Exporting and Importing Digital Cultural Goods: EU Law and the Digital Revolution[1]

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Muzeológia a kultúrne dedičstvo, 2025,13:3:19–37
doi: 10.46284/mkd.2025.13.3.2

Exporting and Importing Digital Cultural Goods: EU Law and the Digital Revolution
The digitisation of the art world and international markets has thrust lawyers into a paradox. They find themselves navigating the uncharted territory of non-fungible tokens (NFTs), cryptocurrencies and blockchains with tools designed in the twentieth century for a nineteenth-century model of the art trade. This paradox begs the question: can we sustain this model, or do we need to update our legal rules relating to export, import, trade restrictions and restitution to match the digital era?
The principal question to be answered is whether EU law is, in this respect, fit for purpose? The import and export regulations and the cultural goods return directive were created with tangible objects in mind. As such, their applicability to objects that do not have a physical domicile is at least problematic. What is also important is that EU art trade laws serve two different purposes: the protection of the Member States' national treasures, and the protection of the EU market from illicit activities ranging from money laundering to terrorism financing. The prima facie answer to the principal question will differ in each of these two cases: it seems that the EU fails to grant adequate protection to intangible national treasures while at the same time dealing reasonably well with the security dimension.

Keywords: digital cultural goods, blockchain, EU Law, export–import

Introduction

Sebastian Miller's text on the dangers of techno-optimism[2] refers to something that is for some a revolutionary technology, for others "a seductive siren song of distant hope": namely,

[1] This work was supported by the National Science Center (Narodowe Centrum Nauki) OPUS grant UMO-2019/35/B/HS5/02084, Legal forms of cultural heritage governance in Europe – A comparative law perspective.
[2] MILLER, Sebastian. The Dangers of Techno-Optimism. In: *Berkeley Political Review*, accessed 2 August, https://bpr.studentorg.berkeley.edu/2017/11/16/the-dangers-of-techno-optimism/.

blockchain technology. Blockchain technology has in recent years taken the halls of business, scientific or legal discussion by storm. Thanks to its development, some people believe we are now dealing with a completely new face of the Internet, defined as WEB3, characterised by decentralisation, mainly through tokens and blockchain. However, as is usually the case with any 'new' technology, which after all is only a step in this never-ending march of technological development, its emergence has led many to begin to think about its adaptability to various fields. It should come as no surprise, then, that this type of pattern is also emerging in the context of the application of blockchain technology in cultural goods and national heritage, with lawyers also clamouring to be heard. Paraphrasing the Latin saying *ubi societas, ibi ius*, one may risk stating that where there is technology, there is also law. Although the law is by nature retroactive, this does not mean that it does not need to adapt to a changing reality. However, for this to happen, we must first ask whether the law needs to be changed, and if so, in which areas?

Our research is driven by the need to determine whether the current model of art export and import control at the European Union (EU) level is suitable for the digital age. The emergence and proliferation of technologies such as blockchain and NFT have reshaped the art trade landscape, particularly in the realm of digital cultural goods. We aim to identify the areas where legislative changes are necessary to adapt to this new reality. Our analysis will focus on the European framework of art trade controls, examining whether these rules are fully or partially applicable to digital content. We will also propose a blockchain-based model for import and export controls of digital cultural goods, providing a rationale for these changes.

Digital cultural goods: new kids in the neighbourhood

The digital future of almost every area of human life is no longer a literary utopia but an indisputable fact. In this future – as the past teaches us – goods known for centuries will be digitally enhanced, or their digital "twins" will be created. This trend does not spare culture; indeed, it covers everything that we qualify as cultural goods. In the late twentieth and early years of the twenty-first century, the term "cultural goods" was juxtaposed with the term "digitisation". It was used in the context of assessing the impact of the Internet on the entire sphere of cultural goods and on the possibilities for GLAM institutions (galleries, libraries, archives, and museums) to digitise their collections. More recently, the term cultural goods is increasingly juxtaposed with the term "tokenisation", which refers to the activity or process of managing assets in the digital world.[3] In essence, this leads to the merging of two completely independent worlds: the virtual world and digital reality, thus giving birth to a "new child" which we refer to as the "digital cultural good" for the purposes of our work.

The creation of digital cultural goods based on the tokenisation process can proceed in two ways, which also relate to understanding the concept of tokenisation itself.

First of all, tokenisation may concern cultural goods that exist in reality. In this case, existing goods are given a token, that is, an abstract record, a digital unit of value that exists as an entry in the blockchain register. The tokenised good will thus have a physical and a digital representation. For example, Gustav Klimt's famous painting *The Kiss* has been re-stocked by the Viennese Belvedere Museum, where ten thousand tokens representing parts of the painting have been put up for sale, while the work remains physically in the museum's collection.

[3] POWROŹNIK, Dominik. Definicja Kryptoaktywów. Czy Prawodawstwo Nadąża Za Postępem Technologicznym. In: *Kwartalnik Prawo Nowych Technologii*, 2, 2022, pp. 31–38.

Secondly, tokenisation may concern phenomena remaining in the purely digital sphere which also take the form of tokens stored in a blockchain register. In this context, tokenisation refers to intangible and exclusively digital goods such as digital files (graphics, music, etc.). In the literature, this type of good is referred to as "born-digital".

In 2021, Christie's auction house sold a digital work entitled "Everydays", the First 5,000 Days – a digital collage of 5,000 smaller paintings by Mike Winkelmann, known professionally as Beeple – for $69.3 million. This image had no physical representation, and NFT technology was used to create it. At this point, however, it should be noted that the concept of digital cultural goods (digital cultural assets) is also sometimes equated with goods that have cultural value and which can exist in the following forms:

1. digitised surrogates of corporeal material, such as photographs of objects;
2. original digital artwork, such as videos and music; or
3. digital data or knowledge, such as databases, spreadsheets, and websites.[4]

However, there is a lack of clarity regarding the definition of the term digital cultural goods. For this paper, we assume that the term covers goods (we will use cognate terms such as items or objects throughout this text as synonyms) that present cultural value and are created using blockchain technology and tokens.

