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TIME FOR RETHINKING? – NON-FUNGIBLE TOKENS AND OWNERSHIP RIGHTS FROM THE HUNGARIAN POINT OF VIEW

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Abstract

The study focuses on the examination of the most fundamental concept of civil law, especially the right in rem, namely the concept of things. The author seeks to answer the question of how new phenomena appearing because of technological development, such as digital assets, including various crypto assets like tokens, can be integrated into the system of classical civil law, whether they may be subject to property rights or the civil law rules applicable to the property.

To answer this question, the author first explores the concept of things based on the old Hungarian private law literature and the provisions of the earlier and current Hungarian civil codes, presenting contemporary private legal opinions. Then, she deals with the legislative extension of the rules governing things and reviews which assets have been subject to a possible revision of the conceptual framework of the thing. The author pays particular attention to the examination of digital assets, defining and classifying tokens based on the MiCA regulation recently adopted by the European legislator. In the final part of the study, the author deals with the category of non-fungible tokens, highlighting the problems that are currently identifiable and clearly need to be solved in the future.

Keywords: *ownership, rights in rem, non-fungible token, crypto asset, MiCA regulation*

1. Introduction

Nowadays, technological development, the appearance, and the continuous spread of artificial intelligence have given birth to several new directions of scientific research. Jurisprudence is no exception: today there is probably no area of law that remains completely untouched by technological influences.

Within private law, one of the dominant lines of research is the liability issues raised by new types of instruments resulting from technological developments (e.g. autonomous vehicles, unmanned aerial vehicles, etc.), which are also closely related to administrative law, constitutional law, and data protection. At the same time, digitalisation and the emergence of artificial intelligence raise questions in other areas of civil law, such as the law in rem and especially contract law.

According to the definition set out in Article 5:14 (1) of the current Hungarian civil code, Act V of 2013 on the Civil Code (hereinafter HCC), the most basic concept of right in rem is a tangible object that can be taken into possession and may be the subject of property rights. The question, however, is how to deal with the new phenomena emerging as a result of digitalisation (e.g. crypto-assets, other digital assets, etc.) that cannot meet the criterion of possession required by civil law. The question is

whether the traditional conceptual framework may need to be revised or expanded in any direction, or whether the current set of rules can be adapted appropriately to the new solutions.

The legal community is also forced to face the untenable nature of the traditional private law approach in the field of contract law. The conclusion of contracts electronically was a novelty about a decade and a half ago. However, a significant part of contractual agreements is now concluded in this form, while the emergence of so-called smart contracts is a serious challenge for both theorists and practitioners. In the latter form of contracting, the lawyer becomes almost a layman: without the 'decipherment' of a computer specialist, the contract is only an illegible set of data.

The presentation delivered at the conference and the present study aim to reflect on the phenomena raised above in the field of law in rem because of new technologies, while at the same time attempting to identify possible directions for solutions.

2. 'Thing' as a basic concept of civil law

Law in rem is a classical area of civil law forming part of private law, which, within the framework of absolute rights, ensures legal dominion for persons over the assets available, thereby fundamentally defining the face of the property structure of society. (Lenkovics, 2001, p. 14) The rights regulated within the framework of legal relations in rem are dominant, i.e. in the case of such legal relations having absolute structure the fundamental question is who has power over the given property. The absolute structure of the legal relationship suggests that the subject of the legal relationship, the rightsholder (e.g. owner, beneficial owner, etc.) is at the core of the legal relationship in rem, and all the characteristic features are defined in relation to it – in the words of *László Leszkoven*, examined from the point of view of the rightsholder. (Leszkoven, 2019a, p. 20).

