire? Is holding an NFTed work equivalent to holding a physical copy? The objectives of this chapter are, first, to contextualise the discussion against the background of the trade of artworks in a blockchain environment; second, to examine the most recent legislation and court decisions concerning NFTs and cryptocurrency; finally, to conduct a comparative study between the common law and civil law systems of their concept of assets and property in relation to NFTs.

We undertake a comparative approach to facilitate the understanding of how different jurisdictions view the legal nature of NFTs. We look at the Anglo-American countries, then turn to Europe and China as civil law jurisdictions. Traditionally, the two legal systems view property rights differently. A comparative study offers insight into whether the convergence of law applies to legal issues of global relevance in a digital environment. Furthermore, this chapter conducts a case study of the most recent court decisions concerning property and intellectual property issues. As the legislation could lag behind the speedy advancement of technologies, court decisions offer a more timely reflection of the judiciary's attitude to NFTs.

This chapter proceeds as follows. The first section introduces blockchain and NFTs as an application of blockchain technologies, particularly the tokenisation of artwork. The second section examines how artworks are traded in the mortar-and-brick era and the digital era. The third and fourth sections scrutinise the common law and civil law approaches towards NFTs and the NFTed artwork. The last section offers a comparative analysis of the different approaches and provides concluding remarks.

1. *Blockchain and the tokenisation of artwork - The blockchains: private, public and consortium chain*

Blockchains have been developed into three types: private chain, public chain and consortium chain. Private chains operate under the control of certain individuals or organisations. This is done by setting up a permissioned network, restricting the individuals allowed to participate in the network and transactions (Jayachandran 2017). As participants must obtain an invitation to join the network, private chains can filter out illegal activities within a chain (Iredale 2021). Yet as there are fewer nodes within the chain, the entire chain may become more easily compromised, posing a potential security risk (Brown 2022). Having a unique hash is vital for maintaining security throughout the different blocks because there are concerns about hackers tampering with the blocks and changing the hashes. In contrast to a private chain, public chains, such as Bitcoin and Ethereum, are openly accessible to all who can access the internet (Jayachandran 2017), who can also see the ledger and participate in the consensus process (Iredale 2021). This design enables participants in a public chain to have equal rights and boosts transparency (Iredale 2021). Yet it also comes with drawbacks. For instance, a high amount of computational power is necessary for a public chain to function, to maintain the distributed ledger at a large scale (Jayachandran 2017). It takes a relatively long time to verify each transaction compared to other chains.

A consortium chain is a permissioned ledger where information can only be shared among a small group of organisations (Crypto News 2021). It is formed by combining various private blockchains belonging to different groups, where each group forms a node on the chain as a stakeholder. While each group manages its own blockchain, the data within it can be accessed, shared and distributed among the other organisations in the consortium (Bybit Learn 2022). A consortium chain is created among organisations to facilitate cooperation among these groups (Banerjee 2022). As a result, consortium chains offer benefits such as efficiency in decision-making (Bybit Learn 2022). However, there are also challenges. For example, a unified framework of industry standards for consortium blockchains (Banerjee 2022) urgently needs to be developed.

1.1. Continued*: The tokens: fungible and non-fungible*

An NFT is a piece of digital artefact that represents the ownership of real-world assets. The influential NFT marketplaces in 2022 are OpenSea, Rarible, NBA Top Shot, Binance and Nifty Gateway, with most of them utilising cryptocurrencies as their payment method (Rodeck 2022). Whilst NFTs operate as a type of cryptocurrency (Fairfield 2021), it is vital to distinguish Bitcoin's and NFT's different natures. Bitcoins are interchangeable and indistinguishable, making them fungible tokens (Nakamoto 2019), while NFT is non-fungible because the associated data has a unique "hash value", a "unique and reproducible alphanumeric value from a specific data set" (Tipotsch 2021) derived from the artwork. There are different types of tokens. For example, using the ERC 20 Protocol, parties may create fungible tokens; using ERC 721 Protocol, they may create non-fungible tokens; using ERC 1238 Protocol, they may create non-transferable tokens (titles or badges).

There are three ways to create and issue tokens. The first method is through an Initial Coin Offering (ICO). This is a method of raising capital for new ventures (Delivorias 2021). The tokens can be exchanged for future products and services or confer a right to a share in future profits on holders (Knowledge at Wharton 2019). The tokens are then launched, and the business can use the proceeds to launch new products and services (CFI 2022). The second method is mining, where groups or individuals compete to solve complex mathematical problems (Trading Education 2021). The first one who solves the equation and validates the accuracy of a transaction in a block wins a reward (Trading Education 2021). Upon mining, tokens can be minted, that is, published on the blockchain and made available for purchase (Craig 2021). This can be done on platforms such as OpenSea, which allows one to mint tokens on the Ethereum blockchain by setting up a crypto wallet, creating a collection and uploading work (OpenSea Learn 2022). The third method to create tokens is through tokenisation by linking or embedding the economic value and the rights derived from the asset to digital tokens created on the blockchain (OECD 2020). The tokenised asset can then be listed and sold on NFT marketplaces. In this chapter, we mainly focus on the third tokenisation method for discussing NFTed artworks.

2. *The trading of artworks*

In the past, artworks were traded by transferring the physical object or licensing the use of the work without the transfer of ownership. Collective copyright licensing is managed by collective societies in Europe and China while in common law jurisdictions, by corporations specialising in collective copyright management. A common problem of collective copyright management is the high agency cost. Moreover, tracing and tracking the author of orphan works is less efficient due to the need for more technology. The intermediary, that is, the collective society, is confined by its structural and technological limits and cannot assist the rightsholder in fully capturing the value of artworks.