The fundamentally complex technological concept of blockchain can be briefly characterised as a ledger, a database, or a register of information (such as ownership or provenance of objects/assets or transactions related to such objects) which is shared with all participants. The blockchain can be used to certify the object of the transaction and can locate it at any time; it also allows, through smart contracts[5], the automatic execution of transactions.[6] Narrowly speaking, a blockchain is a type of data structure consisting of so-called data blocks, in which each block contains information for a period of time. These blocks are linked together in a chain-like data structure. A characteristic of a blockchain is that each block has its own hash value and that hash value is contained in the next block, which makes any attempt to manipulate the preceding block impossible without detection due to its incompatibility with subsequent blocks.[7]

From a broader perspective, the blockchain is defined by its characteristic features, such as:

- a peer-to-peer (P2P) network consisting of all nodes that read or cooperate in recording transactions on the blockchain and
- a consensus protocol – a set of rules agreed upon and implemented by all nodes, governing how transactions can be added to the blockchain.

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[4] ADDISON, Rhian. *Protecting Digital Cultural Assets: A Review of the Export Process and Supporting Mechanisms A Report on Behalf of The National Archives*. National Archives UK, 2019, accessed 2 August 2024, https://cdn.nationalarchives.gov.uk/documents/protecting-digital-cultural-assets-report.pdf

[5] "A smart contract is a type of blockchain record that contains externally written code, and controls blockchain-based digital assets. When triggered by a specified blockchain write event, a smart contract immutably executes its code and may result in another blockchain event". Gartner, Smart contracts, accessed 23 May 2025, https://www.gartner.com/en/information-technology/glossary/smart-contract.

[6] GIANNOULIS, Vissarion and KAPELLAKOU Galatea. Blockchain and Illicit Trafficking in Cultural Goods. In: *Santander Art and Culture Law Review* 9(2), 2023, pp. 17–42, https://doi.org/10.4467/2450050XSNR.23.025.18645.

[7] ZHEN, Peilin and JIANG, Zigui and WU, Jiajing and ZHENG, Zibin. Blockchain-Based Decentralized Application: A Survey. In: *IEEE Open Journal of the Computer Society* 4, 2023, pp. 121–133, https://doi.org/10.1109/OJCS.2023.3251854.

One aspect of blockchain technology is the aforementioned tokens, which are digital units of value that exist as entries in a registry, making them purely abstract. They can represent any asset from the real world or the digital world. Although tokens can be classified in various ways (for example, based on their role in economic transactions, tokens can be utility, payment or investment tokens), with regard the subject of this paper, we will mainly pay attention to the distinction between fungible and non-fungible tokens (NFTs). As the name implies, these two token types are distinguished by their uniqueness or lack thereof. Something which is fungible is replaceable with another identical item. Non-fungible thus means the token is unique and, therefore, not interchangeable with another similar token. Even if, for example, two NFTs represent the same digital artwork, they will contain so-called "clips" of information/data in their blockchains, making them unique.[8] In other words, NFTs, being non-interchangeable and unique in combination with blockchain technology, constitute a digital cryptographic record representing a unique sequence of data associated with a physical or digital object.

A document published by the European Union Intellectual Property Office identifies as NFTs unique digital certificates, registered in a blockchain, which authenticate digital objects but remain distinct from those digital objects.[9] Through the use of blockchain technology, the certificate of authenticity provided by an NFT ensures that the resource it refers to is unique and can be attributed to a specific owner. The literature on NFTs and the art market points out that an NFT acts as a trusted digital signature that authenticates the artwork, removing doubt about authorship, and as a protocol that facilitates transactions in decentralised cryptocurrency markets.[10]

The EU trade in cultural goods: the legislative framework

Although European law deals with cultural goods, it does it in a specific fashion, differentiating it from the approach adopted by its member states and by international conventions

The European Union was created initially as an organisation focusing on the economic cooperation of its members. One of the main objectives of the EU is to facilitate, among other things, the free movement of goods, including cultural goods of all kinds. The free movement of goods as defined by Articles 26 and 28–37 of the Treaty on Functioning of the European Union (TFEU) is, however, not an unrestricted freedom. As far as cultural goods go, Article 36 of TFEU introduces the "national treasures" exception, saying that the Member States can restrict the free movement of such objects.

From this perspective, cultural goods are just an exception to the free movement of goods guaranteed by the treaty. The reason for this is the need to protect "national treasures", that is, cultural goods that are particularly important to the cultural heritage of a Member State. The "national" in this term is somewhat misleading and may suggest a "nationalist" approach to heritage protection. This way of thinking would be wrong because it would narrow the exception to cultural goods created in a given country or by national artists. This would limit the exception immensely because, for instance, *Gioconda*, painted by an Italian artist, could never

[8] KUBIAK, Maciej and KARWOWSKA Ewa. Obrót NFT Jako Nowa Forma Dystrybucji Przedmiotów Własności Intelektualnej. In: *Kwartalnik Prawno Nowych Technologii* no. 1, 2022, pp. 28–33.

[9] EUIPO, *Virtual goods, non-fungible tokens and the metaverse*, accessed 3 May 2025, https://euipo.europa.eu/ohim-portal/en/news-newsflash/-/asset_publisher/JLOyNNwVxGDF/content/pt-virtual-goods-non-fungible-tokens-and-the-metaverse.

