Inheriting Digital Assets – A Glimpse Into the Future

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Abstract

The valuation of digital assets is one of the most important, and increasingly unavoidable issues in contemporary private law. Most of the digitalisation challenges, questions, and problems that have arisen in all areas of private law cannot be addressed or solved entirely without properly positioning the adjudication on digital assets. In this paper, we aim to outline the main questions in the field of private law, for which it is essential to establish an appropriate doctrinal basis for the emergence of digital assets. Handling such assets is a preliminary issue in determining the possible solutions for the latest problems in private law subfields. We review the main findings of recent research in contemporary private law on digital assets, then summarise and synthesise them to form our conclusions. Although the study mainly focuses on European trends, regulatory models and judicial practices of other countries are also examined.

Keywords: *digital asset, crypto asset, NFT, digital asset regulation, digital inheritance, digital will*

JEL Classification*: K11, K15*

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1. Introduction

The valuation of digital assets is one of the most important, and increasingly unavoidable issues in contemporary private law. Most of the digitalisation challenges, questions, and problems that have arisen in all areas of private law cannot be addressed or solved entirely without properly positioning the adjudication on digital assets.

In the study, we intend to map the questions that are raised in the field of private law and collect all those problems that the national legislators will soon have to face.

Firstly, we provide a brief theoretical overview of digital assets. We introduce the definitions of digital assets and the various models for their grouping. Then, we turn to the private law issues and uncertainties surrounding digital assets. In the first place, we make some general observations and outline the factors that make the uniform understanding of digital assets as a property or as a claim difficult. In the rest of the paper, we will highlight the main issues that raise concerns about digital assets in the

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various areas of civil law. Finding answers for these problems will be based on the acceptance of the thesis that digital assets can be adapted into the private law system and recognised either as things or claims.

The number of these found issues varies according to the civil law sub-sectors. The main reason for this is because of the problems related to digital assets are gradually becoming increasingly circumscribed: while initially most of the private law scholars dealing with digital assets were looking for answers on how they could be integrated or even whether at all they could be integrated into the existing private law system, nowadays more and more are moving beyond the ontological problem and are turning to the deeper underlying subproblems.

For example, one of the hottest topics today is the inheritability of digital assets. This is because there is a growing volume of digital "leftover" around the world, which the law cannot yet handle. Legislators need solutions, and legal scholars are working to provide the right doctrinal foundations to meet the needs and expectations of both the legislators and the society.

Problems related to digital assets in the field of family law were less likely to arise until recent times. The questions are mostly formulated by practitioners and courts and are essentially theoretical, reflecting the intention to prepare for the future. The situation is similar in the field of economic law, such as company law or insolvency law.

Although a common feature in all areas of civil law is that 'estate' and 'asset' are fundamental concepts, for the time being, the question of whether digital assets can be included is rarely addressed. What happens, for example, if a company wants to make the payment of the initial capital in cryptocurrency? If the law recognises know-how as apport, what about an NFT artefact? Is it possible to include an NFT asset as a contribution to the company's assets? Do the assets of a company in liquidation include its crypto investments? Does it constitute a withdrawal of cover if the chief executive officer of the company 'rolls over' the company's assets into cryptocurrency?

There are many similar, almost astonishing questions, which may seem futuristic and premature at this moment of digitalisation of private law. However, with the growth of digital wealth and people becoming more aware, it is predictable that such problems in these areas of civil law will also explode at an incredible speed, resulting in courts finding them unprepared. One of the main goals of this recent study is, therefore, to stimulate the working progress toward a mutual direction among theorists and practitioners in areas of civil law that do not yet seem affected by these newly introduced problems of digital assets.

2. What are digital assets?

In the most general terms, *a digital asset is anything stored digitally, that has value and ensures rights for its user.* It is a broad and non-legal concept covering various things. Common digital assets are for example the files stored in someone's computer or other data storage device, files stored in the cloud, data of electronic accounts, purchased items (e.g. e-books, NFT artworks, etc.), social media accounts,

and cryptocurrencies.

From the point of view of private law jurisprudence, digital assets can be circumscribed as *a new class of assets* which is a well-known notion of private law. Asset is a *complex concept* encompassing several elements. It can be defined as *the set of a person's rights and obligations concerning things and vis-à-vis other persons*.[2] The term covers all assets including things, rights, and contractual positions that are marketable and valuable.[3] Based on this, by analogy, *digital assets*, in the most general sense, *are a separate part of one person's wealth, comprising assets that exist only in digital form*. As *Christiane Wendehorst* defines, digital assets are items consisting of, or represented by, digital data, which are subject to a person's control.[4] The set of digital assets can be called a *digital estate*.[5]

Regarding the notion of digital assets, it should be stated as a preliminary point that a uniform and generally recognised, globally accepted legal concept for digital assets does not exist at this time. This is also emphasised by the *United Nations Commission on International Trade Law*.[6]

Indeed, the wording and the content of the term always depend on the creator of the definition and are always adjusted to the scope and the legal aims to be reached by the given regulation. Therefore, most scientific works treat the terms 'digital assets' and 'crypto assets' interchangeably, though the latter expression is something narrower, as it was explained above. Most international organisations and entities, with a few exceptions, have resisted defining digital assets. Nevertheless, recently several rules including legal acts and model rules were adopted that contain the definition of 'digital asset' or 'crypto asset'.