In the digital era, various data management tools help improve the efficiency of collective management. However, the agency cost and source-tracing problems still exist, although to a lesser extent. With the onslaught of blockchain and NFTs, it is time to revisit the agent-based transaction model. Do artists need an intermediary to manage their copyright if they can manage their own copyrighted works with secured NFTs and supporting platforms?

Although blockchain technologies seem to offer an ideally distributed and democratic digital world without intermediaries involving transaction costs (Drobitko 2022), in the new reality of business, NFTed artwork trading platforms emerge as new intermediaries. In China, the platforms can be divided into three categories. The first type comprises platforms that offer blockchain technology. Examples in China include Zhixin Chain, a platform based on Hyperledger technology, which is employed to execute smart contracts, digitise company chops and delineate ownership of intellectual property. Beyond China, Hyperledger Fabric, hosted by the Linux Foundation, offers enterprise-grade blockchain technology for leaders in finance, banking and supply chains.

The second type is the platforms that support the trade of NFTed work. These may include platforms that facilitate the collection and resale of NFTed work, such as Netease Chain, a public chain which allows trade in a large variety of NFTed work, such as animation, music and 3-D models. Similarly, some provide the space for users to sell their NFTed products, for instance, the Two-Mirror Museum (双镜博物), a public chain that sells NFTed products related to culture, such as a digital collectible featuring the Palace Museum's only existing set of wedding garments belonging to a Qing dynasty empress. Such platforms can also be found outside China, for instance, Nifty Gateway, which cooperates with musicians and artists to create limited edition NFTs that are exclusively available on their platform.

The third type relates to those platforms that issue NFTed work. An example of such a platform is BlueFocus, a multinational company specialising in marketing and brand management services in media and design. Another example is CrowdCreate, whose services include assistance in crypto community management and crypto token marketing. The increasingly involved artificial intelligence in creating artwork brings another dimension to the legal compliance for the trading of artworks. Unlike traditional artworks like painting, photography and music, which are protected by copyright, AI-created art is less concerned with copyright. AI-created art is also called generative art. Many NFT projects, such as CryptoPunks, Bored Ape Yacht Club, World of Women, Azuki, Chromie Squiggles, Clone X, and Moonbirds, involve generative art in the creation process. Generative art is generated wholly or in part by the algorithm and not in direct control of the programmer, who is an artist or commissioned by a customer. The programmer creates a programme consisting of one or more algorithms that randomly generate an artwork based on randomised parameter selections or by one or more inputs that are driven or operated to suggest a direction for the artwork. In more complex projects, artificial intelligence is programmed to make decisions during the entire process of creating an artwork (Dornis 2021). Different from the purchase of traditional artworks, the purchase of generative artwork is obtained upon the creation of the art, which coincides with the act of minting. The purchase of the NFTed AI-created artwork takes place by creating and minting the artwork.

However, NFTs are not the artwork, nor does it become the artwork. The NFT records the existence and ownership of the artwork onto the blockchain, and because no two NFTs are the same, and no two blockchain registrations can be the same, the tokenised asset linked to the NFT also can be considered unique and non-fungible. Each NFT contains metadata that describes the corresponding assets in order to prove the physical object's authenticity or rarity. The NFT represents the physical object in code that is written into the blockchain that contains various information. This information frequently contains the name of the creator of the NFT, a URL linking to a representation of the underlying work of the NFT, the date it was minted, and any contractual terms that follow the NFT after it is sold. While the separate URL embedded in the NFT contains a link to a copy of the underlying work, it is not itself a copy of that work. Thus, an NFT is not a reproduction of content; it is merely a token that authenticates the source of the content. For this reason, NFTs themselves are not "copies" and thus not subject to copyright infringement. The metadata does not contain any recognisable content of the underlying work, nor does it describe its contents. Similarly, the metadata does not add, transform, or recast any underlying work.

Nevertheless, NFT establishes an exclusive ownership relationship with the underlying artwork. The hash is stored on a blockchain with an associated time stamp. Consequently, NFT keeps track of hash sales, so it is possible to trace the hand steps of the hash to the creator. This mechanism provides proof of authenticity and, simultaneously, ownership of the work. The transfer of an NFT connected to a work of art transfers the digital ownership of the authentic copy of the work; however, the purposes that can be pursued with this tool are different, so it is necessary to identify the crypto activity, the specific utility that the NFT is intended to create from time to time.

Authors can create and sell NFTs representing their works. In practice, the NFT digital art market recognises the owner of a "legitimate" NFTed work as the "owner" of the work, even though NFTs do not convey copyright ownership of the work (Frye 2021). NFT owners encourage others to use their work because popularity increases the value of the work. Increasing the author's impact creates more value than controlling the use of the work. If the profit from selling NFTs alone is large enough to motivate authors, copyright is no longer necessary as a legal monopoly to reward authors. The value of art has always come from the reputation of the author and the scarcity of the work through "authenticity".

