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# The 'Assetization' of Art on an Institutional Level—Fractional Ownership Implemented in the Royal Museum of Fine Arts Antwerp

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**Abstract:** This article explores the innovative collaboration between the Rubey platform and the Royal Museum of Fine Arts, Antwerp. Through the tokenization of the artwork *Carnaval de Binche* by James Ensor, this platform made it possible for interested investors to purchase blockchain-registered Art Security Tokens within this artwork and become co-owners of it—at least from an economic perspective. Although fractional ownership platforms for art have been established before, this is the first time an art investment opportunity like this has materialized itself in an explicit partnership with a museum. The tokenized artwork will be held on public display within the Royal Museum of Fine Arts Antwerp, for a period of ten years—a significant departure from the usual practice of storing such pieces in a storage vault—before it will be sold again. This article contextualizes this practice within both the 'assetization' of art that has increased in recent decades and the financial challenges facing Belgian—more broadly speaking, European—public museums. Based on a limited number of interviews with the stakeholders and desk research, this article subsequently explores the more practical benefits and concerns of a collaboration like this and presents an analysis of this practice drawing upon publications within the field of economic sociology. Since we find ourselves only at the beginning of this partnership, some questions will be raised for further research.

**Keywords:** art market; assetization; fractional ownership; museum; economic sociology

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## 1. Introduction

This article explores the innovative collaboration between the Rubey platform and the Royal Museum of Fine Arts Antwerp. This art investment platform has tokenized the artwork *Carnaval de Binche* (1924) by the Belgian artist James Ensor, while keeping it on display in the partnering museum. In concrete terms, interested parties can buy blockchain-registered Art Security Tokens that represent part of the financial rights to the painting that serves as collateral itself. This makes them—at least from an economic point of view—'co-owners' of the Ensor (Rubey n.d.; KMSKA 2023). The painting will be held on loan in the Royal Museum of Fine Arts in Antwerp for a period of ten years, after which it will be sold, and the token holders will share in the profit or loss.

Although fractional ownership and the tokenization of artworks have been developed before within the art market through various art investment platforms, this is the first time this idea has crossed over to the museum field and has taken shape as an explicit partnership with a public museum. Therefore, this article will explore this collaboration as a case study and focus on the practical implementation of fractional ownership as an alternative way to finance (temporary) collection expansion for museums. Given that this practice is fueled by the 'assetization' of art, this research situates itself—on a macro level—in the broader discourse about the art market and the European institutional sphere not being as separate as they used to be.

Therefore, the first section will start by contextualizing this project within this increased 'assetization' of art occurring during recent decades, and the financial challenges Belgian museums are facing nowadays—representative of the situation of underfunded public museums in Europe. Hereafter, a brief introduction to the main concepts related to fractional ownership and the history of its implementation within the art market will be provided, before turning to the case study in which the mission of Rubey and the practicalities of this collaboration will be addressed. Subsequently, this article will explore the benefits and concerns of this practice and present an analysis of it, drawing upon publications within the field of economic sociology. These results were generated by synthesizing the theoretical background of the first sections with the expectations of the different stakeholders—the managing partner of Rubey and the director of the Royal Museum of Fine Arts—that were extracted from interviews.

As will be set out, implementing fractional ownership within a public museum encompasses an alternative way of financing (temporary) collection expansion and provides opportunities to publicly disclose artworks that were previously privately owned. However, based on the economic sociological analysis, this article will also cite a more critical perspective regarding it—given that this practice raises questions about the role of public museums within the valuation practices of art as a financial asset.

Since we find ourselves only at the beginning of this collaboration, the last section will raise some questions for further research. It will be worth following up on whether this practice will find resonance with other public museums. An additional study midway through or at the maturity date of this innovative collaboration would be a desirable addition to this exploratory article.

## 2. Arts as an Asset Class and Underfunded European Public Museums

### *2.1. The 'Assetization' of Art*

The tokenization of art can be contextualized within the recent developments of art into an asset class. Investors have gained an expanded interest in art investments in the past decades for a variety of reasons—with the main ones being artworks' noteworthy financial performance and the failure of conventional assets to deliver attractive returns (Eckstein 2008). Artworks' low correlation with abstract financial products, their ability to serve as a storage hedge against inflation, and the positive role they may play in portfolio diversification are all considered financial benefits for investors and have been discussed extensively by various authors (see for example: Mei and Moses 2005; Eckstein 2008; Pownall 2009; Picinati di Torcello 2010; Velthuis and Coslor 2012). Transportability, the possibility of discrete transactions, and the possibility of quick sale are, furthermore, considered determinants in assessing an object's suitability as an asset—all of which apply to art (Eckstein 2008; Boltanski and Esquerre 2020).

As Birch and Muniesa argue, 'assetization' implicates a socially transformative act (Birch and Muniesa 2020, p. 4). Things are 'turned' into assets in a process that implies a broad variety of different actors. The ongoing 'financialization' and 'assetization' of art—taking off from the 1960s and 1970s onwards—are implicated in the broad variety of financial transactions related to art and the growing financial industry entirely built on art as assets existing today. Examples include services that are seeking to turn art into working assets such as asset-backed lending, the structuring of art investment funds, and art securitization (Picinati di Torcello 2010; Velthuis and Coslor 2012). These developments are, furthermore, strongly supported by, and intertwined with, recent technical evolutions within the art market (Robertson and Chong 2008).