In 2022, the *European Law Institute* (hereinafter referred as to ELI) published its principles on the use of digital assets as security (hereinafter referred as to ELI Principles).[7] The concept of digital assets in the ELI Principles is based on the core attributes of assets. According to the ELI Principles, 'digital asset' means *any record or representation of value which fulfils the criteria determined by the Principles.*

In May 2023, a definition of 'digital assets' was also adopted within the framework of the International Institute for the Unification of Private Law (hereinafter referred as to UNIDROIT). Principle 2 (2) of the *UNIDROIT Principles on Digital Assets and Private Law* (hereinafter referred as to Principles DAPL)[8] defines a 'digital

[2] Lenkovics Barnabás, *Dologi jog* (Budapest: Eötvös József Könyvkiadó, 2001), 50.
[3] Menyhárd Attila, *Dologi jog* (Budapest: Osiris Kiadó, 2007), 171.
[4] Christiane Wendehorst, "Proprietary Rights in Digital Assets and the Conflict of Laws", in *Blockchain and Private International Law,* eds. Bonomi, Andrea – Lehmann, Matthias – Lalani, Shaheeza (Brill | Nijhoff, 2023), 101-127., https://doi.org/10.1163/9789004514850_007, p. 102.
[5] Paweł Szwajdler, "Digital assets and inheritance law: How to create fundamental principles of digital succession system", *International Journal of Law and Information technology,* No. 2 (Summer 2023): 144-168. https://doi.org/10.1093/ijlit/eaad014, p. 148.
[6] Taxonomy of legal issues related to the digital economy, United Nations Commission on International Trade Law, Vienna, 2023, p. 35.
[7] https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Principles_on_the_Use_of_Digital_Assets_as_Security.pdf (Date of download: 12 September 2023).
[8] Available at: https://www.unidroit.org/wp-content/uploads/2023/09/Principles-on-Digital-Assets-and-Private-Law.pdf (Date of download: 12 September 2023).

asset' as an electronic record, i.e. information stored in an electronic medium and capable of being retrieved, that is capable of being subject to control.

The third legal act that should be mentioned considering the definition of digital assets, is the *Regulation (EU) 2023/1114* (hereinafter referred as to *MiCAR*)[9], which was adopted by the European legislator in May 2023. By the adoption of this regulation, the European legislator intended to create a harmonised framework for markets in crypto assets. As can be seen, the MiCAR uses the term 'crypto asset' instead of 'digital asset'; among other important provisions, it defines and types of these assets. It is important to mention that the adoption of the MiCAR is not only a milestone in the development of the European crypto regulation but, as a potential regulatory model, it has also great importance for other legislations all over the world.

According to MiCAR, a crypto asset means a *digital representation of a value or of a right* that can be transferred and stored electronically using distributed ledger technology (DLT) or similar technology.[10] The regulation distinguishes three types of crypto assets: asset-referenced tokens[11], electronic money tokens[12], and utility tokens.[13] MiCAR will come into force on 30 December 2024.

Before the adoption of the MiCAR, some European countries have already developed their national legal framework for certain kinds of digital assets. Most states created legal rules on cryptocurrencies or adopted rules for digital assets with a concrete aim (e.g. digital assets as securities).

In November 2017, Estonia modified its anti-money laundering law and inserted provisions on virtual currencies. Cryptocurrencies ('virtual currencies') are defined by the law as a value represented in the digital form, which is digitally transferable, preservable, or tradable and which natural persons or legal persons accept as a payment instrument, but that is not the legal tender of any country or funds (e.g. banknotes or coins, scriptural money held by banks, or electronic money).[14]

In 2018, Malta adopted the *Virtual Financial Assets Act* which serves as the regulatory framework for cryptocurrencies. According to the act, 'virtual financial asset' (or 'VFA') means any form of digital medium recordation that is used as a digital medium of exchange, unit of account, or store of value and that is not (a) electronic money, (b) a financial instrument, or (c) a virtual token.[15]

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[9] 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, pp. 40-205.

[10] MiCAR, Article 3(1), point 5.

[11] Asset-referenced token is a crypto-asset other than electronic money token that purports to maintain a stable value by referencing another value or right or a combination thereof, including one or more official currencies. Due to the stability of their value, these tokens serve as a means of payment. MiCAR, Article 3(1), point 6.

[12] Electronic money tokens are used as a means of exchange, but they also aimed at maintaining a stable value by referencing the value of one official currency. MiCAR, Article 3(1), point 7.

[13] Utility tokens are neither means of payment, nor medium of exchange. They do not serve financial purposes but provide access to a good or a service supplied by its issuer. MiCAR, Article 3(1), point 9.

[14] Money Laundering and Terrorist Financing Prevention Act, Art. 3, point 9).

[15] The detailed review of the Maltese act see Christopher P. Buttigieg, Christos Efthymiopoulos, "The Regulation of Crypto Assets in Malta: The Virtual Financial Assets Act and Beyond", *Law and Financial*

In France, PACTE law (*Plan d'Action pour la Croissance et la Transformation des Entreprises*) was adopted in 2019 which, by amending the French Monetary and Financial Code (*Code monétaire et financier)*, introduced the category of digital assets (*'les actifs numériques'*). However, the French legislator did not define the term itself but determined those items that are covered by this category. According to Article L54-10-1 of the Monetary and Financial Code, digital assets include tokens and virtual currencies within the meaning of European law but exclude financial instrument-like assets.