3. *Legal status of NFT: the common law approaches*

The premise of this property syllogism is that "a particular type of right (such as a chose in action, an intellectual property right or a beneficial interest under a trust) is the same type of right as a right to a tangible asset and must therefore be protected in the same way." (McFarlane and Douglas 2022, page 162). With this background in mind, it is perhaps unsurprising that crypto assets have been more readily accommodated within common law systems' vague notions of property than those of civilian systems. The courts in England and Wales (English and Welsh cases), Singapore (Singaporean cases), and New Zealand (Ruscoe v Cryptopia Ltd (in Liq) [2020]) have acknowledged bitcoins and other crypto assets as property within the common law. Property in the case law to date refers more to assets than things (Low and Hara 2022). This was also the advice of the LawTech Delivery Panel's UK Jurisdiction Taskforce in its Legal Statement on Cryptoassets and Smart Contracts. The key question is how crypto assets as property would fit within the common law's classificatory scheme for property. Unlike the civilian classification between movables and immovables, the common law classifies property into real and personal, with the former comprising mostly land. Personality is, in turn, classified into either choses in possession or choses in action.

3.1. Continued*: The UK*

The point on whether cryptocurrency could be a form of property was more fully developed in AA v Persons Unknown [2019] ("AA"). Bryan J noted that the immediate difficulty was that "English law traditionally views property as being of only two kinds, choses in possession and choses in action" (AA at [55], citing Colonial Bank v Whinney [1885] ("Colonial Bank")). Bitcoins, and other cryptocurrencies, did not fall neatly into either category and thus could not be classified as a form of property (AA at [56] and [58]). Bryan J, however, considered that it was "fallacious to proceed on the basis that the English law of property recognises no forms of property other than choses in possession and choses in action" (AA at [58]). In doing so, he cited extensively from the legal statement on crypto assets and smart contracts published by the UK Jurisdiction Task Force (the "Legal Statement"). The Task Force thus took the view that Colonial Bank was not to be treated as limiting the scope of what kinds of things could be property in law. Rather, it showed the ability of the common law to stretch "traditional definitions and concepts to adapt to new business practices" (Legal Statement at [77]). The Legal Statement, therefore, formed the basis for Bryan J's conclusion that while a crypto asset might not be a thing in action based on a narrow definition of that term, it could still be considered property (AA at [59]). He made a finding that crypto assets such as Bitcoin were property, given that they met the four criteria set out in National Provincial Bank Ltd v Ainsworth [1965] ("Ainsworth") at 1248 – namely that it must be "definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability".

The UK's High Court recently ruled that NFTs are property, and thus victims of NFT theft can now have their stolen assets frozen through court injunctions. The decision comes after months of repeated NFT thefts, as savvy hackers have exploited loopholes and poor security literacy to seize high-profile NFTs. In an earlier case involving NFTs (Osbourne v Persons Unknown [2022]), the court also found a claimant has a good arguable case that misappropriated crypto assets are held on a constructive trust is therefore clear that the courts are open to constructive trust claims as regards crypto assets. However, Ms Osbourne did not go so far as to seek, as Mr D'Aloia has, to ask the courts to consider a claim in which – in addition to the alleged fraudsters – the exchanges are also said to hold the crypto assets on constructive trust. In D'Aloia case, therefore, appears to be the first in which the Court has found that there is a good arguable case for this claim against the exchanges themselves. D'Aloia case allows victims to obtain court injunctions against individuals whose crypto wallet has been identified as carrying a stolen NFT and to the NFT platform on which the stolen asset is being sold.

This ruling demonstrates that the English courts are open to entertaining constructive trust claims concerning crypto assets, not only against the fraudsters themselves but also against third-party exchanges. The possibility of such a claim has been lent further support by the Law Commission's analysis in their Consultation Paper on Digital Assets, published on 28 July 2022 (see paragraph 19.51). This would give victims of crypto-asset fraud a means of direct action against exchanges for breach of trust should they fail to comply with their duties as constructive trustees, having been notified that they are in the possession of fraudulently misappropriated crypto assets.

3.2. *Singapore*

In an earlier case of CLM v CLN [2022] SGHC 46 ("CLM"), Lee Seiu Kin J dealt with the question of whether stolen cryptocurrency assets, specifically Bitcoin and Ethereum, could be the subject of a proprietary injunction. Having considered the cases and the analysis in Ruscoe v Cryptopia Ltd (in liq) [2020] ("Ruscoe"), the judge was of the view (at [46]) that the claimant, in that case, was able to prove an arguable case that the stolen cryptocurrency assets were capable of giving rise to proprietary rights, which could be protected via a proprietary injunction.

In Janesh s/o Rajkumar v Unknown Person [2022], the court noted that although NFTs have been characterised as certificates of ownership "powered by smart contracts and protected by blockchain technology" (Aksoy and Üner 2021, page 1115), NFTs represent an "ownership of a digital certificate of authenticity of commonly available digital art" (Low and Hara 2022). Nevertheless, the court disagrees with the 'NFT is certificate' approach. The court points out that NFTs are not just mere information but rather data encoded in a certain manner and securely stored on the blockchain ledger. (Janesh s/o Rajkumar v Unknown Person [2022], paragraph 58) Rather, NFTs provide instructions to the computer under a system whereby the "owner" of the NFT has exclusive control over its transfer from his wallet to any other wallet.