[10] LYUBCHENKO, Irina. What is Art? NFTs, Beeple, and Art Connoisseurship in the 21st Century. In: *Interactive Film and Media Journal* 2(3), 2022, pp. 174–190. https://doi.org/10.32920/ifmj.v2i3.1532

be treated as a French national treasure, while, say, *l'art pompier* would satisfy the nationality criterion. That would be patently absurd, and that is why the majority of doctrine adopts a broader understanding of "national treasures" encompassing all cultural objects important for whatever reason to the heritage of a member state. From the EU law perspective, the national treasures exception is a concession towards what is sometimes called "art-exporting countries",[11] especially those whose important cultural objects are in private collectors' hands. The EU Member States, which own most of the cultural objects owned by the state or state-controlled entities, are probably less concerned with the free movement of goods in relation to cultural objects. These countries usually have internal laws limiting the exportation of state-owned cultural goods or prohibiting trade with these objects. So, for them, it is rather a matter of dealing with art trafficking and identifying privately owned national treasures that can potentially be exported outside the territory of a Member State. For states with wider private ownership, this exception is far more important. It can serve as a principal tool for preserving their national treasures, or at least, a tool to keep them within the Member State's boundaries. The treaty does not define national treasures nor limit the concept to tangible objects. The nature of this exception limits its application to *res in commercium,* that is, objects that can be bought, sold, donated, inherited and so on, at least potentially. For instance, the fact that a particular object is *extra commercium* according to a Member State's internal laws is an impediment that can be lifted. The exception does not apply to intangible cultural property, which is not an object of classical Western property law. Intangible cultural property belongs to communities that practice it yet cannot sell or lease their practices to others. In the case of digital art, its intangible form means that the nature of the legal title to these objects may vary. Traditional systems, such as the Polish one, do not recognise the concept of intangible chattels (*res incorporalis)*. Instead, these systems may treat digital cultural objects as "digital content", intellectual property or a sui generis non-proprietary (contractual) right. Other systems may consider them property or quasi-property. In any case, such digital goods can be traded within the EU because they are covered by the principle of free movement of goods. If the national treasures exception works in their case, it may be moot, as we will discuss later in this paper.

Apart from the national treasures exception enshrined in the treaty, it is also possible to use the need to protect cultural heritage as an overriding matter of public interest, justifying additional trade restrictions on online cultural goods.[12]

On the internal plane, the EU fosters the return of national treasures of Member States to their country of origin. The directive on the return of cultural goods in its current version allows the EU countries to define what constitutes their national treasures for the directive and, *a fortiori*, also for the national treasures exception established by the treaties. Although not unlimited, the freedom to define national treasures[13] does not restrict states to defining chattels alone as national treasures. Technically, there is no rule in the book prohibiting digital cultural "objects" from being identified as national treasures. Member States can petition for the return

[11] PROTT, Lyndel V. The Experience of UNESCO with the Return of Cultural Objects. In: *Proceedings of the Annual Meeting (American Society of International Law)* 89, 1995, pp. 443–447.

[12] RYSZKA, Joanna and STEC Piotr. Cultural Heritage and the Internal Market Freedoms. In: *El Derecho de La Union Europea Ante Los Objectivos de Desarollo Sostenible*, ed. Aranzazu Calzadilla Medina and Ruth Martinon Quinter, Tirant lo Blanch, 2022, pp. 405–407.

[13] FRANKIEWICZ-BODYNEK Anna and Piotr STEC, 'Defining "National Treasures" in the European Union. Is the Sky Really the Limit?', *Santander Art and Culture Law Review* 5, no. 2 (2019): 77–94, https://doi.org/10.4467/2450050XSNR.19.014.11562.

of a cultural object before a court, which seems to be the least favourable option, or opt for the return by amicable compromise.

EU Art Trade Laws and Digital Art Market: Old Dogs – New Tricks?

Is this system fit for the challenges of the twenty-first century and its digital cultural goods frenzy? There is no simple answer to this question. And nor should there be: the law is seldom simple, especially if it deals with complex legal relationships like heritage protection.

On an internal level, the EU has its own directive regarding the return of cultural goods. Its original version, the Cultural Goods Directive,[14] was designed as a sibling to the 1995 UNIDROIT Convention[15,16] and limited the set of returnable cultural goods (national treasures) to the ones listed in the annexe. The annexe listed cultural goods considered national treasures regardless of their value and cultural goods that met the financial thresholds set up by the directive. This particular way of defining national treasures raised some doubts (i) regarding infringing on the right of Member States to define what constitutes their national treasures and (ii) because, in particular from the perspective of "new" Member States with a developing art market and relatively low prices for cultural goods, many of their national treasures did not meet the directive's thresholds. The new directive 2014/60/EU[17] changed this, allowing the EU Member States to define their national treasures for the purpose of restitution proceedings. Although nothing in the directive impedes the states from defining digital artworks as potential national treasures, as far as we know, none of the EU Member States has done so. Even if it did, the directive is clearly construed with tangible objects in mind, and applying it to intangible cultural goods would be very hard, if not impossible.

The regulation on art exports[18] and the one on art imports [19] complete the EU system of cultural goods trade control. The first one controls the exportation of cultural goods outside EU territory. It is a classical export control tool aimed at protecting the national heritage of Member States (and, indirectly, European heritage as a whole). A possible secondary rationale for this regulation is security reasons. Cultural goods export control prevents criminal activities relating to art trafficking and, indirectly, money laundering. These reasons seem to be a little under-recognised in heritage law literature, but security remains an essential factor that has justified art export control at the European level from the very beginning.[20]

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[14] EUROPEAN UNION. *Council Directive 93/7/EEC of 15 March 1993 on the Return of Cultural Objects Unlawfully Removed from the Territory of a Member State*. Official Journal L 074, 27/03/1993.

[15] UNIDROIT. *UNIDROIT Convention on Stolen or Illegally Exported Cultural Property*. Adopted in Rome, 24 June 1995, accessed 2 August 2024, https://www.unidroit.org/instruments/cultural-property/1995-convention.

[16] PROTT, Lyndel V. UNESCO and UNIDROIT a Partnership against Trafficking in Cultural Object. In: *Uniform Law Review*, no. 1, 1996; STEC, Piotr. Odszkodowanie z Tytułu Zwrotu Dobra Kultury w Konwencji UNESCO z 1970 r., Konwencji UNIDROIT z 1995 r. Oraz Dyrektywie 93/7/EWG. In: Jerzy Pisuluński et al. (eds) *Rozprawy z Prawa Cywilnego, Własności Intelektualnej i Prawa Prywatnego Międzynarodowego*, Warszawa, Lexis Nexis, 2012.; LEVINE, Alexandra Love. The need for uniform legal protection against cultural property theft: a final cry for the 1995 UNIDROIT convention. In: *Brooklyn Journal of International Law* 36(2), 2011, pp. 751–800.