The most comprehensive act on digital assets was enacted in Serbia, in 2020. Indeed, the law on digital assets (hereinafter referred as to LDA)[16] defines a digital asset (or virtual asset) as a digital representation of value that can be digitally bought, sold, exchanged, or transferred and used as a means of exchange or for investment purposes, whereby digital assets shall not include a digital representation of fiat currencies and other financial assets governed by other laws unless otherwise provided by the LDA.[17] LDA distinguishes between two types of digital assets: virtual currencies and digital tokens.

Since MiCAR determines the legal basis for crypto assets for EU Member States, pre-MiCAR national regulations shall be revised, amended, and adopted to the new legal framework created by the MiCAR.

Outside the EU, there are other regulatory models which are worth mentioning. In the USA, a federal regulation specifically addresses digital assets does not exist yet. Nevertheless, to provide for a system of regulation of digital assets, the Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission (SEC) introduced two bills. The *Financial Innovation and Technology for the 21st Century Act* (after this referred as to FIT) would amend Article 2(a) of the Securities Act of 1933 by supplementing it with several new definitions. Among them, digital assets, in general, are defined as any fungible digital representation of value that can be exclusively possessed and transferred, person to person, without necessary reliance on an intermediary, and are recorded on a cryptographically secured public distributed ledger. Moreover, FIT also determines those assets ('exclusions') that are not covered by the above concept.[18] According to the other bill, the *Blockchain Regulatory Certainty Act* digital asset means any form of intangible personal property that can be exclusively possessed and transferred from person to person without necessary reliance on an intermediary.

As can be seen, digital assets can take many forms and can be defined in various ways depending on the aim of the given regulation. Therefore, instead of creating a general concept of digital assets, it is worth reviewing their common characteristics which can designate the borders of the examined expression. Considering these cornerstones, it can be argued whether a given item should be deemed as digital:

Markets Review, No. 1 (March 2019): 30-40, https://doi.org/10.1080/17521440.2018.1524687.

[16] RS Official Gazette, No. 153/2020.

[17] LDA, Article 2(1).

[18] FIT, Section 101. See https://www.congress.gov/bill/118th-congress/house-bill/4763/text#toc-HD1E0AB46EB1F451283A255C67A11340C.

a) Digital assets exist only in digital form. However, it shall be added that in the case of the so-called asset-based tokens physically existing things are behind the given visual asset, e.g. NFT artwork.

b) Digital assets are stored digitally. This feature covers several forms of storage. Digital storing fulfils when the given asset is recorded either in the computer or any other data storage device of the user, in the cloud, or by using blockchain technology. (Cryptocurrencies are specific in this sense since they are always stored in a blockchain.)

c) Digital assets have a value, either financial or emotional.

d) Digital assets ensure rights ('quasi-ownership rights') to their user.

In the literature, scholars classify digital assets into separate groups according to different, e.g. economic, technical, or functional criteria, personal or non-personal nature, or financial value. The study does not aim to provide a comprehensive overview of the different grouping solutions. Nevertheless, based on our previous research[19], it can be stated that the various categories of digital assets developed by scholars can overlap, and therefore, a clear and strict typology of digital assets is not possible. Nevertheless, how digital assets are grouped will have great significance when we examine the questions that arise in the different fields of private law.

The absence of an appropriate theoretical basis for digital assets makes it difficult to answer the questions that arose in the different fields of private law. Therefore, scholars and researchers of contemporary private law jurisprudence shall develop the legal basis for this new phenomenon. Nevertheless, how to make this new legal basis is still undecided: shall we create entirely new rules based on a new theoretical basis, or shall new rules be adopted into the existing legal structure? Is the existing legal structure flexible enough to adopt this new phenomenon? Indeed, shall we force the application of the provisions of the traditional legal institutes (e.g. property) to new ones?

3. Adopting digital assets into the civil law system

Digital assets are an existing phenomenon of our days; however, they are still unregulated. Some say that regulating them is not important: the evolved system works in day-to-day life, therefore, there is no need to regulate them, since the 'code is law' rule prevails. Other scholars think that the law should treat digital assets somehow and the proper way is legal regulation. However, a preliminary question arises regarding the assessment of digital assets, namely, whether they shall be assessed as a subject of property or not.

There are different approaches in the private law jurisprudence. In civil law countries, we shall differ between countries where the subject of property, i.e. the 'thing', shall be tangible (e.g. Germany, Hungary, Japan).[20] Such an approach excludes

[19] About the classification of digital assets see Juhász Ágnes, "Digital Assets and Their Assessment in Private Law with Special Regard on Inheritance Law Provisions", *Revista De Derecho Privado*, 2025 (forthcoming).

[20] Article 90 of the German Civil Code declares that *'[o]nly corporeal objects are things as defined by*

deeming digital (and therefore intangible) assets as a thing.[21] In other countries where national rules treat the concept of things more flexibly, both tangible and intangible things can be covered by the term property (e.g. Austria, France, Romania, etc.)[22] Therefore, digital property can theoretically be adapted to civil law regulation.

The approach of common law jurisdictions to property law is very different compared to the traditional civil law systems. According to this approach, property can be divided into real property (interests in land, immovable property) and personal property (interests in other things). Within this latter, English and Welsh law traditionally recognises two distinct subcategories: rights relating to things ('choses') in possession and rights relating to things in action. The previous term covers any object which the law considers amenable to physical possession, i.e. this category covers tangible things, regardless of whether anyone lays claim to them. These things are capable of transfer by delivery. The latter category, things in action, means things that can only be claimed or enforced through legal action.[23] The above-mentioned distinction was also formulated and confirmed in case law.[24]

The distinction between things in possession and things in actions described above has long held sway in English law.[25] However, there has been a growing demand in the last decade for a theoretical basis for a new type of property that does not fall into either of the two categories. Recent judgments in the English judicial practice also argued that two traditional types of personal property should be maintained in modern property law. Courts of England and Wales recently have recognised certain types of digital assets as distinct things which are capable of being objects of personal property rights[26], or, at least, proceed to softly create a third common law-based category of

law.' Article 5:14(1) of the Act V of 2013 on the Hungarian Civil Code defines things as the object of ownership: '*[p]hysical objects that can be taken into possession can be objects of ownership*.' According to Article 85 of the Japanese Civil Code (Act No. 89 of 1896), '*[t]he term 'things' (...) means tangible objects*', as it is used in the code.