Lee Seiu Kin J adopted the Ainsworth test and upheld the following findings. First, an NFT with its unique metadata is definable (Janesh s/o Rajkumar, [44]). NFTs are not just mere information, but rather, data encoded in a certain manner and securely stored on the blockchain ledger (Janesh s/o Rajkumar, [58]) 'It provides instructions to the computer under a system whereby the "owner" of the NFT has exclusive control over its transfer from his wallet to any other wallet.' (Janesh s/o Rajkumar, [58]) Second, per the second requirement that the "asset must have an owner being capable of being recognised as such by third parties" (CLM, [45(b)], citing Ruscoe at [109]) the presumptive NFT owner would be whoever controls the wallet which is linked to the NFT an NFT with its private keys would be an asset, with an owner being capable of being recognised as such by third parties. The third requirement is that "that the right must be capable of assumption by third parties, which in turn involves two aspects: that third parties must respect the rights of the owner in that asset, and that the asset must be potentially desirable" The 'nature of the blockchain technology gives the owner the exclusive ability to transfer the NFT to another party, which underscores the "right" of the owner.' Lastly, an NFT has a relevant degree of permanence and stability as money in bank accounts which, nowadays, exist mainly in the form of ledger entries and not cold hard cash.

In summary, Singapore's first court decision on NFTs rejects the analogy between a title deed and a certificate of property. The court applies the Ainsworth criteria and upholds NFTs as property.

4. *Legal status of NFT: the civil law approaches - The theoretical and legislative discussion*

Scholars pointed out that digital tokens may be considered “digital assets”. The same approach is taken by the Gesetz über Token und VT-Dienstleister of Liechtenstein, which regulates tokens as assets (Vermögen, art. 4) (Teruel 2021). In fact, it has been stated that “all-European-legal systems of the member states regard not only corporeal thing as the objects of real rights but also incorporeal assets, such as patrimonial rights” (Von Bar and Drobnig 2004). However, some legal systems take a narrower approach concerning the scope of the property, which is limited to “corporeal things”, as is the case under both German and Swiss law (e.g. §§90 Bürgerliches Gesetzbuch30 -BGB- or §641 Swiss Civil Code 31). This means that tokens could not be regarded as the object of property in these legal systems, e.g. in Germany, tokens have been defined as “eine faktische Vermögensposition”, meaning ‘a factual situation’ (Lehman and Krysa 2019). Other EU legal systems have either incorporated a broader definition of the concept of a “thing” to include “patrimonial or valuable rights” (e.g. arts. 334.10 CC; §§292, 298 and 299 Allgemeines bürgerliches Gesetzbuch, ABGB35) or a broader definition of the concept of an “asset” (art. 3.1 Burgerlijk Wetboek -BW-), which makes regulating tokens as an object of ownership more accessible. For example, in Spain, the judgment of the Supreme Court 20/06/201937 denied the recognition of bitcoin as a legal tender (money) but considered it an “incorporeal asset”. In Italy, tokens have been regarded as “digital assets” under the provisions of art. 810 Italian Civil Code (“Sono beni le cose che possono formare oggetto di diritti”); and art. 65 French Loi n. 486 categorises tokens as “incorporeal assets” (bien incorporel).

From an EU perspective, the Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets (MiCA) 24 September 2020 aims to enhance legal certainty to crypto-assets while encouraging innovation and protecting consumers. However, this proposal does not cover the legal nature, the legal effects and the admissibility of using asset-backed tokens to transfer property rights. Tokens issued in blocks of fewer than 150 tokens are excluded from the Regulation. So, the Regulation does not cover small issuances, which are typically the case in the tokenisation of real-world assets. The European Union Court of Justice has ruled that cryptocurrencies fall into legal goods exempt from VAT (EUCG, sez. V, 22 October 2015, case -214/2016).

China's first Civil Code, which became effective in 2021, includes provisions peripherally relevant to virtual assets. In Book I General Provisions, Article 114 provides that civil subjects enjoy property rights (rights in rem), which are the exclusive rights to directly dominate a particular thing, including ownership, usufructuary rights, and security interests. Article 116 is a Numerus Clausus that limits the types and contents of property rights exclusively by law. Article 127 provides that the Civil Code shall recognise the existing legal provisions for virtual property.

4.1. Continued*: European cases*

Italian Supreme Court indicated that an equivalent function approach could be taken to allow the court to treat NFTs similarly to cryptocurrency with similar qualities. It held that the legal qualities of bitcoins depend on the purpose of the usage of the currency and the utility they produce. If a virtual currency is used for speculative purposes, it will be considered a financial product (security token). The Court identifies the requirements to qualify the securities offered (in the specific case LWF Coin) as financial instruments. The test includes the purpose of the use of capital, the expectation of return, and the risk directly linked to the use of capital. (Court of Cassation, Penal Section, 30 November 2021, n. 44337 and 22 November 2022, n. 44378).

The Court of Rome, IP Chamber (Docket No. 32072/2022) enjoined Blockeras s.r.l. from any production, marketing, promotion and offering for sale, directly and/or indirectly, in any way and form, of the NFTs and digital contents and ordered the defendant to withdraw from the market and remove from every website the NFTs and the digital contents associated or products in general covered by the injunction (Rome, 19 July 2022). The dispute concerned trademark infringement and unfair competition practice, consisting of the unauthorised use of words or figurative marks through the production, marketing and online promotion of digital playing cards with images that reproduced footballers' NFTs. The distinctive signs in question show the image of former player Christian (Bobo) Vieri wearing the Juventus shirt and the team's name. The Court did not express an opinion about the legal nature of NFT but stated that the circumstance that Bobo Vieri played for Juventus and that he granted permission to the use of his image through the creation of cards reproducing the player with the different shirts of the teams in which he played does not, therefore, exclude the need to request authorisation for using the registered trademarks owned by the teams whose shirts and names are reproduced. The decision indicated that the court viewed the infringement of IP by NFTs as equivalent to an infringement made through physical reproduction. Therefore, we can deduce that the court considers NFT as equivalent to (intellectual) property.