Within the field of law in rem, 'thing' is one of the most fundamental concepts: it constitutes the indirect object of the legal relationship in rem, that is, what the immediate object, the human behaviour (in this case, power over the thing and its exercise) is directed to. For this reason, it is essential that the legislator delineates the boundaries of the concept of thing within the framework of civil law, and defines what it considers to be things and, in view of this, what can serve as an indirect object of the legal relationship in rem. It should be noted, however, that the concept of a thing in the ordinary and legal sense is not the same: as a legal term, the thing serves to designate and define the object of rights in rem, so it has a narrower meaning than the concept used in everyday life. (Kolosváry, 1942, p. 6)

The concept of thing has been present in Hungarian private law legislation from the very beginning. The Private Law Bill of 1928 regarded the term as a physical object. (Private Law Bill, Article 433). The model of this provision was Article 90 of the German Civil Code (*Bürgerliches Gesetzbuch*, hereinafter referred to as BGB) (BGB, Art. 90: *'Sachen im Sinne des Gesetzes sind nur körperliche Gegenstände.'*) of that time which stated that things within the meaning of the law are only tangible objects. However, in contrast to the German model which gave the term 'thing' a rather narrow meaning, the boundaries of the concept of things were drawn much wider by the Austrian Civil Code (*Allgemeines Bürgerliches Gesetzbuch*, hereinafter referred to as ABGB) (ABGB, Art. '*Alles, was von der Person unterschieden ist, und zum Gebrauche der Menschen dient, wird im rechtlichen Sinne eine Sache genannt*.') of that time, according to which anything that is different from man and that benefits man is regarded as a thing in the legal sense. The representatives of the Hungarian private jurisprudence of these years also formulated their positions differently regarding the conceptual definition of the thing, based on the provisions of the Private Law Bill.

According to *Bálint Kolosváry*, a thing can only be something that has a bodily existence. (Kolosváry, 1942, p. 8) In his view, 'incorporeal things' (*res incorporales* in Roman law) cannot be regarded as

things since they cannot be defined in space, and they do not have a physical character. Although *Lajos Tóth* drew the boundaries of the concept of things in a similar way, his definition is somewhat more detailed. In his interpretation, everything that exists outside of the person has a bodily existence, forms a separate unit, and can be an object of law. (Tóth, 1930, p. 221) *Antal Almási* described things as coproreal objects, legally separated parts of nature. (Almási, 1928, p. 40)

The previous Hungarian Civil Code, Act IV of 1959 (hereinafter HCC [1959]) did not define the concept of property. However, Article 94(1) stated that *anything that can be taken into possession may be subject to ownership*. At this time, the Hungarian legislator did not intend to take a position on the content of the concept of a thing; during the preparation of the HCC [1959] *Elemér Pólay* and *Gyula Eörsi* explicitly recommended not defining the concept of a thing. (Az 1959-es Polgári Törvénykönyv előkészítő anyagai. Az Igazságügyminisztérium iratanyaga az 1959-es Polgári Törvénykönyv előkészítésével és hatályba léptetésével kapcsolatban, I. kötet, Magyar Közlöny Lap- és Könyvkiadó, Budapest, 2017, p. 259). Nevertheless, the Hungarian legislator clearly considered it necessary to stipulate that only those things can be the object of ownership that can be taken into possession. That is, according to the HCC [1959], a thing is defined as the object of ownership.

Regarding Article 94(1) of the HCC [1959], the position represented by *Miklós Világhy* is worth mentioning. As he stated, Article 94(1) of the HCC [1959] suggests that the object of property right may only be the thing in the civil law sense. Nonetheless, this is in fact interpreted in reverse: the nature of a given object shall be assessed by whether it can be the object of ownership. Accordingly, the thing as a category of civil law is, in fact, nothing more than *an abstract expression of the object of ownership*. (Világhy, 1965, p. 285)

It also shall be explained, how the term 'can be taken into possession' shall be understood. This term has a dual meaning: on the one hand, it means the physical expression of the given object (corporeal object) and its ability to be brought under human domination and its actual possession, which at the same time is supplemented by the legal possibility and permissibility of possession. (Lenkovics, 2001, p. 36; Leszkoven, 2019b, p. 55) Contrary to this, *Attila Menyhárd* considers that possession can be recognised only regarding the physical property of the thing and cannot be understood in a legal sense. (Menyhárd, 2014)