[17] EUROPEAN UNION. *Directive 2014/60/EU of the European Parliament and of the Council of 15 May 2014 on the Return of Cultural Objects Unlawfully Removed from the Territory of a Member State and Amending Regulation (EU) No 1024/2012 (Recast)*. Official Journal L 159, 28/05/2014.

[18] EUROPEAN UNION. *Council Regulation (EC) No 116/2009 of 18 December 2008 on the Export of Cultural Goods (Codified Version)*. Official Journal L 39, 10/02/2009.

[19] EUROPEAN UNION. *Regulation (EU) 2019/880 of the European Parliament and of the Council of 17 April 2019 on the Introduction and the Import of Cultural Goods*. Official Journal L 151, 07/06/2019.

[20] JERINGAN, Christopher G. Protecting National Treasures in a Single-Market EC. In: *Boston College International and Comparative Law Review* 17, no. 1, 1994, pp. 153–154.

The import regulation is not a classical heritage protection law aimed solely at preserving cultural goods on any territory; it is more of a tool for preventing criminal actions such as terrorism financing or money laundering.[21] Along with incidental acts dealing, for instance, with the situation in Syria and Iraq or with the implementation of sanctions against Russia, the export regulation serves also security purposes.[22]

In both regulations, importing and exporting a cultural object requires a special permit issued by a competent administrative authority of a member state. The permit is required only for objects specified in the Annexes to both regulations, which focus on movable objects.

Are all these acts fit for purpose in the digital age? The fact that they were construed and implemented in times when only tangible objects were considered national treasures or cultural objects of commercial value may lead to a simple and intuitive answer: no, they are not. However, simple and intuitive answers are not always the best ones. The reality seems to be much more complex. We live in a time when well-established, traditional concepts of property and ownership are evolving into something new and something traditionally trained lawyers will barely understand.[23] This is a pivotal moment where "heritage" and "cultural object" start to take on new meanings. Digital art and digital cultural objects are but one of the many facets of this process. Heritage law seems to consider its notions from non-Western legal cultures in that slow but natural process. The concept of intangible heritage has strong connections with Asia, with its "living heritage" humans and protection of traditional crafts and arts. These attitudes, along with more recent attempts, often driven by indigenous populations around the world, to protect rivers and shrines by granting them legal personality mix concepts from various legal cultures.[24] With the widening concept of cultural heritage, traditional legal means of protection seem to lag behind. As we have shown above, there are no specific rules on trade in digital heritage objects in EU law, but this is a common drawback of heritage laws and international conventions. None of the key conventions – the 1970 UNESCO Convention,[25] 1995 UNIDROIT Convention, the Hague 1954 Convention,[26] or even the Nicosia Convention of 2017 on crimes against cultural property[27] – mention such objects in their texts. The first three predate the existence or significance of such items. That said, the fact that the Nicosia Convention of 2017 fails to mention digital objects is somewhat surprising. They also remain

[21] SCHREIBER, Hanna. Regulation (EU) 2019/880 and the 1970 UNESCO Convention – A Note on the Interplay between the EU and UNESCO Import Regimes. In: *Santander Art and Culture Law Review* 7(2), 2022, pp. 175–176, https://doi.org/10.4467/2450050XSNR.21.023.15268; SZABADOS, Tamás. The EU Regulation on the Import of Cultural Goods: A Paradigm Shift in EU Cultural Property Legislation? In: *Croatian Yearbook of European Law and Policy* 18(1), 2022, pp. 19–20, https://doi.org/10.3935/cyelp.18.2022.472.

[22] DOBOSZ, Kamil. First-Ever EU Regulation on the Import of Non-EU Cultural Goods – Its Significance to the Domestic Market and the National Legal System. In: *Journal of Heritage Conservation* 67, 2021, pp. 171–180, https://doi.org/10.48234/WK67LEGAL; SCHREIBER, Regulation (EU) 2019/880 and the 1970 UNESCO…; DE JONG, Anna M. The Cultural Goods Import Regime of Regulation (EU) 2019/880: Four Potential Pitfalls. In: *Santander Art and Culture Law Review* 7(2), 2021, p. 36, https://doi.org/10.4467/2450050XSNR.21.017.15262.

[23] JAGIELSKA–BURDUK, Alicja. *Cultural Heritage as a Legal Hybrid*. Springer International Publishing, 2022, https://doi.org/10.1007/978-3-031-04946-0_3.

[24] Ibidem, pp. 303–304.

[25] UNESCO. *Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*. Adopted in Paris, 14 November 1970, https://www.unesco.org/en/node/66148.

[26] UNESCO. *Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention*. Adopted in The Hague, 14 May 1954, https://www.unesco.org/en/legal-affairs/convention-protection-cultural-property-event-armed-conflict-regulations-execution-convention?hub=415.

[27] COUNCIL OF EUROPE. *Council of Europe Convention on Offences Relating to Cultural Property*. Adopted in Nicosia, 19 May 2017, https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=221.

silent as far as intangible cultural heritage is concerned. This is because some of these laws were created for different eras.

Today, we have problems that were not imaginable 20 or 30 years ago. For instance, how does one put a "blue shield" sign put on heritage objects to mark them as immune from military attacks on digital heritage? Label the servers? Add some code to warn military units focusing on cyber warfare not to enter a protected area? The 1954 Hague Convention does not cover intangible heritage because no one expected the combatant party to focus on the deliberate destruction of its human carriers.[28] Contemporary attempts to fix this with jury-rigged solutions on the protection of intangible heritage destroyed by Russians in Ukraine (registration of cultural practices, conducted, for instance by volunteers running a project SUCHO[29]) or attempts to preserve intangible heritage from extinction in Indonesia[30] can hardly be converted into laws. Theft, trafficking and illegal export of digital cultural objects seem completely absent in heritage lawyers' contemporary legal toolbox.

But does this mean that old laws must be replaced by something completely new? Definitely not. And we are not going boldly where nobody has gone before here. Technological and cultural change has always existed, and both the law and the lawyers have had to adapt.