At the European level, the Court of Rome is the first to order an injunction to the creation and marketing of NFTs infringing registered trademarks. It also ordered the NFTs to be removed from the trading website. The decision represents a reference point at a global level at a time when strong attention is paid, by all operators in the sector, to the legal aspects of this new digital tool. It goes from who defines NFT as "a digital not interchangeable good, such as a photograph, a song or a video, whose property has been authenticated and stored in a database called blockchain and which can be collected, sold and exchanged on various online platforms" (Trevisi et al. 2022) to those who consider them as "unique digital certificates, registered in a blockchain, used as a means to register the ownership of an object, as a digital artwork or a collectible object" (EUIPO 2022). The decision represents an implicit accreditation of the interpretation – already adopted by the main national and international offices, including EUIPO, for which Class 9 is the one for registered trademarks used to distinguish certain types of "digital goods". The Italian Court reiterates the provision of art. 97 of the Copyright Law, relating to the permitted uses of the right to the image of a person, does not extend to the use of trademarks possibly represented in the same image. The same consideration, however, also introduces the probably most important concept of the decision, which confirms the fact that the creation of NFTs – which are "goods intended for commercial sale" – requires specific authorisation from the proprietor of the trade mark, of which it, therefore, constitutes a separate infringement and distinct from the infringement constituted by the use of the trademark in the digital images associated with the NFT.

This confirms the preference for a legal definition of NFT that undertakes a dichotomy between the certificate and the content (Janesh s/o Rajkumar v Unknown Person [2022] SGHC 264). Above all, it explains the ratio of the same precautionary order, which is not by chance kept well distinguished between NFTs and the corresponding digital content, inhibits the "production, marketing, promotion and offer for sale, direct and/or indirect, in any way and form" of, on the one hand "of the NFT (non-fungible token)" and, on the other hand, of any other "digital content or product generally bearing the photograph, even modified, and/or the Juventus trademarks, as well as the use of said trademarks in any form and manner". This judgement echoes the US court decision involving Maison Hermes against the artist Mason Rothschild and Nike in relevant goods traded in StockX, a second-hand market.

In the latter case, in particular, this dichotomy of NFT / digital content cannot be ignored. The judge will have to decide whether the creation of an NFT generates an intrinsic value rather than a mere digital certificate of ownership of the associated property, which, hypothetically, the person who mints and uploads the NFTed work is the legitimate owner of the work. We can deduce that even if someone possesses a good legitimately, it can be unlawful for the legitimate owner to produce NFTs of the good protected by IP rights. Since the judgments are still at a first summary level, we can only speculate on this issue.

The Commercial Law Court of Barcelona (Visual Entidad De Gestion De Artistas Plasticos/ Punto Fa, S.L. [2022] AJM B 1900/2022 – ECLI:ES: JMB: 2022:1900, Juzgado de lo Mercantil nº 09 de Barcelona) delivered one of the first judgments dealing with the relationship between intellectual property and NFT. The decision involves the fast fashion brand Mango and the Spanish collective society for artists VEGAP (Visual Entidad de Gestión de Artistas Plásticos). In March 2022, Mango exhibited a series of artworks created by Farkas, an artist, in a virtual museum on the Decentraland, a Web 3.0 site. Mango legitimately owns the original copy of the works. The collection was designed to reinterpret rather than directly reproduce the artworks, which are under copyright protection. VEGAP sued Mango for copyright infringement, arguing that the minting and displaying of the artworks infringed copyright, Mango argued that the NFTs were just a list on OpenSea and did not represent any proprietary rights per se. The Court ordered tokens to be de-listed and further pointed out that the withdrawal of a work does not amount to destroying tokens since tokens can be used during the process. For this reason, the Court orders the claimant to provide a cryptocurrency wallet, with a deposit of EUR 1,000 that will be used to maintain legal custody of the NFTs and orders OpenSea to transfer custody of those tokens to be deposited to the applicant's portfolio.

The first aspect of the dispute is the extent of Mango's rights as owner of the physical artwork. The ruling states that VEGAP transferred the right to display physical works publicly, but nothing else. The Court assumes that the right to display does not give the right to digitise the work, display and sell it as NFT. The second question that the Court will have to examine is whether adapting a work in this way infringes copyright. Styles and ideas are not protected, only the expression of the idea is protected. If the Court decides that these designs are indeed in violation of relevant IP rights, the question is whether the minting NFT of a work without authorisation is unlawful in itself and whether the display and sale of such an NFT is a communication o the work to the public. It can be argued that an NFT may include a link to a copy of the work but not the work itself. The connection could not even be permanent and may be interrupted. In addition, the actual connection to work is not always easy to reach. If the link is to an IPFS file, it is not accessible unless a specialised browser like Brave, which can read IPFS links, is used. From this perspective, it is difficult to admit that "the act of minting" is protected as an exclusive right of the author.