The operative HCC changes the provisions of the HCC [1959] and lays down the following in relation to the concept of the thing: a *physical object that can be taken possession* of, which may be the subject of ownership. (HCC, Article 5:14 (1)). Thus, the text of the HCC clarifies the thesis emphasized by Világhy: the rem status ('thingness') of a given object is determined by whether it can serve as an object of property rights or not. As Leszkoven concludes, *the legislator puts the relationship of ownership at the centre of the right in rem and intends to approach the concept of right in rem through property rights and property relations*. (Leszkoven, 2017, p. 37) From this point of view, the comment of *Árpád Orosz* is also interesting. According to him, instead of using the term 'possession', it would have been more appropriate if the legislator had inserted the phrase 'ownership' into the text of the HCC. (Orosz, 2022)

According to the HCC, the object of ownership can only be things. Other civil law phenomena like rights, claims, or contractual positions cannot be the object of ownership, but the legislator provides for the transfer of them via separate legal institutions within the system of the law of obligations. (See the provisions of the HCC on assignment (Art. 6:193-6:201), transfer of rights (Art. 6:202), and transfer of contracts (Art. 6:208-6:211).)

3. The legislative extension of the application of the civil law provisions on a thing

The possible revision of the boundaries of the concept of a thing delineated normatively by the legislator is a recurring issue of private jurisprudence. The concept of a thing described by the HCC is rather narrow and inflexible, which makes its application difficult, especially in view of the economic and social changes.

As Lenkovics explains, *'the range of human needs and the things to satisfy them, and even more, so the intangible goods of financial value, are expanding or at least constantly changing with the passage of time*.' (Lenkovics, 2001, p. 35) Accordingly, it is not possible to construct an eternal concept of things that would be always capable to describe the object of the legal relationship in rem adequately.

This characteristic formulated by Lenkovics made it clear from a very early age to practitioners of private law that the extension of the civil law concept of things is indispensable. In his above-mentioned article, Kolosváry has already dealt with the question of whether natural forces and energies can be classified as things. In answer to the question, he stated that *'the classification of natural forces as things is both forced and superfluous.'* To protect the useful effects of natural forces, he considered the rules of property protection appropriate. (Kolosváry, 1942, p. 9)

The need for an extensive application of the rules on the thing was also acknowledged by Világhy. He considered that these rules could be applied to things other than physical things, albeit only in a highly figurative sense. He noted, however, that such an extension does not serve to strengthen the protection of other things. (Világhy, 1965, p. 285)

The HCC explicitly relaxed the strict framework of the concept of a thing and recognised other objects of law as having things-like nature, extending the application of the rules on things. According to Article 5:14(2) of the HCC, rules on things shall apply accordingly to money and securities as well as to natural forces usable as things, e.g. solar energy, wind energy, etc. At this point, it is worth drawing attention to the distinction between natural resources that can be used in a manner of things and so-called energy sources (e.g. oil and its derivatives, natural gas, coal), since possession may have particular significance in relation to the latter.

Article 5:14(3) of the HCC provides that rules on things shall also apply to animals, taking the provisions of Acts (Cf. Act XXVIII of 1998 on the protection and humane treatment of animals) establishing derogations reflecting their special nature into account. (HCC, Article 5:14 (3)). For example, Article 5:30 (1) of the HCC states that the owner has the right to transfer his ownership to another person or to discontinue his ownership. In contrast, Article 8 of the Act XXVIII of 1998 on the protection and humane treatment of animals states that the ownership and keeping of animals kept in the human environment and dangerous animals must not be abandoned.

It is important to note that HCC only provides for the application of the rules on things to the mentioned legal objects but does not extend the borders of the concept of a thing, i.e. they still do not qualify as things within the meaning of the HCC. (Menyhárd, 2014, p. 933)

However, this application of the rules on things raises further questions when treating money and securities as things. In connection with the HCC [1959], *György Bíró* has already drawn attention to the problems arising from the lack of differentiation of the legislative text. (Bíró, 2003) HCC [1959] concerned only securities and made no distinction between bearer securities and dematerialised securities. Whereas in the case of documentary securities the material characteristics are still strongly present (they are 'movable' by virtue of their tangible nature), dematerialised securities are completely devoid of that characteristic since they exist merely in the form of an electronic signal.