[21] See in detail: Juhász Ágnes, "Time for Rethinking? Non-Fungible Tokens and Ownership Rights from the Hungarian Point of View", *Multidiszciplináris Tudományok*, No. 3 (2023): 36-46, https://doi.org/10.35925/j.multi.2023.3.4; Juhász Ágnes, "The Civil Law Concept of things in the Digital Era – a Hungarian perspective", *Annales Universitatis Apulensis / Series Jurisprudentia* 27 (2023): 132-148.

[22] Article 265 of the Austrian General Civil Code declares that *'[e]verything that is distinct from the person and serves the use of people is called a thing in the legal sense.'* According to Article 535 of the Romanian Civil Code (Law Nº 287/2009 on the Civil Code), assets defined as *'[t]hings, tangible or intangible, that constitute the subject-matter of a property right.'* Concerning the Eastern Slavic countries see Roman Maydanyk – Nataliia Maydanyk – Nataliia Popova, "Reconsidering the Concept of a Thing in Terms of the Digital Environment: Law Towards an Understanding of a Digital Thing", *Open Journal for Legal Studies*, No. 2 (2022): 31-56, 32-33.

[23] Johan David Michels – Christopher Millard, "The New Things: Property Rights in Digital Files?", *The Cambridge Law Journal*, No. 2 (2022): 323-355, https://doi.org/10.1017/S0008197322000228.

[24] As it was stated in *Colonial Bank v Whinney*, '(…) *[a]ll personal things are either in possession or in action. The law knows no tertium quid between the two*.' See Colonial Bank v Whinney (1885) 30 Ch D 261, p. 38. IN 1931, another judgment confirmed that 'there is no middle term'. See Allgemeine Versicherungs-Gesellschaft Helvetia v Administrator of German Property [1931] 1 KB 672.

[25] Cf. Your Response Ltd v Datateam Business Media Ltd [2014] EWCA Civ 281 at [13] and [26].

[26] Fetch.ai v Persons Unknown [2021] EWHC 2254 (Comm), [2021] 7 WLUK 601; Zi Wang v Graham Darby [2021] EWHC 3054 (Comm).

things to which personal property rights can relate.[27]

In June 2023, the Law Commission of England and Wales (hereinafter 'Law Commission') published a report concluding that certain digital assets including crypto-tokens and NFTs are capable of attracting personal property rights. Moreover, the Law Commission recommended that legislation should create a clear and consistent framework for digital assets and confirm the existence of this third category (*tertia quid*) of personal property. On 30th July 2024, the Law Commission published a supplemental report and draft Bill.[28] In case of the implementation of this Bill, the existence of the above-mentioned third category of personal property would be confirmed by legislative act since Clause 1 of the draft Bill declares that '[a] thing (including a thing that is digital or electronic in nature) is not prevented from being the object of personal property rights merely because it is neither (a) a thing in possession, nor (b) a thing in action. Nevertheless, the draft Bill attempts neither to delineate what does or does not constitute a 'thing', nor what things are objects of property rights. It also does not attempt to detail the implications of such proprietary recognition.[29] It should be added that the draft Bill addresses only the law of Egland and Wales since private law is transferred to the Northern Ireland Assembly in Northern Ireland and the Scottish Parliament in Scotland. The preparation of a private law reform is not known yet either in Northern Ireland or in Scotland. Moreover, since the distinction between things in possession and things in actions is unknown in Scottish private law, the recognition and regulation of digital assets probably also will be made differently.

As can be seen, the private law assessment of digital assets changes from country to country, according to the legal systems. But why is it so important to answer the question of whether digital assets can be considered property? Property is one of the core concepts of private law. If a digital asset can be deemed as property, it can be transferred either among living persons or in the event of death, i.e. it will fall under the rules of succession law. Therefore, the assessment of digital assets is a preliminary question in the way of adopting these new items into our legal system. Moreover, it is not a question that digital assets shall be regulated by legal provisions, or, as *Haentjens* and *Lehmann* declare, '(…) digital assets are and will always be subject to the law and legal rules. (…) Moreover, digital assets need the application of proprietary rights (…).[30]

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[27] Vorotyntseva v MONEY-4 Ltd (t/a nebeus.com) & Ors [2018] EWHC 2596 (Ch); Ion Science v Persons Unknown 21 December 2020 (unreported); AA v Persons Unknown & Ors, Re Bitcoin [2019] EWHC 3556 (Comm), Director of Public Prosecutions v Briedis & Anor [2021] EWHC 3155 (Admin), Tulip Trading v Van Der Laan [2023] EWCA Civ 83, [2023] 4 WLR 16 at [24]-[25].

[28] Digital assets as personal property: Supplemental report and draft Bill, Law Commission, HC 188, Law Com No 416, available at https://lawcom.gov.uk/digital-assets-as-personal-property-supplemental-report-and-draft-legislation/ (Date of download: 4 August 2024).