4.2. *Chinese cases*

In the first NFT court decision in China (Qice Technology Ltd v A Technology Ltd), the Hangzhou Internet Court, an intermediate-level court, holds an NFT-trading platform liable for copyright infringement for an NFTed unauthorised reproduction of an artwork uploaded by its user. The court discussed similar issues regarding the nature of NFTs. It holds that the metadata exclusively and uniquely represents a copy of an artwork. It is identifiable by third parties and maintains the scarcity of the work in a digital form. Therefore, an NFTed work is a 'digital commodity', and NFTed copies of the work are digital assets. The trade of an NFTed work is essentially a transfer of ownership of the copy being tokenised and uploaded (page 18). Acquiring such an NFTed work entails obtaining the property rights and interests in that copy. It entails no license to use such digital assets nor a license or a transfer of the intellectual property rights of the underlying artwork (unless the sales agreement provides otherwise). In the further analysis of copyright infringement, the court distinguishes NFTed work from a physical object. It holds that the distribution right does not apply in this case because it only concerns the distribution of physical objects. The legitimate creator of an NFT should not be the person who possesses a copy of the underlying work but the person who owns the copyright or obtains a due license for the underlying work. Hence, it holds that the uploading of the NFTed work infringed on the right to disseminate work by information networks.

However, as the court is only a district-level court, it remains to be seen whether its ruling will be widely followed or is likely to be challenged in subsequent cases by other courts in China. In any case, as the authorities have not yet enacted any formal NFT laws or regulations, the court's insights in the judgment are meaningful, and NFT players in China should carefully consider the implications of the ruling.

5 *Conclusions*

The value of art has always come from the reputation of the author and the scarcity of the work through 'authenticity'. NFTs offer artists the opportunity to secure incomes with tracing and tracking functions and embedded smart contracts while encouraging the dissemination of artwork that cannot be reproduced without authorisation. If the profit from selling NFTs is large enough to motivate authors, copyright as a legal monopoly is no longer necessary to generate rewards. Recognising NFTs as property encourages artists to be open to the market, which helps create cultural prosperity and increase social welfare.

The NFT is more than a recording of digital work. Minting an NFTed work is to record the work on the blockchain through an identification code. The creation of the digital tokenised work (i.e. registered blockchain with hash code) involves the acquisition of ownership by the registration holder. NFTed artwork might evoke the question of exclusive possession and control of the work, including property and intellectual property such as copyright. The right to tokenise a work protected by copyright belongs to the owner of the copyright or those who have the authorisation of the owner; beyond this hypothesis, this right belongs to the owner of NFTed work. Consequently, it is necessary to distinguish NFTs from NFTed artwork. The NFT is a mechanism for forming the ownership of a right of use and disposition of digital work in the hands of the person who registers the NFTs.

Although the judiciary from different jurisdictions has been willing to extend the protection for brick-and-mortar property to NFTed artworks, NFTs are at the risk of misrepresenting or even infringing IP rights in a work minted into NFTs. Possessing an NFT does not necessarily confer any legal right over the digital or physical object the NFT refers to. Several proposals have been advanced to overcome this limitation to the concept of NFT. Some try to strike a balance between the legal and the technical dimension, incorporating aspects of copyright law into the metadata of the NFT or in accompanying documentation; others propose to incorporate the actual work into the underlying smart contract. While many commentators are critical at this point (Ryan 2021), others, like Fairfield, see the potential of NFTs as forms of 'unique digital property', re-establishing personal property rights that have been lost to user agreements and other instruments of uneven bargaining power (Fairfield 2021).

In the UK, the Task Force took the view that Colonial Bank was not to be treated as limiting the scope of what kinds of things could be property in law. Instead, it showed the ability of the common law to stretch "traditional definitions and concepts to adapt to new business practices". National Provincial Bank Ltd v Ainsworth [1965] has established a four-factored test for the property as something "definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability". In Singapore, the court rejected the analogy between a title deed for real property and NFTs as a certificate for digital assets. Rather, it adopted the Ainsworth criteria and upheld NFTs as property.

In Europe, although some jurisdictions traditionally take a narrow approach concerning the scope of the property, which is limited to "corporeal things", many others are more open to including incorporeal assets, such as patrimonial rights, into real rights. The court decisions discussed in section 4 demonstrate that cryptocurrency and NFTs are considered digital assets (Calzolaio 2020). The Italian and Spanish Courts noted that NFTs, on the one hand, bear a certifying function and, on the other hand, link to specific content. China's first Civil Code explicitly recognises virtual property as an object protectable by law. In the first NFT-concerned case, the court distinguishes the NFTed work from a physical object and holds that an NFTed work is a 'digital commodity', and NFTed copies of the work are digital assets. It adopts a test similar to the Ainsworth test that evaluates whether the data is unique and securely linked to a work and is identifiable by third parties. It is consensus that while the right of the owner to mint and tokenise a work is to be fully protected, it cannot be overlooked that this right must be exercised in compliance with the principle of economic solidarity and fair competition. The comparison between the legal systems implies an increasing level of convergence of law towards a harmonised concept of digital assets in a world built on blockchain and tokens. In comparing the common law and civil law systems, convergence of law is emerging in the digital world. The legal systems have advanced closer towards a concept of property with many shared features. First, the data must be stored securely on the blockchain ledger. The nature of blockchain technology gives the owner the exclusive ability to transfer the NFT to another party, which underscores the "right" of the owner. Second, the data should be capable of being recognised by third parties. Third, the data has intrinsic value that is respected and potentially desirable by third parties. Lastly, an NFT has a relevant degree of permanence and stability as money in bank accounts which, nowadays, exist mainly in the form of ledger entries and not cold hard cash. Property is moving from a static concept to a concept of act and activity. At the same time, ownership is the link between the owner and the worthy interest to be realised and guaranteed.