About the thing-like nature of securities, *István Gárdos* expressed a very interesting thought. As he explained, securities, unlike real things, do not exist independently of persons, but precisely as an element of the legal relationship between persons. Their essence is not their bodily nature, physical form,

and characteristics, but their content, the debt or value they represent. In his view, *'the very form of a dematerialised security confirms that, in the case of securities, the physical form is not inherent in the essence of the asset; a security is capable of shedding its bodily form without any change in its essential legal nature if a more effective method of fixing it is available.'* (Gárdos, 2017, p. 271)

In assessing the thing-like nature of money, the distinction between cash (i.e. banknotes and coins) and bank scriptural money raises further questions. Although judicial practice does not consider bank scriptural money to be a thing (Cf. BH+ 247.6.2015.), Gárdos took a position on this issue in a similar way to the one explained above: bank scriptural money can also qualify as a thing, since its value does not derive from its physical characteristics but is determined by the social convention behind its role as a general measure of value. (Gárdos, 2016b) According to the current state of private jurisprudence, bank scriptural money (Cf.: HCC, Article 6:395 (2). For details, see: Gárdos, István – Gárdos, Péter: Fidúcia és dologi biztosítékok – Az óvadék és a rendhagyó zálogjog, In: Polgári Jog, No. 6/2018.) is treated as a bank deposit on demand, as a claim on the bank, which, although capable of functioning as a means of payment, does not result in its quality as a thing or property.

4. Is it necessary to further expand the boundaries of the concept of a thing?

At the beginning of the 1980s*, Endre Lontai*, in his study dealing with intellectual property ownership issues, emphasized the need to rethink the prevailing concept of property rights, both in view of the inner content of property rights and its attachment to physical things. (Lontai, 1982, p. 414) With regard to intellectual property, *Tamás Sárközy* took the view explicitly that they are subject to property rights. (Sárközy, 1973, p. 117)

During the preparation of the HCC in force, it was Sárközy who formulated several controversial issues related to the civil law concept of things, which may raise the need for the further broadening of the concept of a thing and for the relaxing thing-centred nature of the rules of law in rem. (Sárközy, 2001) He raised the question of to what extent various intellectual works, such as authors' works, computer programs, inventions, industrial designs, trademarks, etc., as well as property rights, especially company shares, can be subject to property rights and consequently, can be transferable. During the codification process, the transferability of total assets of a natural or a legal person) as a unit was also disputed.

In assessing the above questions, Sárközy considered it justified to expand the range of property objects having an 'incorporeal' nature and proposed extending the rules on things to intellectual property and other rights having pecuniary value. (Sárközy, 2001) A similar position was taken by *Vilmos Bacher*, who considered that the legislator should have regulated intellectual property within the chapter of the HCC relating to property rights. (Bacher, 2000, p. 25) Bíró, on the other hand, proposed to expand the range of possible objects of transfer rather than broaden the boundaries of the general concept of a thing. (Bíró, 2003, p. 18)

Although the question of treating intellectual property as things arises again and again in Hungarian private jurisprudence, it can be stated that they do not qualify as things considering contemporary literary positions and judicial practice. Similarly, it can be stated in relation to the business share of a limited liability company that, although it is marketable and transferable as a set of intangible, pecuniary rights, it cannot be included in the category of things under the HCC. (BDT 2000. 275.)

Though the revision of the current boundaries of the concept of things has not yet been directly raised in contemporary private jurisprudence, the intensification of the digitalisation process, the emergence of artificial intelligence, the civil law 'taxonomic positioning' of new phenomena emerging due to the appearance of artificial intelligence (Cf. Stefán, Ibolya: A mesterséges intelligencia fogalmának polgári

jogi értelmezése, In: Pro Futuro, No. 1/2020, pp. 28-41., p. 38), and the applicability of existing rules raise several new questions, to which the legislator must provide answers in the future. The latter raises the issue, for example, of the legal status of digital data (For more details, see Szilágyi, Ferenc: Kié a digitális adat? Az allokatív adatjog létjogosultsága a magánjogi (dologi jogi) megközelítés margóján. Parts I and II, In: Polgári Jog, No. 9-10/2022 and No. 2022/11-12.) and the private law treatment of crypto assets, in particular cryptocurrencies and NFT-based assets. In the absence of regulation, these phenomena can be assessed solely based on the different positions appearing in jurisprudence.