[29] Digital assets as personal property: Supplemental report and draft Bill, p. 34.

[30] Matthias Haentjens – Matthias Lehmann, Matthias, "Chapter 16. The Law Governing Secured Transactions in Digital Assets", *Blockchain and Private International Law*, Andrea Bonomi, Matthias Lehmann and Shaheeza Lalani (eds.) (Leiden: Brill Nijhoff, 2023) 456-478, hhttps://doi.org/10.1163/978 9004514850_018, 459-460.

4. Questions to be answered in the field of succession law

Digitalisation has an impact on inheritance law as a field of private law in at least two directions. On the one hand, digitalisation affects the making of legal statements, and therefore, it is a question of whether any new forms (e.g. digital will) should be recognised beyond the traditional forms of making a will. On the other hand, it is also controversial, if digital assets can be part of the legacy or not, and if so, how. Which value shall we attach to them and how the different types of digital assets shall be treated?

There are general questions that are basic for inheritance law. Nevertheless, there are special questions as well which relate only to the intestate or testate succession. In the following, questions having general and special nature are also discussed.

4.1. Digital assets as a part of the legacy?

The main question that arose in the field of inheritance law is whether digital assets can be involved in the legacy. The answer depends on the private law assessment of digital assets. If they are deemed as property or claim, they can fall under the succession law rules. Nonetheless, since there is no clear answer to this question, the discussion on the private law concerns is hypothetical yet: we start from the hypothesis that digital assets can be somehow, either as property or claim, involved in the legacy, i.e. they are inheritable.

As we mentioned above, digital assets can appear in several different forms and the various digital assets require different legal treatment. The great diversity of digital assets forces scholars to group them. At this point, it is worth mentioning the classification of *Dubravka Klasiček* who differs between digital assets by the inheritance law problems raised by them. The drafted categories are as follows: (1) digital assets stored on an electronic device or a similar medium, created by the owner of the device, (2) digital accounts and their content, stored on online platforms' servers, (3) digital assets that have been purchased from online platforms, and (4) cryptocurrencies.[31] According to Klasiček, digital assets that fall under the same category can be treated in the same way by inheritance law.

The categorisation developed by *Paweł Szwajdler* is also noteworthy. He drafts two kinds of grouping by distinguishing between financially valuable and non-financially digital assets on the one hand, and between personal and non-personal digital assets, on the other hand.[32] Considering digital assets having a purely financial nature

[31] Dubravka Klasiček, "Inheritance Law in the Twenty-First Century: New Circumstances and Challenges", *Modernising European Legal Education (MELE) Innovative Strategies to Address Urgent Cross-Cutting Challenges,* Oskar J. Gstrein, Mareike Fröhlich, Caspar van den Berg and Thomas Giegerich (eds.), (Springer, 2023) 235-251, p. 239.

[32] In his reading, financially valuable digital assets cover digital assets having financial value but are not limited to digital assets that have a financial nature. The category of financially valuable digital assets is broader, encompassing financial digital assets, e.g. coins and cryptocurrencies. Non-financially valuable digital assets, in contrast, cover all digital assets that have only emotional, or sentimental value or are worthless in financial terms. Personal digital assets are strictly linked to their owners and typically have no

(e.g. coins, cryptocurrencies, tokens, and other financially valuable digital assets) Szwajdler states that they, due to their financial value, should be understood as parts of the legacy.[33]

We consider that the grouping of digital assets based purely on their financial value is not suitable for creating a proper basis for the inheritance of digital assets. The inheritance of a given asset, even physical or virtual, shall not depend on the value. Value is a relative feature of the assets, for which worth inheriting. However, as we experienced in real life, the ownership of things of only marginal value (e.g. the outdated furnishings of a house and old household objects, etc.) also passes to the heirs. These things often have emotional value for the heirs (e.g. grandfather's military ID card from Word War I), but no one doubts the inheritability of these assets. Why? Because they are physical things, and they can be the object of ownership rights. The value of digital assets is also different. Nevertheless, we cannot accept an approach according to which digital assets having purely emotional value shall be excluded from inheritance. We can agree with Szwajdler that the financial value of a given digital asset, especially in the case of cryptocurrencies, makes it suitable to be part of the legacy of the deceased person. But, to solve succession law problems of digital assets, another categorisation is needed.

Partially based on the grouping of the above-mentioned authors, we suggest another grouping of digital assets by which the inheritance of digital assets can be assessed. This categorisation is shaped by the 'behaviour' of digital assets. Based on this, we created three groups. There are digital assets that have a nature like things: they behave like things in real life. Although these items cannot be owned in the traditional, physical sense, the entitled person, even if called 'user', exercises certain rights similar to rights encompassed by the ownership: he can (digitally) possess, use, and dispose of the given digital asset, e.g. he can transfer it. There are other digital assets which are like claims. Mainly cryptocurrencies are included here. The third category covers assets that have a data-like nature. These digital assets mostly have a personal nature and cover different items (e.g. social media accounts, e-mail accounts, etc.) relating to the deceased person. This categorisation is value-independent, i.e. the inheritability of a given digital asset depends not on its financial value, but its main characteristics. Accordingly, while the first two categories of digital assets can be part of the legacy of the deceased person, the third one will not fall under the scope of succession rules but shall be considered under privacy rules. Nevertheless, it is a further question, if heirs can get the right to access digital content.[34]

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financial value (e.g. e-mail accounts, social media accounts, etc.). Nevertheless, these kinds of digital assets can reach a financial value regarding the person of the owner, for example in the case of celebrities. Contrary to personal digital assets, non-personal digital assets are transferable; they are not linked to a person but have financial value and can be the subject of a transaction.