There are, however, a few consequences to this growing business of art investing. One of them, according to Georgina Adam, is the rising demand for storage facilities (Adam 2018, p. 112). Due to an increased amount of art solely purchased for investment purposes, 'more work sleeps in warehouses rather than in collectors' homes' (p. 2). Negotiations about artworks only bear on the title of ownership and financial arrangements are set up to keep transactions discreet—all while the artworks remain stationary within storage facilities or freeports (Boltanski and Esquerre 2020, p. 247). The latter are thereby widely used to escape taxation on assets and although regulations have tightened up—they continue to be a fruitful environment for criminal activities such as money laundering by providing opportunities to store dubiously acquired cash (Adam 2018; Post and Calvão 2020; Weeks 2020; Zarobell 2020; Rausch et al. 2020). It is against the backdrop of these developments that this practice is worth exploring—this will be elaborated on further in the following sections.

### *2.2. Financial Challenges for European Public Museums*

This project can equally be contextualized within the challenges Belgian museums are facing—this is representative of the situation of underfunded public museums in Europe. In recent decades, these institutions have faced substantial cuts in government subsidies (Lindqvist 1990; Faro 2016; Zarobell 2017). This, in combination with increased competition in the funding pool and the rising costs of security and storage facilities, has led to the financial pressure they are experiencing today (Lindqvist 1990; Zarobell 2017). This urged a re-thinking of both a museum's tasks and its day-to-day operations. One of the direct consequences is that museums increasingly have to demonstrate their societal relevance and are subject to instrumentalist funding policies (Woodward 2012; Bell and Oakley 2015). They, furthermore, have increased their ambitions in community building an developing participatory practices (Simon 2010)—driven by financial interest, declining attendance and the so-called new museology, as is also reflected in the new ICOM definition that was recently adopted (see, for example, Vergo 1989; Hooper-Greenhill 1996; International Council of Museums 2022). As museums are assigned much broader social roles in addition to their core tasks, they consider it increasingly difficult to commit to exhibiting, preserving, and researching their collection (Alexander 1999; Faro 2016; Merriman 2008). These obligations, set by an increasing range of stakeholders, require a steady flow of resources (Woodward 2012).

'Too small or non-existent acquisition budgets' make collection expansion almost impossible, as noted in the 2016–2020 vision note for the Belgian museum sector (Faro 2016). The lack of resources also means that European museums can often no longer compete within the international art market to acquire pieces. Recently, museums have made joint purchases of artworks as an answer to this increased financial pressure. This can in a sense also be seen as a form of 'fractional ownership', or at least as 'shared ownership'. One of the most famous examples is the purchase of two Rembrandt portraits by the Louvre and the Rijksmuseum (The Guardian 2015).

Another direct result of lesser government support and illustrative of the privatization of the European museum field is that museums are increasingly run as actual businesses, becoming more entrepreneurial (Alexander 1999; Zarobell 2017). They often apply a more market-driven approach as an answer to the struggle to find funding—leading to the sometimes criticized 'blockbuster exhibitions'— and the adaptation of various branding strategies (Alexander 1999; Woodward 2012; Zarobell 2017). Other museums turn to private citizens and corporations to generate income—thereby moving closer to the American model—and develop various stakeholder relationships as these contribute to financial stability (Lindqvist 1990; Alexander 1999; Fabrikant 2016). An example of these are the widespread 'friends-of-the-museum' initiatives (Lindqvist 1990)—some of them explicitly mentioning collection expansion as one of their aims.

Lastly, many museums experience overflowing depots due to the scale of existing collections—which are also financially burdensome—leading to a 'profusion struggle' between the wish to collect more and the burden of preserving what already has been collected, and ongoing debates about de-collecting, or dynamic museum collections (Merriman 2008; Morgan and Macdonald 2018; Jones 2018).

## 3. Bridging the Gap between the Art Market and the Institutional Sphere

### *3.1. Collection Value and Asset Value*

Recent contributions within the field of economic sociology recognize the distinctive nature of how value is created within the art market and approach the exchange value of artworks as a social institution (see for example: Smith 1989; Karpik 2010; Orléans 2014).

Boltanski and Esquerre thereby distinguish between value creation within what they call a 'collection form' and an 'asset form'—both are applicable to art and prevalent in what they argue is the 'enrichment economy' we currently find ourselves in (Boltanski and Esquerre 2020). The first form draws upon the 'memorial power' of objects—a 'socially attributed' quality referring to the closeness of objects to historically significant persons or events, and the latter to the transformation of a commodity into 'money, treated as quasi-money, or treated as a substitute for money', aimed to build up wealth (pp. 192, 241). Asset value, according to the authors, is thus encapsulated in the relationship between an object's price and its anticipated 'meta price' or its possible future price.

Within the broader discourse about assets, Birch and Muniesa state similarly that the 'true value of an asset, as the vernaculars of financial valuation have it, is the one that stems from its capacity to create value', making 'asset value' thus inherently tied to expectations about the object's future value (Birch and Muniesa 2020, p. 3). Asset value and valuation practices are dynamic as they are 'constituted by an active and ongoing management of that value by social actors' (p. 7), making them inherently subjective (p. 4). As the authors argue, assetization is a process of 'narrative transformation', which implies a reframing of these involved social actors (p. 18). Assets are *made*, the authors argue; they are socially constructed.

Institutions—both for-profit and non-profit—can according to them, by their authority shape and/or augment the value of objects within the 'collection form'. Museums can, for example, assign value in relation to a narrative of the past that gives them memorial force and by preserving them in collections that cannot be sold (Boltanski and Esquerre 2020, p. 126). In this case, it can be hypothesized that the 'collection value' of this artwork will be enhanced by its narrative presentation in a museum context, also by shedding light on a lesser-known period of the artist. The authors continue that 'while museums may seem to offer "spaces for resisting the effects of the growing commercialization of art" (...) it is precisely when they present works of art in a context that distinguishes them from "commercial products" that museums help solidify the presence of these works in the economy of enrichment' (ibid.). Regarding this specific pilot project, a crossover of these dynamics can be observed since an artwork that will be sold is inserted in a prestigious museum collection—this is, however, equally true for works of private collectors that are (temporarily) included in museums collections, as will be touched upon later.