The question of the private law treatment of crypto assets arises more and more frequently with the spread of these assets, and the response is becoming an increasingly urgent demand on the part of practice and financial market participants. A prerequisite for addressing the issue of crypto-assets is the clarification of the conceptual bases, the starting point of which is the so-called MiCA regulation (hereinafter MiCAR), adopted by the EU legislator in 2023. (Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, OJ L 150, 9.6.2023, p. 40-205). On the one hand, MiCAR defines crypto-assets and distinguishes between their types, on the other hand.

As defined in MiCAR, a crypto asset means a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology (DLT) or similar technology. (MiCAR, Article 3(1), point 2)

MiCAR distinguishes three types of crypto assets. 'Asset-referenced' token means a type of crypto asset that purports to maintain a stable value by referring to the value of several fiat currencies that are legal tender, one or several commodities or one or several crypto assets, or a combination of such assets. (MiCAR, Article 3(1), point 3). Due to the stability of their value, asset-referenced tokens serve as a means of payment.

The main purpose of an 'electronic money token' (or 'e-money token') is to be used as a means of exchange, but it is also intended to maintain a stable value by referring to the value of a fiat currency that is legal tender. (MiCAR, Article 3(1), point 4). The latter are therefore primarily means of payment, but their value is pegged to a single fiat currency for reasons of stability. In addition to the differences, the e-money token has several similarities in its functioning with the use of *electronic money*, insofar as the former also acts as an electronic substitute for coins and banknotes and is used for payment. (Electronic money is the monetary value represented by a claim on the issuer, stored electronically, including magnetic storage, issued upon receipt of funds for the execution of payment transactions as defined in point (5) of Article 4 of Directive 2007/64/EC and accepted by a natural or legal person other than the electronic money issuer. L. Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit, and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC, OJ L 267, 10.10.2009, pp. 7-17, Article 2, point (2). The current Hungarian Act on Credit Institutions (Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises, hereinafter referred to as ACE) regulates electronic money as a type of payment instrument and defines its concept in accordance with the Directive. Cf. ACEm Article 6(1), para. 16) (For a detailed comparison of electronic currencies and cryptocurrencies, see Bacsó, Róbert: Virtuális valuta mint a modern kori pénzpiaci szabályozás kihívása, In: Polgári Szemle, No. 1-3/2016, pp. 244-251.). Holders of electronic money may always require the electronic money institution to redeem their electronic money at par value for fiat currency which is legal tender. This possibility will also be available for e-money tokens after the entry into force of MiCAR, contrary to current practice.

As the third type of crypto-assets, MiCAR refers to *utility tokens*, which, contrary to the above two types of crypto assets, qualify as neither means of payment, nor medium of exchange, i.e. they do not serve financial purposes, They provide digital access to a good or service, available on DLT, and is only accepted by the issuer of that token. (MiCAR, Article 3(1), point 5). The type of crypto asset is therefore essentially linked to the functioning of the digital platform and digital services.

In the private law assessment of the first two of those types of crypto assets, i.e. asset-referenced tokens and e-money tokens, the qualification of these assets is the primary task. Accordingly, it is necessary to answer first the question whether, in addition to their usual designation as cryptocurrency, these instruments can be classified as money. (For an examination of cryptocurrencies from a financial law point of view, including the question of their integration into the financial system, see Nagy, Zoltán: A kriptopénzek helye és szerepe a pénzügyi rendszerben, In: Miskolci Jogi Szemle, No. 2/2019, pp. 5-14.). If the answer to the above question is positive, asset-based tokens and e-money tokens may theoretically be subject to the rules governing the property pursuant to Article 5:14 (2) of the HCC. In case of a negative answer, i.e. if cryptocurrencies cannot be included in the category of money, then the normatively extended rules governing them cannot be applied.

At the same time, the answer is far from simple, since there is no uniform concept of money throughout the legal system, and even the content of the term is not the same within the field of civil law since it is interpreted differently by the rules of law in rem and contract law. (Gárdos, 2016a) The distinction between cash and bank scriptural money has already been raised in the study, just as it has been recorded that Hungarian jurisprudence and judicial practice treat the latter not as a thing, but as a claim. From the point of view of the law in rem, therefore, the term money should be understood only as cash (banknotes and coins), given that, by virtue of their physical expression and tangibility, they participate in the circulation of property in the manner of things. However, for the purposes of the application of contract rules, the term money covers both cash and bank scriptural money.