NFTed artworks are considered incorporeal assets that confer quasi-property rights and interests. The legal principle of numerus clausus is an instrument for legal certainty. However, reality goes beyond the dogmas of the legal tradition. The jurist must take an evolutionary leap forward to adapt the mechanisms and techniques of law to emerging digital technologies that change the societal ecosystem. The concept of property per se and the rights deriving from the property need a recalibration that shifts from focusing on exclusive control to the use of the thing. Attention must be paid to the consideration that the “thing” becomes a juridical good as a reference point and content of legal situations if it has a socially appreciable utility and finds in the orderly system an evaluation in terms of merit (Perlingieri 1990). The artificial exclusivity – created by the relationship between the account/portfolio and the hash via NFT – that represents the copy of the underlying value – evokes the proprietary logic even if its dynamics undermine any theoretical definition for the benefit of the valuation of the interests involved.

Reference List

Articles

Aksoy, P.C. & Üner, Z. (2021). NFTs and Copyright: Challenges and Opportunities. Journal of Intellectual Property Law & Practice, 16(10), 1115-1126.

Calzolaio, E. (2020). Il bitcoin come oggetto di property. Note a margine di una recente sentenza della High Court. Il Foro Italiano, CXLV 10, 494-500.

De Caria, R. (2020). Blockchain and Smart Contracts. Italian Law Journal, 6(1), 363-380.

De Caria, R. (2018). The Legal Meaning of Smart Contracts. European Review of Private Law, 26(6), 731-752.

Dornis, T.W. (2021). Of ‘Authorless Works’ and ‘Inventions without Inventor’ – The Muddy Waters of ‘AI Autonomy’ in Intellectual Property Doctrine. European Intellectual Property Review, forthcoming 2021, 1-28

Fairfield, J. (2021). Tokenized: The Law of Non-Fungible Tokens and Unique Digital Property. Indiana Law Journal, forthcoming. https://ssrn.com/abstract=3821102

Frye, B.L. (2022). After Copyright: Pwning NFTs in a Clout Economy. The Colombia Journal of Law and Arts, 45(3), 341-353

Moringiello, J.M. & Odinet, C.K. (2022) The Property Law of Tokens. Florida Law Review, 74, 607-671. https://ssrn.com/abstract=3928901 or http://dx.doi.org/10.2139/ssrn.3928901

Murray, M.D. (2022). Generative and AI Authored Artworks and Copyright Law. Hastings Communications and Entertainment Law Journal, 45(1), 28-43. https://ssrn.com/abstract=4152484 or http://dx.doi.org/10.2139/ssrn.4152484

Murray, M.D. (2022). NFT Ownership and Copyrights. https://ssrn.com/abstract=4152468 or http://dx.doi.org/10.2139/ssrn.4152468

Perlingieri, P. (1990). L'informazione come bene giuridico. Rass. dir. Civ., 326-338.

Teruel, G.M.R., Simon-Moreno, H. (2021). The digital tokenization of property rights: a comparative perspective. Computer Law and Security Review, 41, 4-5.

Book Chapters

Low, K.F.K. and Hara, M. Cryptoassets and Property. In Sjef van Erp & Katja Zimmermann (eds), Edward Elgar Research Handbook on EU Property Law (forthcoming)

Cases

AA v Persons Unknown, [2019] EWHC 3556 (Comm)

Colonial Bank v Whinney [1885] 30 Ch.D 261

CLM v CLN [2022] SGHC 46

Janesh s/o Rajkumar v Unknown Person [2022] SGHC 264

Juventus Football Club S.p.A. v Blockeras s.r.l. [2022] Court of Rome, IP Chamber, Docket No. 32072

National Provincial Bank Ltd v Ainsworth [1965] AC 1175

Osbourne v Persons Unknown & Anor [2022] EWHC 1021 (Comm) (10 March 2022)

Qice Technology Ltd v A Technology Ltd ([2022] Zhe 0192 Min Chu No. 1008

Ruscoe v Cryptopia Ltd (in Liq) [2020] NZHC 728, [2020] 2 NZLR 809

Skatteverket v Hedqvist [2015] EUCG, sez. V, 22 October 2015, case -264/2014

Visual Entidad De Gestíon De Artistas Plásticos v Punto Fa, S.L. [2022] AJM B 1900/2022 - ECLI:ES: JMB: 2022:1900, Juzgado de lo Mercantil nº 09 de Barcelona

English and Welsh cases

AA v Persons Unknown [2019] EWHC 3556 (Comm)

Danisz v Persons Unknown [2022] EWHC 280 (QB) at [13]

Fetch.AI Ltd v Persons Unknown Category A [2021] EWHC 2254 (Comm) at [9]

Ion Science Ltd v Persons Unknown (unreported EWHC(Ch) 21 December 2020, Butcher J) at [11]

Mr Dollar Bill Ltd v Persons Unknown [2021] EWHC 2718 (Ch) at [10]

Shair.Com Global Digital Services Ltd v Arnold 2018 BCSC 1512 at [15]

Vorotyntseva v Money-4 Ltd [2018] EWHC 2596 (Ch) at [13]
Wang v Darby [2021] EWHC 3054 (Comm) at [55]

Singaporean cases

B2C2 Ltd v Quione Pte Ltd [2019] SGHC(I) 03 [2019] 4 SLR 17 at [142], but the issue was left open on appeal: [2020] SGCA(I) 02, [2020] 2 SLR 20 at [144]. See now, however, CLM v CLN [2022] SGHC 46 at [46].