Following the argumentation of Boltanski and Esquerre, it can be hypothesized that the value of this work (or its so-called 'metaprice') will increase due to its exposition in the Royal Museum of Fine Arts. Similar remarks in relation to the contemporary art market have been made by Olav Velthuis, who states that gallerists continue to persuade curators to include their artists in museums or other noncommercial exhibitions as a way to establish value for their artworks (Velthuis 2005). Based on the same principle, a previous narrative analysis of auction catalog entries led to the conclusion that auctioneers often refer to visual resemblances to pieces in a museum collection as an active attempt of increasing the value of the goods offered for sale (Kalbermatten and Rausch 2021). This illustrates how the artwork's exhibition in the museum possibly embodies an increase in both its collection and asset value, and, that the art market and the institutional sphere mutually influence each other.

### *3.2. Fractional Ownership, Blockchains, and Asset Tokenization*

Fractional ownership, an idea that originated within the sphere of business jets, allowing businesses to purchase shares in a jet, quickly passed on to real estate and penetrated, more recently, the art market (Petterson 2022). The boom of the art market in recent decades and the subsequent 'assetization' and 'financialization' of art provided a fruitful environment for this development to appear—it might be even seen as symptomatic of it as it converges the ownership of art with that of financial investments (Charlesworth 2018).

Fractional ownership provides a way for buyers to purchase shares or tokens of an artwork that represent a percentage of total ownership rather than buying the entire artwork at its prohibitive price (Casiraghi 2022). At first sight, it thus encompasses the possibility to structurally disrupt the notion of what it means to 'own' an artwork. The idea behind it is, however, not new (Petterson 2022), and is in fact very similar to the ambitions of art funds (see for example Robertson and Chong 2008; Horowitz 2014; Velthuis and Coslor 2012). For private investors, fractional ownership used to take shape as the purchase of comparatively low-value shares of a securitized art fund (Barbereau et al. 2022). More recent initiatives have implemented blockchain technologies—thereby expanding the concept of fractional ownership to a global pool of investors who are no longer obliged to register with a custodial broker or a company-owned stock exchange (ibid.). The emergence of blockchain technologies and their relation to the art market have already been discussed by various authors—including its application in for example provenance title registries and the payment of artist's resale rights (Charlesworth 2018; Whitaker and Kräussl 2018; Whitaker 2019; Barbereau et al. 2022).

This article limits itself by mentioning the two basic concepts that are at the core of these technologies: 'distributed, decentralized peer-to-peer computing'—which removes the need to trust a central authority for keeping official records (Whitaker 2019); and, the 'promise of an unalterable, mutually guaranteed, and transparent record of past events and transactions' (Charlesworth 2018). Peer-to-peer computing is supported by distributed ledger technology (DLT), making it possible to transfer economic value, rights, and claims—of both digital and physical assets—without custodial intermediaries such as banks or other financial institutions, but directly via peer-to-peer transactions. A successful transfer is achieved when a new record is appended to the blockchain—'to a distributed ledger's transaction history' (Barbereau et al. 2022).

Before assets can be bought, sold, or traded on the blockchain, they need to be tokenized—a principle which has, since 2017–2018, been applied to 'all sorts of assets from diamonds to luxury boats, and artworks' (Sazandrishvili 2020; Folaron 2023). To tokenize an asset, the physical object needs to be digitized. This digitized asset can subsequently be divided into subunits, with every one of these units being represented by a digital token (Ibid., p. 68). As Sazandrishvili explains, this makes all tokenization intrinsically a digitization; however, not all digitization is tokenization. Tokenization is a form of digitization that supports fractional ownership as these asset tokens can be compared to digital certificates of ownership in real assets, with the bearer of the token being the owner of a percentage of the underlying asset (Maecenas n.d.).

Through the representation of real assets as digital tokens, various benefits for investors are achieved. They enjoy the 'security, liquidity, and immutability' of cryptocurrencies, applied to real-world assets and the provenance of the tokenized artworks registered on the blockchain (Clavien 2020). Tokenized claims can pertain both to digital artworks or physical artworks, fungible or non-fungible; and to custodied assets or assets without a custodian (Barbereau et al. 2022). In the case of Rubey, a physical artwork is being tokenized—therefore, digital collectibles (such as for example 'Cryptokitties' released by Dapper Labs) will not be discussed any further.

### *3.3. Fractional Ownership within the Art Market: A Brief History*

Since the most recent decade, various platforms offering fractional ownership opportunities for art have emerged. The 'first market cycle' of startups can be situated as early as the financial crisis when the first initiative—'Art & Cultural Exchanges'—was set up in China (Anapur 2022; Petterson 2022). However, due to its speculative behavior, the Chinese government quickly imposed restrictions, leading to a closure not long afterward. Europe followed in 2011, with 'A&F Markets' in Paris and 'SplitArt' in Luxembourg, but both initiatives failed (Petterson 2022). Six years later, attempts started to re-emerge—this time intrinsically linked to the rapid developments manifesting themselves in blockchain technologies and initial coin offerings (ibid.). In 2017, Maecenas managed to acquire USD 15.38 m through ICOs for a work by Andy Warhol, and the company subsequently divided it into ART tokens, selling 31.5% of them in 2018 (Whitaker 2019). This second wave of startups that originated circa 2017—including ArtSquare, Malevich, and Feral Horses—was quickly slowed down due to the lack of a regulatory framework, an issue that somewhat continues today (Petterson 2022).