Cryptocurrencies emerging because of digital transformation and technological development, which significantly influenced the evolution of money, can be understood as a specific version of money as a means of payment, even legal, created by digital technology. However, the question arises whether the nature of cryptocurrencies as a means of payment is sufficient to consider them as money, or whether there are further characteristics along which a given instrument, means of payment, can be classified as money.

Regarding the functions of money – approached from an economic point of view – *Zoltán Nagy* primarily emphasizes its function as a means of exchange and its value-carrying character in the exchange of goods, in addition to which he also mentions the appearance of money as a unit of account, i.e. that money serves to express the value of things and goods. (Nagy, 2019, p. 7) However, the possible compliance of cryptocurrencies with these three criteria does not mean that they can be legally included in the money category. The latter would require its recognition as legal tender, issuance by an authorised financial institution (e.g. Hungarian National Bank) and placing on the market, but in the case of cryptocurrencies this element is completely absent. Based on the above, it can be concluded that *cryptocurrencies cannot be considered money in legal terms, but only in an economic sense,* (Cf.: Dornfeld, László: A kriptovaluták és az e-bizalom kapcsolata, In: Magyar Rendészet, No. 4/2021, pp. 211-227, p. 211; Béldi-Turányi, Noémi Tímea: Bitcoin polgári jogi megítélése, és szabályozásának törekvései, In: Bujtár Zsolt et al. (eds.): Kriptoeszközök világa a jog és gazdaság szemszögéből. Konferenciakötet – Válogatott tanulmányok, Pécsi Tudományegyetem, Állam- és Jogtudományi Kar, Pécs, 2021, pp. 159-172, p. 167; Rácz, Lilla: A személy és a dolog fogalmának (lehetséges) változásai a mesterséges intelligencia és a kriptovaluták világában, In: Állam- és Jogtudomány, No. 4/2020, pp.

82-107, p. 104.) and therefore the application of civil law rules on things cannot be extended to them. In view of this statement, the following question rightly arises: if cryptocurrencies cannot be considered money in rem, what other category of private law can they fall under? Can they possibly be perceived as claims, like bank scriptural money? The answer can also be deduced from the lack of recognition of cryptocurrencies as money: if cryptocurrency is not considered money, then the rules of contract law governing monetary claims cannot be applied.

At the same time, the perception of cryptocurrencies at EU level is different. The evolving EU regulation of cryptocurrencies, including the MiCAR proposal, which has been referred to several times before, clearly moves in the direction that crypto assets (including cryptocurrencies), similarly to electronic money, are defined as claims and accordingly their transfer or reclaim can take place in accordance with contract law rules. Therefore, asset-referenced tokens and e-money tokens may therefore be defined in domestic law as means of payment substituting money, in accordance with EU legislation. In a recent study, *Ádám Boóc* explicitly defined cryptocurrencies as freely convertible virtual tools having no issuer, and which serve as money substitutes. (Cf.: Boóc Ádám: A dologi jog legfontosabb technológiai jogi kérdései, új technológiák joga és a dologi jog, In: Homicskó Árpád Olivér (ed.): A digitalizáció hatása az egyes jogterületeken, Károli Gáspár Református Egyetem, Állam- és Jogtudományi Kar, Budapest, 2020, pp. 25-40, p. 35.).

5. The general private law approach of tokens

Among the types of crypto assets defined by MiCAR, only the two categories that function as means of payment, which can also be called cryptocurrencies, were assessed in rem and, as a preliminary question, their possible classification as money was discussed. However, this problem could also be examined in a broader context. In this case, the fundamental question is how tokens can generally be incorporated into private law dogmatics and regulatory framework.

A comprehensive examination of the outlined problem cannot take place within the framework of the present study, as it requires the continuation of the research started, i.e. it is not yet possible to formulate answers supported by appropriate arguments. Nevertheless, it is worth drawing attention to some phenomena that should receive attention during further processing and in-depth analysis of the topic.