[33] Szwajdler, "Digital assets and inheritance law: How to create fundamental principles of digital succession system", 152.

[34] How the heirs can get access to the digital remains of the deceased person, is an interesting and, at the same time, very important question. Because of its complexity, the topic needs further research, and in-depth knowledge and examination of privacy rules are required. The problem, therefore, is not elaborated thoroughly in this study. However, the issue of post-mortem privacy is becoming more and more prominent

4.2. Regulating the inheritance of digital assets

Provided that certain digital assets can be involved in the legacy, it shall be examined whether existing rules of inheritance law can be properly applied to them, or separate rules shall be developed. In this regard, Paweł Szwajdler emphasises that creating legal regulation in the field of digital inheritance is necessary to limit the existing legal uncertainty.[35] In our opinion, the legislation shall declare that certain kinds of digital assets fall under the legacy. Nevertheless, the wording of such a provision and the designation of the inheritable digital assets are also problematic and raise several further questions that cannot be answered now.

Declaring the inheritability of certain types of digital assets would be the most important provision in the inheritance law. In the case of intestate succession, the order of succession is determined by law: legal provisions provide the heirs and the proportion they inherit after the deceased. In this case, no further special provision is needed, most general rules could properly be applied to digital assets. The same is true for testate succession: if the inheritability of digital assets is recognised, the testator has the right to involve digital assets in the content of the testament. How to provide digital assets is a further question that we discuss later.

4.3. Renunciation of inheritance and disclaiming inheritance

By accepting that digital assets can be a part of the legacy, further questions need to be answered. What if an heir does not want to inherit the given digital asset because it has no financial, or emotional value for him? Is there any possibility of refusing it?

In the case of intestate succession, the law states who will benefit from the legacy of the deceased person and to what extent. Nevertheless, the strictness of the statutory provisions is mitigated by the freedom of choice of the heirs. Although this freedom is limited, it ensures the heirs express their intention when they do not intend to inherit. This freedom typically appears in the succession law of every legal system, even if the form is various and regulated in different ways.

In those legal systems, and most modern legal systems belong to this category, where the legacy passes to the heirs at the time of the legator's death without any separate legal act[36], heirs' freedom of choice is ensured by separate legal institutions.

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and is of increasing concern to the contemporary literature and legal community. Cf. See for example Lilian Edwards – Edina Harbinja, "Protecting Post-Mortem Privacy: Reconsidering the Privacy Interests of the Deceased in a Digital World", *Cardozo Arts & Entertainment Law Journal*, No. 1 (2023), 101-147.; Edina Harbinja, "Post-mortem privacy 2.0: theory, law, and technology", *International Review of Law, Computers & Technology*, No. 1 (2017): 26-42; Michael Birnhack – Tal Morse, "Digital remains: property or privacy?", *International Journal of Law and Information Technology*, No. 3 (Autumn 2022): 280-301.

[35] Szwajdler, "Digital assets and inheritance law: How to create fundamental principles of digital succession system", 162.

[36] In these legal systems, the acceptance of an inheritance is also known. Nevertheless, this acceptance does not have direct relevance for the transfer of rights in rem. Cf. Manfred Wenckstern, "Inheritance, Acceptance and Disclaimer", in *The Max Planck Encyclopedia of European Private Law*, Jürgen Basedow,

In these so-called *ipso iure* succession systems (e.g. in Belgium, Germany, France, the Netherlands, Hungary, Greece, etc.)[37], heirs may declare by judicial acts like renunciation of inheritance and disclaiming inheritance that they do not wish to share in the legacy. Indeed, the above-mentioned national laws compensate for the automatic acquisition of the legacy by declaring the right of the legal heirs to disclaim the acquisition of inheritance.[38]

In other legal systems, where the legacy does not pass to the heirs by force of law, but an additional statement (e.g. acceptance) is required or a special procedure shall be carried out (e.g. Austria, Italy, Spain)[39], heirs do not need any other legal institution that would ensure their free decision on the inheritance.

Although a comprehensive comparison of the national provisions on the renunciation or disclaiming of inheritance will not be made, in the following, we shortly review some national rules to illustrate the legal environment, into which the inheritance of digital assets shall be adopted.

According to Hungarian law, for example, the 'person entitled to intestate succession' may renounce his inheritance, wholly or partially, under a written contract concluded with the legator.[40] The term 'a person entitled to intestate succession' indicates that the renunciation of inheritance is limited to intestate succession and is opened only for legal heirs but not for testamentary heirs. The contract shall be concluded in written form; any oral agreement between the legator and the heir does not have the intended legal effect. It is important to emphasise that the renunciation shall not affect the descendants of the renouncing person unless the contract provides so or unless it was done against a satisfaction the amount of which equals the compulsory share.[41] Unless otherwise agreed by the parties, a renunciation by a descendant of the legator, always shall be made in favour of the other descendants.[42] Nevertheless, parties may provide otherwise. Thus, the heir is not excluded from renouncing only a certain part of the estate or given assets.