In 2018, when the main regulatory problems were solved, the development gained momentum again and one of today's market leaders, Masterworks, was founded—at the moment of writing, this company has purchased a total of 239 artworks (Masterworks n.d.). Masterworks allows investors to build portfolios of shares in artworks and to sell these shares on a company-owned exchange. This differs from Maecenas, which operates a DLT-based exchange and uses the ERC-20 fungible token standard (Barbereau et al. 2022). The main difference between securitization (Masterworks) and tokenization (Maecenas), according to Barbereau et al., is the media of storage and exchange: 'shares are registered on a proprietary exchange like the Nasdaq', where asset tokens are on a distribution ledger (p. 217). Tokenization makes it possible to buy fractions directly from an asset's custodian, without requiring intermediating parties (ibid.).

Other companies were inspired to do the same: Mintus, Sygnum, Artemundi, Fractional.art, Yieldstreet, Particle, Rares, and Arttory/Winston Art Fund soon followed, leading to today's wide variety of platforms (Petterson 2022). In 2021, the world's first digital asset bank Sygnum, together with Artmundi, tokenized Picasso's *Fillette au Beret*; the practical result was, however, the same—the work ended up in a storage vault. As Anapur notes, the practice of fractional ownership as it has established itself over the past ten years was mainly tailored for investors, and not for traditional art lovers; buyers cannot enjoy their artworks in the usual manner by putting them up on the wall (Anapur 2022). As argued in the first chapter and illustrated by this example, many art investments remain in storage vaults for years, disappearing out of the public domain. The website of Maecenas reads (Maecenas n.d.):

> 'the most likely scenario would be for the artwork to be stored in a purpose-built art storage facility that provides high-security access. This has the benefits of preserving the artwork in optimal conditions (humidity, temperature, lighting) and significantly lowering the risk of damage or theft, which is reflected in the lower premium that would be charged by the insurance company'.

According to their website, it is 'also possible to store the artworks at museums or certain galleries given that they meet our guidelines and are approved by the insurance provider'. It is very unlikely though that such a partnership has been established or will be established in the near future given that Maecenas has only successfully tokenized one artwork, and their art investment platform is currently disabled, making it seem that the company is not actively tokenizing other artworks anymore.

Recently, some fractional ownership platforms have addressed the issue of reduced visibility for art investments. For example, the Korean company TESSA—which operates via a digital application—exhibits the works it has purchased in their own museum (TESSA n.d.). The platform Particle wants to loan its purchased works to the Particle Foundation, which aims to preserve and display the collection globally through collaboration with 'galleries and institutions' (Particle Collection n.d.).

Although many of the artworks offered via fractional ownership end up in a storage vault, authors have identified a couple of advantages for those willing to buy art. The most mentioned ambition of enterprises developing these shared investment opportunities is to 'democratize' the art market and art investments. Because of fractional ownership, 'low-net worth individuals and small investors, who have so far found it difficult to make meaningful purchases in art', now have the opportunity to invest in blue-chip artwork and to diversify their asset portfolios (Clavien 2020).

Besides the purchase price, the often-high maintenance costs of an artwork can be split among the token holders—depending on the token model — further enhancing a democratic investment opportunity and lowering financial barriers (Clavien 2020). Not only is 'a share' of an artwork less expensive than the entire one, these platforms also generally charge lower fees in comparison to auction houses and galleries, and tokens can be traded 'easily' on a liquid exchange. Investors can furthermore diversify the investment risk by buying shares or tokens in various artworks (Blignaut 2023). With regard to the primary art market, tokenization may also provide opportunities for collectors who 'don't have the time or knowledge to spot up-and-coming artists and evaluate which works to purchase' (O'Neill 2018).

By fundamentally changing the way in which art purchases are made, and by lowering the financial entry barriers of the industry, fractional ownership has the capacity to disrupt the traditional art market—however, more critical voices are starting to emerge. Additionally, the truly revolutionary character of cryptocurrencies is also increasingly being questioned, since they seem to reinforce pre-existing economic principles and are therefore not necessarily emancipatory (Lottie 2019).

At the time of writing—a year after the crypto crash and possibly slowly recovering from it (Schiller 2023)—only few of the benefits mentioned above have actually been able to materialize into socially valuable applications. It is therefore worth considering whether a public–private partnership such as this is a possible way forward. With respect to this particular case— it can be added that there are voices recognizing the crypto winter as a reason that explains why the time for tokenization of real-world assets may have come; investors seem to be heading towards it against the backdrop of this crash of cryptocurrencies (Casey 2023).

## 4. How to Own a 'Piece' of an Ensor?

The following subsection will provide an in-depth analysis of the collaboration between Rubey and the Royal Museum of Fine Arts, Antwerp.

### *4.1. Mission Rubey*

Although various fractional ownership opportunities for artworks have been established in the last decade, this is the first case in which a company has the public disclosure of the tokenized artworks explicitly embedded in its mission. Rubey's mission statement is, therefore, threefold: 'people, society and museums' explained the managing partner of Rubey (Van Doorslaer, personal interview, March 2023). This points to the platform's ambition to democratize fine art investments by enabling investment at a very low entry price, to be of societal relevance through the public disclosure of artworks that were previously in private hands, and to increase the relevance of their partnering museums through branding and active asset management, respectively. The other aspects of their mission—which will be briefly discussed later—include the creation of a 'community' of investors around the artwork and the development of more structural partnerships with museums.

Rubey targets, in contrast to other art investment platforms, not only 'people who want to invest in art but don't have the budget to buy a masterpiece' but also 'people looking for an investment with a positive social impact' (Rubey n.d.). It is exactly this strong aim for societal impact, through loaning the tokenized artwork to a museum, which differentiates the company from other fine investment platforms and makes its collaboration with a public museum notable for analysis from an academic point of view.