Tokens are a legal embodiment of a share of an asset, a set of permissions, or a set of claims that are held by the holder of the token. They are blockchain-based records that represent the title and other property rights. (Konashevych, Oleksii: General Concept of Real Estate Tokenization on Blockchain, In: European Property Law Journal, 1-2 (Iss. 9) (2020), pp. 1-45, p. 6). A token as a unit of account connects to the address of the user who exercises exclusive control over the address by his private key. Tokens can appear either in physical form or they can be a digital representation of a physical asset (e.g., a real estate or an artistic work) or a set of claims, (e.g., the electronic representation of a debt contract).

Based on the main characteristics of tokens, we can distinguish between fungible and non-fungible tokens (hereinafter referred as to NFTs). While fungible tokens can be substituted by other fungible tokens, NFTs have a special place in the diverse world of tokens. Their specialty is precisely their irreplaceability. They are unique and not fungible with other crypto-assets, therefore their value is attributable to each crypto-asset's unique characteristics and the utility it gives to the holder of the token. (MiCAR, Recital 10). One of the most common uses of NFTs is works of art, where tokens are linked to digital artwork (For the conceptual definition of digital artwork and the detailed treatment of the related issues, see Sztermen, Orsolya Lili: A digitális műalkotások megjelenési kérdései. I.

Terminológiai problémák, In: Miskolci Jogtudó, No. 3/2022, pp. 70-83.) and provide proof of authenticity by operating based on blockchain technology.

While artefacts produced in the traditional way are clearly considered things in civil law terms and can accordingly be subject to ownership, the assessment of digital artefacts, particularly NFT-based digital artworks, is far from clear. Since the latter categories are not corporeal things, they have no physical dimension, they cannot be defined spatially, and they cannot be included under the concept of things according to the HCC, in accordance with the above-mentioned theoretical approach.

Another question about tokens is the tokenization of corporeal objects that classically fall under the concept of things, i.e. they can be taken into possession. In these cases, behind the given token there is a physical (property) object (referring to the previous question, for example, an artwork), which is tokenized by its owner. Thus, the token created in this way 'represents' the given asset in the virtual space, proving the ownership of the given thing. Although tokenisation of assets can be useful in practice in many ways (e.g. tokens can be used to make the transfer of assets traceable), rules in rem (e.g. rules on the transfer of ownership) in their current form are not suitable to apply for a situation similar to the above. (For further examination of this issue, see: Kőhidi, Ákos: A virtuális valóság pszeudoreáliáinak polgári jogi vizsgálata, In: In Medias Res, No. 2/2022, pp. 55-66, 63-64.).

6. Closing remarks

The way, as the legal structure of a given society explains the concept of a thing is always depends on the economic and technical development of the society, and its distinguishing skills and abilities*, László Asztalos* stated. (Asztalos, p. 178. Cited by Lenkovics, 2001, p. 35) There is no doubt that economic and social changes have an impact on the development of legal regulations, so it is also clear how the need to revise and expand the boundaries of the classical concept of things ('physical objects that can be possessed') arises from time to time in private law jurisprudence.

The Hungarian legislator accepted the extension of the application of the rules on things already at the time of the adoption of HCC [1959], but the normatively defined framework of the category of things has not changed to this day. According to Article 5:14 (1) of the HCC in force, the object of ownership can continue to be only physical objects that exist in their physical reality.

Considering the well-founded position of representatives of private law jurisprudence, the Hungarian legislator still resists the recognition of disembodied (intangible) objects as things. Nevertheless, it allows the *appropriate* application of the rules relating to things in several cases, such as money, securities, natural forces that can be used in the manner of things, and animals. On the other hand, instead of broadening the boundaries of the concept of things, the legislator prefers to expand the range of objects that can be the subject of transfer (e.g. claims, rights, contractual position).

The phenomena that arose because of digital transformation are undeniably present in our everyday life: they work and are in motion. At the same time, however, the law is still a mere spectator of events – it does not seem to be able to respond adequately to the questions raised by the appearance of these phenomena yet, although the answer is constantly being demanded by legal scholars. The legal nature of the new phenomena examined in the study is not yet defined and will probably not be possible until there is a need to establish a regulatory framework for their operation at a global level.

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