European cases

Juventus Football Club S.p.A. v Blockeras s.r.l. [2022] Court of Rome, IP Chamber, Docket No. 32072
Skatteverket v Hedqvist [2015] EUCG, sez. V, 22 October 2015, case -264/2014
Visual Entidad De Gestíon De Artistas Plásticos v Punto Fa, S.L. [2022] AJM B 1900/2022 - ECLI:ES: JMB: 2022:1900, Juzgado de lo Mercantil nº 09 de Barcelona

Others

Banerjee, A. (2022). Everything you need to know about consortium blockchain. Retrieved 4 November, 2022, from https://www.blockchain-council.org/blockchain/everything-you-need-to-know-about-consortium-blockchain/
Brown, E. (2022). Comparing public and private blockchain features, pros & cons. Retrieved 5 November, 2022, from https://bsvblockchain.org/news/comparing-public-and-private-blockchain-features-pros-cons
Bybit Learn (2022). Consortium blockchain. Retrieved 4 November, 2022, from https://learn.bybit.com/glossary/definition-consortium-blockchain/
CFI (2022). Initial Coin Offering (ICO). Retrieved 6 November, 2022, from https://corporatefinanceinstitute.com/resources/cryptocurrency/initial-coin-offering-ico/
CFI (2022). Minting Crypto. Retrieved 6 November, 2022, from https://corporatefinanceinstitute.com/resources/cryptocurrency/minting-crypto/
Craig, J. (2021). Crypto Minting vs Mining: What's the Difference? Retrieved 6 November, 2022, from https://phemex.com/blogs/crypto-minting-vs-crypto-mining
Crypto News (2021). What is Consortium Blockchain? Retrieved 4 November, 2002, from https://crypto.news/glossary/consortium-blockchain/
Delivorias, A. (2021). Understanding Initial Coin Offerings. European Parliamentary Research Services. Retrieved 6 November, 2022, from https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/696167/EPRS_BRI(2021)696169_EN.pdf
Drobitko, A. (2022). Can Artists Still Benefit From NFTs? Retrieved 6 No-

vember 2022, from https://www.forbes.com/sites/forbesbusinesscouncil/2022/06/29/can-artists-still-benefit-from-nfts/?sh=57efba0a648d

EUIPO, EUIPO Draft Guidelines 2023 edition. Retrieved 13 January, 2023, from https://euipo.europa.eu/ohimportal/nl/draft-guidelines 2023

Hamilton, A. (2022). The Private and Public Benefits of NFT Art. Retrieved 6 November 2022, from https://www.zenofineart.com/blogs/news/the-private-and-public-benefits-of-nft-art

Hashtag Investing (2022). Top 6 Benefits Of NFT's For Artists And Reasons To Use Them In 2022. Retrieved 6 November, 2022, from https://www.hashtaginvesting.com/blog/top-benefits-of-nfts-for-artists

Iredale, G. (2021). Public vs Private Blockchain: How do they differ? Retrieved 4 November, 2022, from https://101blockchains.com/public-vs-private-blockchain/

Jayachandran, P. (2017). The difference between public and private blockchain. Retrieved 4 November, 2022, from https://www.ibm.com/blogs/blockchain/2017/05/the-difference-between-public-and-private-blockchain/

Knowledge at Wharton (2019). How to Design an Effective Initial Coin Offering. Retrieved 6 November, 2022, from https://knowledge.wharton.upenn.edu/article/design-effective-initial-coin-offering/

McFarlane, B. and Douglas, S. (2022). Property, Analogy and Variety. Oxford Journal of Legal Studies, 42, 161-186.

OECD (2020). The Tokenisation of Assets and Potential Implications for Financial Markets. OECD Blockchain Policy Series. Retrieved 6 November, 2022, from https://www.oecd.org/finance/The-Tokenisation-of-Assets-and-Potential-Implications-for-Financial-Markets.pdf

OpenSea Learn (2022). What is minting? Retrieved 6 November, 2022, from https://opensea.io/learn/what-is-minting-nft

Rarible (2022). How do I sell my NFT on Rarible? Retrieved 6 November, 2022, from https://rarible.com/how-it-works/using-rarible/how-do-i-sell-my-nft-on-rarible

Reiff, N. (2022). Decentralised Autonomous Organisation (DAO): Definition, Purpose and Example. Retrieved 5 November, 2022, from https://www.investopedia.com/tech/what-dao/

Storey, A. (2022). 11 Surprising Benefits of NFTs for Artists. Retrieved 6 November, 2022, from https://postergrind.com/11-surprising-benefits-of-nfts-for-artists

Tipotsch, A., Formulating a Smart Contract and Minting an NFT. Retrieved 13 January 2023, from https://www.schoenherr.eu/content/formulating-a-smart-contract-and-minting-an-nft/

Trading Education (2021). Cryptocurrency Mining Explained. Retrieved 6 November 2022, from https://trading-education.com/cryptocurrency-mining-explained

Trevisi, C., Visconti, R.M., Cesaretti, A. (2022). Non-Fungible Tokens (NFT): business models, legal aspects, and market valuation. Rivista di Diritto dei Media. Retrieved 13 January, 2023, from https://www.medialaws.eu/rivista/non-fungible-tokens-nft-business-models-legal-aspects-and-market-valuation/

Whittaker, M. (2022). How Does Bitcoin Mining Work? Retrieved 6 November 2022, from https://www.forbes.com/advisor/investing/cryptocurrency/bitcoin-mining/