### *4.2. A Two-Stage Rocket Launch: Private and Public Investors*

Although in the future it may be possible to purchase an artwork directly through crowdfunding, the company has chosen a two-stage approach in this pilot tokenization of *Carnaval de Binche* (1942). The artwork was first purchased by a target company based in Luxembourg. This target company, which in the case of *Carnaval de Binche* consists of 15 private investors who all pooled together approximately EUR 100, 000, is (and will remain) the legal owner of the physical artwork (Van Doorslaer, personal interview, March 2023).

However, the financial rights related to the work are divided into virtually equal parts represented by Art Security Tokens, distributed to the private investors following the purchase of the artwork, and subsequently re-offered to public investors via the Rubey platform. This makes it so that, from an economic point of view, 'the investors subscribing to the Art Security Tokens become indirect 'owners' of a piece of art' (ibid.).

In concrete terms, *Carnaval de Binche* was acquired through a private sale by the target company for EUR 1.2 million and 'divided into 1 million Art Security Tokens to raise a sum of 1.41 million euros'. The difference between the amount raised by the token offering and the purchase price amounts to EUR 210, 000 and is intended to fund the costs associated with the tokenization process and maintenance of the systems, as explained by the managing partner (Van Doorslaer, personal interview, March 2023). In the future, it might also be possible to offer the tokens directly for public sales to raise funds for the actual purchase. Nevertheless, the current approach also has advantages, as it diminishes the risk of the artwork being 'burned' when the purchase would fail, and provides an opportunity to 'democratize at public level and at private investment level', as Van Doorslaer added in our interview.

### *4.3. Management*

After the tokenization of the artwork, 25% of the tokens are made available for public sale. This means that the private investors will retain 75% of the Art Security Tokens and it means that the majority of the tokens can never be acquired through public sales. Despite their large stake, however, even the private investors have no say in what happens to the artwork. This is a conscious choice by Rubey as one cannot assume that all token holders are reasonable decision makers in terms of both art and finance, as explained by the managing partner (Van Doorslaer, personal interview, March 2023). The token holders do have consultation rights, which means that their opinions can be determined through a survey, but these results are not binding. In practice, as explained in the previous section, token holders only hold a share in the financial rights to the artwork and not the physical ownership, as this would only complicate the decision-making process. In addition, investors often do not want to be bothered with all the practical details regarding their investment according to him; Rubey takes care of the practicalities of the partnerships with the museums with the aim of removing the burden from the investors.

### *4.4. Maturity Date*

After the maturity date of the Art Security Tokens, which is set to be ten years, the artwork will be sold. Investors will thereby by directly exposed to the fluctuation of the work's value as the target company will sell it and will 'use the painting's entire net realizable value (after deduction of realization costs and taxes) to repay the investor's deposit and to pay out the agreed return' (Rubey n.d.). The ASTs thus have a fixed term of 10 years; however, as Rubey aims to sell the work under 'favorable market conditions', this period can be extended by a period of one year a maximum of three times (10 + 1 + 1 + 1). Additionally, it has been agreed upon that, if the issuer of the ASTs receives an interesting offer for the painting in question, it may accept it during the final thirty-six months of the contract (ibid.). In practice, this means that Rubey will sell the painting between seven and thirteen years after tokenizing it.

The collaboration between the museum and Rubey is thereby not different from a traditional private loan agreement—the difference here is that the work belongs not to one private owner but to a group of investors. Therefore, the same principles are adopted as with any other loan: the museum is responsible for the presentation of the work in the best possible conditions, the insurance of the work, and it manages it with due diligence by reporting any possible damages to the owners. It is, however, not responsible for the conservation and restoration of it (Willems, personal interview, May 2023).

### *4.5. Art Security Tokens*

The Art Security Tokens (ASTs) Rubey uses for the tokenization of *Carnaval de Binche* can be compared to an electronic form of a traditional security or tradable financial asset (Rubey n.d.). This means that the issuer is 'bound by the financial legislation and the monitoring of this by supervisory authorities'; according to Rubey, this is the main characteristic which distinguishes ASTs from unregulated tokens and NFTs. It also means that there are legally enforceable rights and obligations for the token holder against the issuer. Another important difference to note is that Rubey's ASTs "represent a value of an art collectible that exists in the real world"—unlike NFTs, their website states, which mainly represent digital artworks (Rubey n.d.). Furthermore, ASTs are fungible—since each token has the same value, they are interchangeable (Van Doorslaer, personal interview, March 2023).

The ASTs are registered on the Ethereum/Polygon blockchain and can subsequently be traded according to smart contracts that automatically define whether a transaction is valid or not. One of the conditions registered in this smart contract is that the exchange of tokens is only possible with registered users on the Rubey platform and, therefore, are verified according to the Anti-Money Laundering (AML) and Know Your Customer (KYC) regulations, according to the website (Rubey n.d.). Lastly, as mentioned before, the target company always remains the legal owner of the physical painting and only transfers the financial rights to the token holders through these tokens. The company's website reads:

> 'Note the quotation marks around 'Co-owner'. This is because any investor who purchases Rubey Art Security Tokens effectively becomes the legal owner of these Art Security Tokens, even though they do not directly own the piece of art itself. The official ownership of the piece resides with a specific target company of Rubey. Each Rubey target company owns one piece of art and transfers the financial rights related to the piece to the token holders' (ibid.).