After the death of the legator, heirs also have the right to refuse the inheritance. According to the Hungarian rules, heirs, both intestate and testate, may disclaim inheritance following the opening of succession.[43] Compared to the renunciation of inheritance, there are some differences. Since disclaiming can be made after the death of the legator, it appears not in the form of a mutual agreement but a unilateral statement of the heir. A further important difference is that disclaiming always relates to the whole inheritance of the given heir, i.e. the heir cannot 'browse' among the assets of the

Klaus J. Hopt, Reinhard Zimmermann and Andreas Stier (eds.) (Oxford: Oxford University Press, Oxford, 2012).

[37] Hungarian Civil Code, Art. 7:87, German Civil Code, Art. 1942.

[38] Inge Kroppenberg, "Devolution of the Inheritance/Universal Succession", *The Max Planck Encyclopedia of European Private Law*, Jürgen Basedow, Klaus J. Hopt, Reinhard Zimmermann and Andreas Stier (eds.) (Oxford: Oxford University Press, Oxford, 2012), 459-462, 459.

[39] Cf. Austrian Civil Code, Art. 797 and Art. 819; Italian Civil Code, Art. 459 and Art. 470–476.

[40] Hungarian Civil Code, Art. 7:7(1).

[41] Hungarian Civil Code, Art. 7:8(1).

[42] Hungarian Civil Code, Art. 7:8(2).

[43] Hungarian Civil Code, Art 7:89(1).

legacy. Disclaiming inheritance, as a rule, is based on the principle of 'all or nothing'. Nevertheless, the law declares two exemptions. On the one hand, the heir, if not professionally engaged in agricultural production, may separately disclaim inheritance of the land used for agricultural production and the related equipment, installations, livestock, and work equipment.[44] On the other hand, the heir who inherits both under a testamentary disposition and by the law may disclaim the part obtained by him under one of these legal titles.[45] In other cases, when the heir's disclaiming is subject to a condition, time, or other restriction, or applies only to a part of the legacy (partial disclaiming), disclaiming shall be invalid.[46]

German civil law rules also ensure the right to disclaim the inheritance (*Ausschlagung*). Nevertheless, the heir can no longer disclaim the inheritance if he or she has accepted it, or, if the period for disclaiming has expired. The inheritance is deemed to have been accepted upon the expiry of the period.[47] The disclaiming can only be made within six weeks. This period commences at the time at which the heir becomes aware of the claim and the reason for the appeal. In certain cases (e.g. if the testator's last place of residence was only abroad or the heir is abroad at the beginning of the period), the time limit extends to six months.[48] The German civil code, similarly to the Hungarian, provides that disclaiming shall not be subject to a condition or a time limit, and cannot be limited to a part of the inheritance. Partial disclaiming is invalid.[49]

The Greek Civil Code contains very similar rules to the German provisions. This is not surprising since the Greek Civil Code was strongly influenced by the German law. Under Greek rules, the heir may disclaim the inheritance within a timeframe of four months from the time when the heir becomes aware of the death of the deceased. This time limit is 1 year, if the deceased lived outside of Greece, or the heir lives outside of Greece. The disclaiming of the inheritance shall concern the whole inheritance, i.e. partial disclaiming is invalid. Similarly, the disclaiming is also invalid if it is subject to a condition, time, or other restriction. [50]

After reviewing some existing national provisions on the renunciation and disclaiming of inheritance, some observations need to be made. As a main rule, all three examined national laws exclude the partial disclaiming of inheritance. According to this rule, the disclaiming of inheritance means the disclaiming of digital assets as well. Nevertheless, a question arises: what if the heir intends to share in the inheritance, but does not want to get any digital assets of the deceased person? This situation cannot be legally treated under the existing rules. However, such an intention presumably will arise in the future, since not all heirs want to get, for example, a crypto estate if he or she has never done business in this way. Therefore, in our opinion, digital assets shall be treated separately, and the separate disclaiming of these assets shall be recognised

[44] Hungarian Civil Code, Art. 7:89(2).
[45] Hungarian Civil Code, Art. 7:89(3).
[46] Hungarian Civil Code, Art. 7:89(4).
[47] German Civil Code, Art. 1943.
[48] German Civil Code, Art. 1944(1)-(3).
[49] German Civil Code, Art. 1947 and 1950.
[50] Greek Civil Code, Art. 1847-1848.

by the national legislators. Making exemptions is not unknown, for example, in the Hungarian succession law, where, as we mentioned above, agricultural land and other related assets can be separately disclaimed if certain conditions fulfil. The main argument behind this recognition is that in these cases the inheritance means a burden for the hairs by forcing them to change the way they lived and make a new start as a farmer.

We believe that the above example could be followed by the recognition of the specific disclaiming of inheritance of digital assets. The underlying reasons are different, as the inheritance of a digital asset does not require the heir to start a whole new life. Nonetheless, the law shall consider that not all people want to 'own' digital assets and do business in the crypto market. Therefore, in the future, detailed rules shall be elaborated for these situations.

4.4. Involving digital assets in the testator's will

Before going into the discussion in depth, it is important to note that in this subsection of the study, we examine the question of including provisions on digital assets in a will made by traditional means (e.g. in writing), but not in a digital will. We think it important to record this because in the literature, sometimes, the term '*digital will*' is wrongly defined as a provision for digital assets in the event of death. It should be stressed that the above expression does not refer to the content of the will, but to its form, i.e. a digital will is a collective term for wills made not traditionally, but with the help of a digital tool.

People are increasingly aware of the post-mortal fate of their assets. Those who have significant crypto assets and investments intend to provide these assets in the event of their death. Discussing the problem, of how digital assets can be involved in the testator's will, we also start from the hypothesis that digital assets are a part of the legacy. Therefore, the testator can provide digital assets and such a provision shall not be invalid under succession law rules. Nevertheless, due to the non-listable nature of digital assets, it is unclear how the testator can practically make this provision. Is it possible to include in the will a term like 'all my digital assets' or it is necessary to make separate provisions for each digital asset? According to us, both solutions can work.