Computer crime is an excellent example of this approach: the law was unprepared for software theft and similar acts, but criminal liability principles were flexible enough to adapt to these new criminal offences. The same should be true in the context of heritage laws. The principles are sound. The national treasures exception, the model of return proceedings and import and export control are firmly rooted in how we think of art trade controls. Adding new types of cultural goods to the list should not be a *prima facie* problem. However, there are additional issues to consider: how to do it on the legal and technical levels, and why do it? Even if something is technically possible to regulate, it does not mean we should do so. Therefore, the next question to discuss is the rationale for regulating digital cultural goods' status as national treasures, their return to the requesting state, and how to control the exportation and importation of digital goods that can only cross borders in a metaphorical sense.

Can we control digital goods export and import? In search of a legislative template

Although digital cultural objects constitute a relatively new and small part of the market, now is the time to think about the future. Although still new, with big players like Sotheby's and Christie's having their own NFT Art Auction Departments and exhibitions of generative AI art being held,[31] we are far beyond the "this is just a fad" stage. Digital and NFT art has already earned the status of being "worth collecting". This paper is not about the ontology of

[28] ALCALA, Ronald. Cultural Evolution: Protecting "Digital Cultural Property" in Armed Conflict, In: *International Review of the Red Cross* 919(6), 2021, accessed 2 August 2024, https://international-review.icrc.org/articles/cultural-evolution-protecting-digital-cultural-property-in-armed-conflict-919; CHAINOGLOU, Kalliopi. The Protection of Intangible Cultural Heritage in Armed Conflict: Dissolving the Boundaries Between the Existing Legal Regimes? In: *Santander Art and Culture Law Review* 3(2), 2017, pp. 109–134, https://doi.org/10.4467/2450050X-SNR.17.017.8426.

[29] SUCHO – Safeguarding Ukrainian Cultural Heritage Online', Heritage repository, Safeguarding Ukrainian Cultural Heritage Online, 2022, www.sucho.org.

[30] AMALI, Lanto Ningrayati, KATILI Muhammad Rifai, and ISMAIL Wandi. Preservation of Intangible and Tangible Cultural Heritage Using Digital Technology. In: *Indonesian Journal of Electrical Engineering and Computer Science* 28(2), 2022, p. 980, https://doi.org/10.11591/ijeecs.v28.i2.

[31] CHRISTIE'S. Digital Art and NFTs. Accessed 2 August 2024. https://www.christies.com/en/events/digital-art-and-nfts/overview

intangible (digital) art. What interests us here is that it is recognised as art, and the difference between oil on canvas and digitally created painting is just the *corpus mechanicum* or, plainly speaking, the medium it is recorded on. Of course there are differences resulting from that: this type of art is easy to copy and originality has a slightly different meaning, but it is still art.

However, regardless of digital objects' status as collectables, the primary question remains: can they be subject to importation and exportation and, consequently, to EU or international trade control? As R. Addison points out:

> There is a clear lack of awareness that digital items can possess cultural value, that they are more than just data.... In turn many institutions within the GLAM sector, bodies which support the sector (such as DCMS and security agencies) and the commercial sector (such as auctioneers) are unaware that digital cultural assets are at risk of export.[32]

So, how do you "export" or "import" digital content? The simplest solution is to transfer it to a server abroad. Encryption, denying access to a member state, or even transferring digital heritage content stored on a physical medium such as, for instance, a USB key or a DVD are also viable options.[33]

As far as security goes, the EU has noticed the problem and is working on the trafficking of cultural goods in digital contexts. This activity has thus far focused on digitisation of the tools normally used to control trade in tangible cultural objects. Although it has been noticed that digital art can be trafficked or used for money laundering, no hard law has been proposed thus far. And, despite the existence of a task force and Commission Recommendation on a common European data space for cultural heritage, the EU remains focused more on the digitisation of cultural products and the creation of a joint space for presentation, as well as creating a sort of "European Cloud for Digitized Cultural Goods".[34] "Digitally born" heritage remains the poor relative of tangible assets that should be digitised. Its trafficking and export control are being discussed, but there is no enthusiasm for transforming the debate into a robust set of rules.

This is somewhat surprising, because export control of intangible assets is a hot topic where other intangible assets, particularly software and technology, are concerned. In particular, dual-use products, such as civil and military digital products, is interesting here. Making them available to potentially hostile countries or organisations overseas would mean that these goods have been "exported" (US customs law has a category of activities "deemed export"). Placing software or data on a foreign server or using cloud services provided by a hostile country also has the same effect as the illegal export of tangible objects. US law requires that persons dealing with restricted digital goods obtain a permit and, in the case of a breach of export restrictions, self-report the incident. Even free software providers have to consider export laws and be very careful not to make restricted technologies (such as cryptographic protocols) available to anyone. So far, permits and reporting are being done using more-or-less traditional methods, with no application of blockchain or NFT technology to the exported software.[35] Even the Linux Software Foundation, one of the biggest players in open-source software, encourages its

[32] ADDISON, Protecting Digital…, p. 31.
[33] Ibidem, p. 24.
[34] EUROPEAN COMMISSION. *Commission Recommendation (EU) 2021/1970 of 10 November 2021 on a Common European Data Space for Cultural Heritage*. Official Journal L 395, 10/11/2021, http://data.europa.eu/eli/reg/2021/694/oj.
[35] *Code of Federal Regulations* Title 15, Commerce and Foreign Trade, Part 734. Washington, DC: US Government Publishing Office, current as of 2 August 2024, https://www.ecfr.gov/current/title-15/part-734.

members and other developers to stay open by publishing relevant information on the website or in e-mail communications.[36] The EU does not lag behind the US in this area: Regulation (EU) 2021/821 of the European Parliament and of the Council of 20 May 2021 set up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items deals, including the export of software and other intangibles.

Does this also apply to digital heritage? Yes, it is possible to export it just the way we do it with data in the cloud or with licensing software. If the buyer stores the object on a server outside the European Union, it is quasi-exported out of that territory. And, if the person who controls this object decides to encrypt it or simply deny access to anyone, this object will be lost forever.