## 5. Analysis

The aim of this section is twofold: the first part will address the more practical benefits and concerns of a public–private partnership like this—partly based on the museological challenges that were set out previously, and the second part will analyze the case through the lens of economic sociology and its theories of 'assetization'.

### *5.1. Practical Benefits and Concerns*

Implementing fractional ownership within a museum encompasses an alternative way to finance (temporary) collection expansion. The first and foremost reason why a European museum would consider implementing fractional ownership, and why the Royal Museum of Fine Arts decided the enter this pilot project, lies exactly in this reason. As Whitaker argues, one of the greatest areas in which the implementation of blockchain technologies within arts entrepreneurship can have an impact is by providing 'novel funding structures for organizations and governments' (Whitaker 2019, p. 38).

As mentioned before, the acquisition budget for European museums is limited and museums are facing financial pressure for various reasons; this makes purchasing new artworks difficult or practically impossible. The director of the Royal Museum of Fine Arts in Antwerp considers the tokenization of an artwork—as is now happening with *Carnaval de Binche* of James Ensor—a third strategy, that can be added to the acquisition strategies the museum currently adopts; these are soliciting the 'Topstukken' fund or relying on long-term loans from private collectors (Willems, personal interview, May 2023).

Besides providing an alternative way to generate funds for collection expansion, fractional ownership may also contribute to the disclosure of cultural heritage that is currently held in private hands—this is an advantage that is directly interwoven with the previous one. Via tokenization, Van Doorslaer explains, capital can be raised to acquire works from important Belgian artists that are currently hidden abroad and would be valuable additions to the collections of Belgian museums (Van Doorslaer, personal interview, March 2023). Otherwise, these acquisitions would be financially impossible. The public display of these previously privately owned works may also come with augmented research possibilities for the artwork in question; this will, thereby, possibly lead to a more holistic image of an artist's oeuvre, as artworks in private collections are often under-researched. In the case of *Carnaval de Binche*, this means that the work will be included in the Ensor

Research Project, a research project which aims to map out the entire oeuvre of this Belgian artist (Willems, personal interview, May 2023).

Another reason why the museum decided to partake in this collaboration is the possibility of establishing interesting contacts within the token holders' community. After all, the Rubey platform and the museum aim to create a community of co-owners around the work—in return for their investment, the fifteen private investors receive a life-size print of the artwork and a free pass to the museum. The public investors are invited to a yearly evening in which all public investors gather in the museum and they can ask questions of experts about 'their' painting (Van Doorslaer, personal interview, March 2023). With this, Rubey aims to maintain a link between the investors and the painting, as is stated in its mission. This is facilitated by the public display of the work in the museum, making it possible for token holders to visit their asset—in contrast to other investment platforms, where the artwork disappears for years into a vault.

The museum and Rubey consider the token holders within this 'community' to function as ambassadors of both the artwork and the museum in general—as it might be expected that they will visit the museum and speak with friends and family about 'their' investment. They are therefore comparable to 'friends of' the museum, who, while being an ambassador of the museum—as described by Lindqvist—may also contribute to the financial stability of the museum (Lindqvist 1990). This tokenization can, therefore, be considered to be some sort of participatory practice; however, one could critically engage with the notion of 'community' and ask whether the investors purchasing these tokens via an online platform can be called an actual community. There will, after all, also be absent investors who will not be engaging in these activities and never visit the museum. Next to the above-mentioned benefits, a few practical concerns or thresholds for why museums might choose not to engage in a practice like this are worth mentioning. Some museums simply do not work with loan agreements; they only work with their own permanent collection. Meanwhile, others might only work with temporary exhibitions and would not be able to display the work for a continuous period of ten years (Van Doorslaer, personal interview, March 2023). Bearing the responsibility of managing and insuring the artworks is considered too financially burdensome for some institutions.

The main benefits for the token holders have been set out before—such as the possibility to partake in art investment and 'co-own' a museum piece at a democratic entry price. There are, however, some potential risks for the investors—some are related to art investments in general, while others are specific to the relatively recent nature of these technologies; this market is still in its infancy, and it is important to acknowledge the somewhat uncertain future of blockchain applications. Because of these, there is a liquidity risk for the tokens—as well as a 'risk of regulatory compliance'—given that the legal frameworks for these practices are not yet fully formed (Rubey n.d.). Lastly, scholars point towards some general uncertainties about the future of fractional ownership—the idea that all artworks are a suitable investment is 'simply wrong', according to Adam. Additionally, the lack of expertise in both art and finance in past platforms made it so that only a few initiatives could truly pierce the market (Adam 2021). This is an issue that, in this particular case is mediated through close collaboration with museum professionals. Furthermore, Adam stated that the use of tokens and cryptocurrencies poses problems for 'oversight wrong-doing', and she questions whether there is 'really much of an appetite for what is a very speculative field' (Adam 2021). As these platforms acquire pieces at historically high prices, Petterson notes that 'the promised exchanges have yet to materialize' and 'prices need to keep going up much further' for investors to expect any profit (Petterson 2022); this uncertainty, however, also manifests itself in more traditional forms of arts investment.

### *5.2. Creating Value*

If we approach this project from an economic–sociological perspective, following the argumentation of Boltanski and Esquerre, it can be hypothesized that the 'collection value' and the 'asset value' of this artwork will be enhanced by its presentation in a prestigious museum such as the Royal Museum of Fine Arts—as partly touched upon by D'hoore and Schramme (D'hoore and Schramme 2023). Rubey wants to contribute to this by actively managing its asset and promoting the museum (Van Doorslaer, personal interview, March 2023). In this specific case, the tokenization can also be situated within the branding strategies of the museum. As the Royal Museum of Fine Arts recently re-opened with great celebrations after a renovation period of ten years, it has been pays great attention to its promotional activities. The museum saw its chance to be the first in Europe to acquire an artwork in this manner, as it consciously brands itself as an innovative museum (Willems, personal interview, May 2023).