In the law of property, the concept of '*universitas rerum*' has been developed to facilitate the movement of goods. It means a 'whole collection of things' or 'totality of things'. Indeed, in the case of succession law, legacy is also a kind of *universitas rerum* since it appears as the totality of the deceased person's assets. Consequently, digital assets are a subcategory, a special kind of universitas rerum within the legacy. However, when the testator can provide the 'digital assets as a whole', problems can arise in the future, since digital assets are not listed, and it can be debated by the heirs which digital assets are included in the '*digital universitas rerum'*. Therefore, the most appropriate and prudent solution is for the testator to identify, list, and dispose of the digital assets that are part of the digital estate.

Identifying all digital remains, however, is very difficult. There are several

seemingly ordinary digital items (e.g. online coupons, accounts, etc.) that we do not identify as digital assets. Therefore, making an inventory that contains all digital accounts with password protection including the login IDs and passwords of each site, is a real challenge. A further problem is that some websites require a user to periodically change the password for the account, so the list will need to be updated from time to time. If the person creates a new account, the list also needs to be updated.

Even if the person makes such an inventory of digital assets, inserting all this information in the will is quite worrying, not to mention the fact that updating passwords and creating any new accounts impacts the will as well. However, privacy issues involved with placing this information in a will could be solved if passwords were attached to the will as a closed annex or another separate document would contain them.

As can be seen, several essential and less essential questions arise regarding the involvement of digital assets in the will. Considering all the above, disposing of digital assets by a will presumably will not be without problems.

Closing the circle of uncertainties in succession law, we can conclude that the question of whether digital assets are inheritable is increasingly being answered in the affirmative.[51] This answer also meets the expectations set out by society. In this regard, however, it is a huge problem that scholars try to force traditional private law thinking on the new phenomena and want to pigeonhole digital assets into our traditional system of civil law concepts.

We consider that current succession law regulations shall be upgraded and, by elaborating new principles and concepts (e.g. digital inheritance, digital heir, digital will, etc.) adjusted to the needs of the modern age, will be suitable for the adoption of digital assets. But until these new regulatory solutions are in place, people are dying every day, leaving behind a digital legacy that needs to be managed in some way.

In the lack of clear legal rules, people are looking for other appropriate options by which they can dispose of their digital remains. Recently, new expressions appeared in the private law jurisprudence regarding digital assets and their inheritance. In a broad sense, *digital estate planning* means a process by which people can arrange and prepare for the disposal of digital assets. During this process, after the identification of digital assets, the person provides access to these assets and provides them for the event of his or her death. In common law jurisdictions, it is more often that attorneys provide the service of digital estate planning for the clients. However, as *Hopkins* notes, the methods of traditional estate planning are impracticable and cause privacy risks for the clients.[52] Moreover, some traditional estate planning companies also recognised this demand and offered a variety of services to assist in planning digital assets. But there are also several new companies set up specifically for this purpose.[53] The services

[51] Natalie Banta, "Property Interests in Digital Assets: The Rise of Digital Feudalism", *Cardozo Law Review*, No. 3 (2017): 1099-1157, 1108.

[52] Jamie P. Hopkins, "Afterlife in the Cloud: Managing a Digital Estate", *Hastings Science & Technology Law Journal*, No. 2 (2013), 209-244, 229. About traditional estate planning see in detail Maria Perrone, "What Happens When We Die: Estate Planning of Digital Assets", *CommLaw Conspectus: Journal of Communications Law and Policy*, No. 1 (2012), 185-210, 186-188.

[53] *AssetLock*, for example, enables users to upload documents, final letters, final wishes, instructions, important locations, and secret information to an online safe deposit box.

offered by these companies are not a complete solution for the inheritance of digital assets. Furthermore, many problems are also caused by the fact that the content of these digital asset plans and the disposal of digital assets are often in conflict with the *mortis causa* rules applied by online platforms and digital service providers. In brief, it can be stated that digital estate planning is still in its infancy and needs further development to serve the needs of society as effectively as possible.

5. Closing remarks

In this paper, we tried to map the questions in the field of private law, for which it is essential to establish an appropriate doctrinal basis for the emergence of digital assets. Assessing digital assets is a preliminary issue, along with solutions to the newest problems emerging in the private law subfields can be addressed.

If we glimpse the future, many questions have arisen in the field of succession law. However, mapping all these questions and predicting what further issues digital assets may raise is impossible. There will presumably be completely new phenomena that we cannot expect yet. That is why preparing for the future, as far as we can, and based on our current knowledge, is important.

Given the pace at which the law can react, we think that the questions listed above and others like them are not sought when they arise, because then it will be too late. If we only wait and do not prepare, the fast-changing digital environment will regulate itself instead of the law. We must not be complacent and say that this is the distant future, which is so far away – why bother? Instead, we should be proactive, get ahead of future problems, and prepare scenarios to answer future questions so that law enforcers are not left empty-handed, but are given a handhold.

Strong arguments favour recognising digital assets as assets in the traditional sense, i.e., things, rights, or claims. In our opinion, some kind of digital assets should be treated as things, and therefore, they can fall under the scope of the legacy, while other digital assets, e.g. cryptocurrencies, shall be treated as claims. In this latter case, the application of succession law rules would also be possible.

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