Is it really a danger? We can imagine what would happen if, say, a new encryption technology were to fall into the hands of a dictator. But what harm could arise from allowing the exportation of digital cultural goods? Doing so is not like divulging technological secrets, after all.

In the case of tangible cultural goods, the reasoning is simple – a state wants to keep the object on its territory because it is important for this country's culture, history, traditions and so on, or simply because it is a valuable piece of art.[37] In the case of illegal exportation, the country has a claim for return of its national treasure to its territory. This physical connection with the territory is, of course, not applicable to intangible art. But when thinking about the connection between a cultural good and a state, we should not focus on traditional notions of property law, particularly interests in goods, be it in the sphere of the country's private law or its public law. It is neither ownership nor the possession or detention of a good that constitutes the interest of the state. Even traditional national treasures can be owned by non-state entities without losing their "national treasure" designation. So, if it is not about ownership, what is it about? We believe that the (public law) interest of the state in national treasures has two facets: access and control. The state needs the means to access an object for various reasons: inspection, conservation, research, presentation to the public, and so on. The state needs to exercise control over an object to guarantee access and prevent it from being destroyed or demolished.[38] That also makes digital-born heritage or digitised representations of tangible objects[39] valuable as national treasures and suitable for trade controls. Security reasons that underly export and import regulations, such as the prevention of money laundering or trafficking of cultural goods, also fall under the "access and control principle", giving us reasonable justification for applying to digital heritage the same rules we use with its tangible siblings. Therefore, it should be possible to apply trade restrictions to national treasures entering the internal market (no changes in the treaties are required) and limit the export and import both to protect the heritage and for security reasons, such as prevention of terrorist financing or money laundering. Return of digital cultural goods is also an option.

The problem is that all three cases will require legislative changes to enable the effective exercise of the Member States and the EU's control of the movement of cultural goods.

[36] WINSLOW, Steve DOLAN Mike, and PERLOW Jason. *Understanding Open Source Technology and US Export Controls,* The Linux Foundation, 2021, accessed 2 August 2024, https://www.linuxfoundation.org/resources/publications/understanding-us-export-controls-with-open-source-projects.

[37] ADAMUS, Rafal. Legally Protected Cultural Goods and Bankruptcy Proceedings. In: *Opolskie Studia Administracyjno-Prawne* 18(2), 2020, pp. 9–26, https://doi.org/10.25167/osap.2177.

[38] RYSZKA and STEC, Cultural…, pp. 405–407.

[39] STEC Piotr and JAGIELSKA-BURDUK Alicja, 'Digital Restitution of Cultural Goods: In Search of a Working Model', *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique* 36, no. 5 (October 2023): 2207–18, https://doi.org/10.1007/s11196-023-09973-2.

Although, theoretically, it would be possible to apply the directive *mutatis mutandis* to digital national treasures, it would require both from the courts and requesting parties a lot of creativity. And execution of the return orders/judgements would be almost impossible. Both import and export regulations apply only to goods named expressly in the annexes, and both annexes list tangible objects only. Since both regulations are exceptions to the rules on the free movement of goods, they have to be interpreted strictly according to the ancient rule *exceptiones non sunt extendae*. So, adding "digital" to each of the categories in an annexe by administrative authorities or courts to protect digital treasures would be impossible, Moreover, there are no provisions in both regulations applicable to digital goods.

This is why we propose the introduction of separate rules on the return, import and export of cultural goods that utilise distributed ledger (blockchain) technologies. This idea will be developed later in this text. On a non-technical plane, Regulation 2021/821 could be a template for future amendments to import and export regulations: firstly, because the two cultural goods regulations are is based on the principle of a closed list (*numerus clausus*) of controlled goods, and secondly, because they define the export of digital items in a way that could be amended to accommodate digital cultural goods.

According to Article 2 (2) d of Regulation 2021/821, export means, among other things

> transmission of software or technology by electronic media, including by fax, telephone, electronic mail or any other electronic means to a destination outside the customs territory of the Union; it includes making available in an electronic form such software and technology to natural or legal persons or to partnerships outside the customs territory of the Union; it also includes the oral transmission of technology when the technology is described over a voice transmission medium.

Of course we can hardly imagine transmission of a digital cultural object by fax (although it is possible in the case of software source code), but the principle remains sound. Export of such objects could be defined as transmission by any technical means to a destination outside the customs territory of the European Union. And import of digital cultural goods could be defined as the transmission of digital goods by any technical means to a destination within the customs territory of the European Union.

Another feature of the dual-use goods regulation that could be used to control the import and export of digital cultural goods is the red flag system provided in Article 4 et seq. of the 2021/821 regulation. This system can be used to signal to the competent authorities that certain goods not listed in the annex are potential dual-use technologies and should be subject to export authorisation. This could be applied, for instance, to digital cultural goods not included in the annexe to export regulation but classed by an EU Member State as digital national treasures.

However, as far as the execution of trade restrictions or return orders is concerned, technology will fail, as will more traditional ways of enforcing judgements. That is why we propose an old-fashioned yet effective legal solution to this problem. All transactions concerning illegally exported or imported cultural goods or digital treasures not returned to a Member State despite of existence of a valid judgement should be made null and void. In other words, courts of the Member States should have the duty not to recognise the transfer of rights in these cases, whether the transfer of title occurred on EU territory or outside of it. Consequently, public (e.g. auction) and private sales, testamentary transfers and transfers to trust property would

be invalid. These goods would thus be non-transferrable and, unlike dirty money, it would be virtually impossible to launder these assets. The original sin of lack of a proper electronic "seal of approval" (*vide infra*) would mean that illegally traded digital heritage items would forever become a "sticky commodity" unless returned under the control of a Member State. This would also have an effect on other jurisdictions whenever the proper law for a digital heritage item contract is that of an EU Member State and whenever the export rules are taken into account by a non-European court as *lois d'application immédiate* (overriding mandatory law). And even if non-European courts refuse to apply these rules on public policy grounds (which is rather improbable), the commercial value of digital cultural objects that cannot be traded within the EU will drop significantly, making the trade in illegally exported digital goods a risky and unprofitable business.