However, the expected increase in asset value due to this partnership has also led to more critical questions regarding the role of a public museum in the valuation practices of art as a financial asset and whether a public museum may be 'used' to increase the financial value of the financial assets of a few. It is important that clear agreements are made around these intentions (Schramme cited in Gordts 2022). These critical remarks are rooted in the traditionally government-funded European museum field—in which an aversion to private money is more prevalent, contrary to the Anglo-Saxon model.

The Royal Museum of Fine Arts, however, distances itself from this value-increasing approach. The director argues that the museum is not involved in this speculative aspect and that a possible increase in the value of the work is independent of its exhibition at the museum (Willems, personal interview, May 2023). Some awareness about the role of museums within the valuation practices of particular artworks is, however, valuable; this is because the art market and the museum sphere are not two strictly separate domains but mutually influence each other, as argued within the economic sociological literature. A project like this, furthermore, does not operate in a 'vacuum'; rather, it operates in a web of dynamics between social actors. In this context, it is worth mentioning that the idea of private owners trying to get their works exhibited in a museum's collection to increase their value is not new; this is prevalent in both the primary and the secondary circuit (see, for example, Velthuis and Coslor 2012).

The managing partner of the Rubey platform furthermore convincingly adds that this project does not differ much from a 'Public Private Partnership structure', being a collaboration between the government and private companies for the development of public infrastructure (Vlaams Kenniscentrum Publiek-Private Samenwerking 2018). Various authors have recently explored the practice of a PPP within the cultural heritage sector as an answer to the funding struggles that are being faced in the preservation of this heritage (see, for example, Macdonald and Cheong 2014; Riches Think Paper 07 2016; Borin 2017; Jelinčić et al. 2017). In addition, the Flemish government has recently commissioned research on the 'Cooperation between private collectors/private collection managing institutions and (semi-) public cultural heritage institutions in Flanders', highlighting interest in further public–private partnerships in the future as a sustainable heritage practice (D'hoore and Schramme 2023).

Lastly, this practice conceptualizes the role of a museum as the mere 'custodian' of the artwork; however, one could wonder whether this is in line with the increasingly diverse expectations placed on museums and the findings of recent museum studies.

## 6. Concluding Remarks

This article explores the innovative collaboration between the Rubey platform and the Royal Museum of Fine Arts in Antwerp. Through the tokenization of the artwork *Carnaval de Binche* by James Ensor, this platform made it possible for interested investors to purchase blockchain-registered Art Security Tokens within this artwork and become—at least from an economic point of view—co-owners of it. This is the first time that an art investment opportunity like this has materialized in an explicit partnership with a museum, since the tokenized artwork will be held on public display for a period of ten years. Therefore, this project was contextualized within both the 'assetization' of art—that has expanded during recent decades—and the current financial challenges Belgian (and, more broadly speaking, European) museums are facing.

After exploring the main concepts related to fractional ownership of art, this article shed light on how the implementation of fractional ownership within a museum setting could provide practical benefits for European public museums that are constrained by tight acquisition budgets. In addition to offering an alternative way of generating funds for (temporary) collection expansion, fractional ownership may contribute to the disclosure of cultural heritage in private hands. Furthermore, it can fit within museum branding strategies, community-building strategies, and art historical research projects—as can be seen in this case.

Additionally, this article illustrates that the art market and the institutional sphere are not as separate as they used to be. With regard to this, it can be argued that the exhibition of this particular asset within a prestigious museum like the Royal Museum of Fine Arts probably leads to a value increase for this artwork, based on findings within economic sociology. Therefore, more critical questions are raised surrounding the role of public museums in a collaboration like this that could use further reflection. Nevertheless, a counterargument for these can be provided by stating that this collaboration does not differ much from 'PPP structures' that are implemented in other domains of society and that this loan agreement is similar to a 'traditional' loan agreement with a private party—who may or may not also have ulterior financial motives.

At the moment of writing, it remains unclear what exactly will happen with the painting after this specific time period. Although there will definitely be a 'hard exit' for the current token holders, according to the director, the sale of the painting does not necessarily mean that it will disappear from the museum—possibilities include the issue of a new tokenization or willingness to buy among a few investors who might re-lend it to the museum (Willems, personal interview, May 2023). Nevertheless, if the work is sold and possibly returned to a (foreign) private collection, there are still benefits to this partnership according to Willems, such as the art historical knowledge gained and the acquired public disclosure. After the expiry of a 'traditional' private loan—this case being very similar, as argued by the stakeholders—many artworks equally disappear from the public domain.

As we find ourselves only at the beginning of this partnership, it is not yet possible to formulate definitive conclusions. Concerning the broader museum field, it will be interesting to follow up on whether this practice finds resonance with other museums. To determine whether fractional ownership is to be applied on a large scale, comparative studies may be useful. Given the fact that it encompasses an innovative way of financing (temporary) collection expansion and fits within the increased entrepreneurial spirit of European museums, chances are that this is the case. However, there remain some general uncertainties with regard to the future of blockchain technologies and their ability to truly penetrate the art market—especially against the backdrop of the 'crypto crash' in 2022. As asset tokenization is a quickly emerging field, and legal frameworks are not yet fully confirmed, research from a legal perspective is equally necessary. More evidence-based studies about the impact of these partnerships on museums which are part-way through or at the end of the ten-year period would be equally useful additions to this exploratory article.

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## References


Adam, Georgina. 2018. *Dark Side of the Boom: The Excesses of the Art Market in the Twenty-First Century*. London: Lund Humphries.