A blockchain model for export import certification

A great deal has already been written in the literature on the use of blockchain technology in the area of the preservation of cultural heritage/digital goods, pointing to its use for purposes such as verifying provenance and authenticity and exercising and managing ownership of such objects. It has also been stated that blockchain, as an information management system, can identify physical and digital asset transactions.[40] Furthermore, several entities are now already offer solutions for registering existing artworks on the blockchain, i.e., for example, ARTORY[41]or VERISART[42] In September 2023, the European Blockchain Sandbox announced selected projects for the first cohort. One of the projects, Compellio, involves the development of a new multisector solution, Digital Product Passports (DPP), which combines blockchain, verifiable credentials, and decentralised identity technologies to provide higher levels of accountability and transparency in complex supply chains. Imports of cultural goods, tackling of illicit trade, and IP management are also to be addressed as part of the project.[43]

Drawing on the above, we would like to join the discussion on the possibility of creating a blockchain-based model for the certification of the import and export of digital goods. Our considerations do not go in the direction of presenting a ready-to-implement technological solution, but rather constitute recommendations for good practice which may contribute to a more optimal and adequate use of blockchain technology in the area of digital goods. In view of the above, and in line with some of the previously articulated assessments and voices in the discussion, we recommend the following.

Recommendation 1

Certification of imports and exports should take place using a so-called private blockchain, access to which will be supervised and the validation itself done by the controlling entity. The recommendation of a private model instead of a public one stems from the fact that in a

[40] GIANNOULIS and KAPELLAKOU, Blockchain …

[41] ARTORY, Unlocking Art & Collectibles as a Credible Asset Class, accessed 23 May 2024, https://www.artory.com/.

[42] PATIAS, Petros, GEORGIADIS Charalampos, Fighting Illicit Trafficking of Cultural Goods—The ENIGMA Project. In: *Remote Sens.* 2023, https://doi.org/10.3390/rs15102579.

[43] European Blockchain Sandbox announces the selected projects for the first cohort, 6 September 2023, European Commission website, accessed 25 MaY 2025 https://digital-strategy.ec.europa.eu/en/news/european-blockchain-sandbox-announces-selected-projects-first-cohort.

public blockchain, the information is validated by the participating community (miners);[44] no individual entity agrees to join the network of other members or designates the function that the entity in question is to perform. In contrast, in the case of a private blockchain network, an invitation from the "owner" of the network is required to join (although the network may also be completely closed to outside users). It is also characteristic of a private blockchain that participants are assigned specific roles, which may further influence, for example, the restriction of their access to certain records. On the plus side, when using a private blockchain network to certify the export and import of cultural goods, its users rarely remain fully anonymous and the information stored in the blockchain can be altered (unlike, as a rule, when using a public blockchain). The latter functionality appears to be particularly important if one considers the possibility that information may be entered on the blockchain for criminal purposes and that it will subsequently not be possible to change such records. The example cited is not purely hypothetical: in mid-2018, a certain Terence Eden was able to place an entry in the Verisart registry certifying that he is the owner and creator of Leonardo da Vinci's Mona Lisa, and Verisart issued a certificate.[45]

For these reasons, a private blockchain seems to be more suitable for the certification of the export and import of cultural goods, as it offers the possibility to retain some control over the information recorded in it and to take steps to rectify or change this information.

Recommendation 2

A dedicated state agency should act as a participant in this private blockchain network. With regard to the certification of the export and import of cultural goods, this issue is crucial, as it eliminates risks related to the inclusion of unreliable or inaccurate information in the blockchain. In any case, the need to entrust specific state authorities/institutions with the responsibility for the protection of cultural property is nothing new: the Convention Concerning the Protection of the World Cultural and Natural Heritage already calls on state parties to establish one or more national services responsible for the protection of cultural property against illegal imports, exports and transfers.

Recommendation 3

This network should be overseen by the European Commission, which will act as the validating body, the "owner of the network". This approach seems reasonable for at least two reasons. Firstly, the European Commission already has experience and awareness of the need to develop blockchain technology, best demonstrated by the fact that it is the body behind the development of the European Blockchain Services Infrastructure (EBSI). The assumption is that each Member State will operate one node in this peer-to-peer network. Furthermore, it is envisaged that EBSI could be used, among other things, for secure data sharing between authorities in the EU, starting with IOSS (Import One-Stop Shop) VAT identification numbers, as well as one-stop-shopping for imports among customs and tax authorities. Equally – as can be imagined – data on the export and import of digital cultural goods could be shared in this way. Secondly, the European Commission is the body developing the legal framework, including in areas related to blockchain, which gives it an advantage over other EU bodies[46] Subsequently,

[44] Ibidem.

[45] Ibidem.

[46] Legal and Regulatory Framework for Blockchain, accessed 23 May 2025, https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-blockchain.

we assume that the European Commission will also have to demonstrate its commitment by reviewing systematically, at predetermined intervals, the adequacy of the solutions adopted for the operation of the blockchain, and by publishing and updating the list of agencies that act as participants in the network.

As an aside, it may be pointed out that UNESCO could play a similar role at global level. UNESCO has already been identified in the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict as the body that assists state parties in the development of technologies for the protection of the hundred and cultural property.[47]

The adoption of such a solution will certainly also have the effect of significantly reducing the widespread problem of fragmentation of cultural property databases, and the fact that they are based on a wide range of technological solutions and systems.[48]

We also propose that such certificates should be issued based on pre-developed international guidelines which will be created with blockchain technology, its specificities and adaptable solutions in mind.

Of course, when referring to the blockchain issue, one cannot ignore what is off-chain. In reality, digital cultural goods (or more specifically, a specific graphic file) will usually be stored outside the blockchain, that is, off-chain. This in turn carries risks related to, for example, the expiration of the link leading to digital cultural goods, the physical destruction of the server on which the cultural good is stored, and overcoming problems related to technological obsolescence, among others. Hence, appropriate measures aimed at minimising the aforementioned risks should go hand in hand with the development and implementation of the model. In this respect, it is necessary, above all, to develop an appropriate technological approach – which, contrary to appearances, is not an easy task. And although solutions such as those based on the IPFS (Inter-Planetary File System) or peer-to-peer file exchange networks have been proposed, they are only a fragmentary solution to the problems.

Undoubtedly, consideration will also need to be given to the question of what consensus model should be adopted for this blockchain network. In particular, the literature draws attention to two types of consensus: proof of space/capacity (PoC) and proof of elapsed time (PoET). Although this requires specialist IT expertise, at this point we are convinced that the second consensus model is more appropriate, as it provides an equal opportunity for all miners to be selected as validators, yet requires significantly less energy consumption.[49]

The market organisation model

The idea of using blockchain technology to certify the export and import of digital cultural goods is only one part of a wider puzzle. The answer to the question of how to control the import or export of digital cultural goods still requires the development of an adequate model, involving detailed solutions that will take into account the specificity of these goods on the one hand and the possibilities offered by blockchain and NFT technology on the other. In our opinion, in order to achieve this goal, it is not necessary to develop completely new legislative solutions from scratch but only to adapt or modify solutions or models that already exist.

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[47] Ibidem.

[48] Ibidem.

[49] ZOANNOS, Nikolaos, CHOURDAKI Pelagia, and ASSIMAKOPOULOS Nikitas. Can UNESCO Use Blockchain to Ensure the Intangible Cultural Heritage of Humanity? A Systemic Approach That Explains the Why, How, and Difficulties of Such a Venture. In: *Heritage* 6(3) 2023. https://doi.org/10.3390/heritage6030171

Firstly, we point out the need to prepare and continuously replenish inventories of these assets. Such an inventory would be based on the blockchain model presented earlier, and a designated state agency would be responsible for developing it and placing it on the blockchain. Given that this blockchain should be intended to be private, there would be the possibility of completing the inventory (census). Placing information on a specific digital cultural good on a blockchain would make it possible for agencies of other states to become familiar with it, thus fulfilling the criteria for notification

Secondly, it is worth considering the need to label digital cultural goods in a specific and individual way. The commentary on Rule 142 of the Tallinn Manual 2.0 seems inspiring in this regard, where it states that the use of the hallmark of the Convention on Cultural Property is appropriate to qualify digital cultural goods. In doing so, Ronald Alcala rightly suggests that NFT tokens could also be used to identify digital cultural goods.[50]

Of course, making this idea a reality would require a transnational consensus on how to understand the concept of digital cultural goods, which may prove difficult in practice, although it is necessary. To achieve this, one of the possible steps could be the creation of a shared inventory, which, even if it does not include exhaustive lists of digital cultural goods, could provide explanatory notes offering clear and comprehensive guidance on how to classify such goods appropriately. Such a list should be systematically updated and supplemented so as to keep up with technological progress. The export of digital cultural goods that are included in the list (or that meet the criteria indicated in the list) would require an application. In the case of national treasures and the cultural goods directive, the task of defining what digital items are national treasure should be left to individual EU Member States.

Generally, an export license would be required if the export was to a territory outside the European Union. Such a permit would be issued at the request of the interested person. Undoubtedly, the issue of requirements to be placed on an applicant for an export license also require deeper consideration. Due to the highly complex and specific nature of the environment in which digital cultural goods operate, an applicant would have to provide information regarding the technical and organisational measures implemented to prevent the loss or destruction of such goods. In view of ongoing technological developments, consideration should be given to implementing the risk-based approach known from other EU legislation in this area. The applicant would thus need to estimate the risk that may occur during the export of such goods and adopt appropriate measures to manage those risks, as well as apply appropriate technological and organisational solutions to protect the goods.

The competence to issue such a licence would be vested in the State agency that establishes the inventory of cultural objects in the Member State, following an assessment of the risks and of the protection measures identified by the applicant.

Similarly, if digital cultural goods were to be imported from a non-EU country, this would also require the consent of the Member State. Here, it would be necessary for the applicant to prove that the cultural goods were exported in accordance with the law of the exporting country. When deciding whether to grant or refuse a license, Member States would also have to take into account international regulations concerning cultural goods, as well as possible risks related to, for example, violating public security considerations, the security of the European Union, the prevention of money laundering and contacts with countries subject to terrorist financing sanctions.

[50] ALCALA, Cultural Evolution…

Conclusions

The current state of affairs in the EU with respect to digital art import and export laws can be described as a typical legislative quagmire, yet no one seems bothered by it. Lawyers and lawmakers are used to catching up with the reality. Law is reactive – it seldom plans in advance. That is why we still have a system designed with a quite narrow set of physical cultural objects in mind. However, it should be relatively easy for law and EU lawmakers to catch up, as long as the art market decides that digital art is not a fad and is here to stay. Modification of the existing laws will happen. Most probably, Member States will start with their own export legislation, testing the limits of the national treasures exemption and the possibilities of the return directive. Then, given the growing number of transnational digital art transactions with non-European entities, the EU will have to act not only to protect national treasures of its members but also to protect the security of the Union. Surprisingly, it will probably be much easier to reach a consensus on how to regulate the import and export of digital cultural goods than to decide which cultural goods can be labelled "(digital) national treasures" and to what extent Member States are authorised to restrict their circulation. The way in which EU law understands the return of cultural objects to the territory of a member state hardly fits into the concept of digital heritage. As for now, we think that the concept of a national treasure as an item that should stay permanently within the borders of the Member State should be reinterpreted: in the case of digital heritage, what is important is that the Member State has access to and control over what happens with the object. That includes the ability to preserve it from deletion/destruction or deterioration, as well as ensuring access of State's representatives, researchers and the general public have access to it. In the case of material objects, having a cultural object located in the Member State's territory generally does the job. In the case of digital heritage, these goals must be achieved by other means, including the right to access such an object. This should be added to the return of cultural goods directive. However, there is a good chance that all the future restrictions in digital heritage trade will be justified by security reasons rather than by the need to protect cultural artefacts labelled as national treasures.

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