Adam, Georgina. 2021. Piece by Piece: The Issues with Fractional Ownership of Art. *The Art Newspaper*. September 28. Available online: https://www.theartnewspaper.com/2019/10/30/piece-by-piece-the-issues-with-fractional-ownership-of-art (accessed on 29 August 2023).

Alexander, Victoria D. 1999. A Delicate Balance: Museums and the Market-Place. *Museum International* 51: 29–34. [CrossRef]

Anapur, Eli. 2022. Fractional Ownership—A New Model of Art Collecting. Available online: https://www.widewalls.ch/magazine/fractional-ownership-art (accessed on 8 May 2023).

Barbereau, Tom, Johannes Sedlmeir, Reilly Smethurst, Gilbert Fridgen, and Alexander Rieger. 2022. Tokenization and Regulatory Compliance for Art and Collectibles Markets: From Regulators' Demands for Transparency to Investors' Demands for Privacy. In *Blockchains and the Token Economy: Theory and Practice*. Edited by Mary C. Lacity and Horst Treiblmaier. Cham: Palgrave Macmillan, pp. 213–36.

Bell, David, and Kate Oakley. 2015. *Cultural Policy*. London: Routledge.

Birch, Kean, and Fabian Muniesa. 2020. *Assetization: Turning Things into Assets in Technoscientific Capitalism*. Cambridge: MIT Press.

Blignaut, John. 2023. The Big Picture in Fractional Art Investment. Available online: https://www.linkedin.com/pulse/big-picture-fractional-art-investment-john-blignaut?trk=public_profile_article_view (accessed on 29 August 2023).

Boltanski, Luc, and Arnaud Esquerre. 2020. *Enrichment: A Critique of Commodities*. Cambridge, UK: Polity Press.

Borin, Elena. 2017. *Public-Private Partnership in the Cultural Sector: A Comparative Analysis of European Models*. Brussels: P.I.E. Peter Lang.

Casey, Michael J. 2023. *Has Tokenization's Moment Finally Come?* CoinDesk Latest Headlines RSS. Available online: https://www.coindesk.com/consensus-magazine/2023/03/03/has-tokenizations-moment-finally-come (accessed on 6 March 2023).

Casiraghi, Francesca. 2022. How Do You Choose a Fractional Art Ownership Venture? London Art Trade. Available online: https://www.londontradeart.co.uk/en/magazine/how-do-you-choose-a-fractional-art-ownership-venture (accessed on 3 May 2023).

Charlesworth, J. J. 2018. Art Market, Meet Blockchain. Available online: https://artreview.com/online-opinion-jj-charlesworth-art-market-blockchain-christies/ (accessed on 3 May 2023).

Clavien, Aurelia. 2020. 'Is Fractional Ownership a Sustainable Investment Option?: London Trade Art Magazine.' Buy Art Online. Available online: https://www.londontradeart.co.uk/en/magazine/is-fractional-ownership-a-sustainable-investment-option (accessed on 8 May 2023).

D'hoore, Laura, and Annick Schramme. 2023. *Samenwerking Tussen Privéverzamelaars/Private Collectiebeherende Instellingen en (Semi-)Publieke Cultureelerfoedinstellingen in Vlaanderen*. Antwerpen: Universiteit Antwerpen, p. 99. Available online: https://publicaties.vlaanderen.be/view-file/51961 (accessed on 13 August 2023).

Eckstein, Jeremy. 2008. Investing in Art. In *The Art Business*. Edited by Iain Robertson and Derrick Chong. Abingdon: Routledge, pp. 69–91.

Fabrikant, Geraldine. 2016. European Museums Adapt to the American Way of Giving. *The New York Times*. March 15. Available online: https://www.nytimes.com/2016/03/17/arts/design/european-museums-are-shifting-to-american-way-of-giving.html (accessed on 15 January 2023).

Faro. 2016. Overleg Vlaamse Musea Volop Inzetten Op Musea. Available online: https://faro.be/sites/default/files/bijlagen/e-documenten/visietekst_musea.pdf (accessed on 15 January 2023).

Folaron, Max. 2023. Real World Asset Tokenisation—How Did We Get Here? *LinkedIn*. July 14. Available online: https://www.linkedin.com/pulse/real-world-asset-tokenisation-how-did-we-get-here-max-folaron (accessed on 13 August 2023).

Gordts, Pieter. 2022. Iedereen Een Aandeeltje Ensor, Dat Is Een Interessant Systeem Om Je Publiek Meer Te Betrekken. *De Morgen*. April 28. Available online: https://www.demorgen.be/tv-cultuur/iedereen-een-aandeeltje-ensor-dat-is-een-interessant-systeem-om-je-publiek-meer-te-betrekken~b2efd34a (accessed on 15 January 2023).

Hooper-Greenhill, Eilean, ed. 1996. *The Educational Role of the Museum (repr.)*. London: Routledge.

Horowitz, Noah. 2014. Art Funds. In *Art of the Deal: Contemporary Art in a Global Financial Market*. Princeton: Princeton University Press.

International Council of Museums. 2022. ICOM Approves a New Museum Definition. Available online: https://icom.museum/en/news/icom-approves-a-new-museum-definition/ (accessed on 30 August 2023).

Jelinčić, Daniela Angelina, Sanja Tišma, Matea Senkić, and Domagoj Dodig. 2017. Public-Private Partnership in Cultural Heritage Sector. *Transylvanian Review of Administrative Sciences*, 74–89. [CrossRef]

Jones, Trevor. 2018. A (Practical) Inspiration: Do You Know What It Costs You to Collect? In *Active Collections*. Edited by Elizabeth Wood, Rainey Tisdale and Trevor Jones. London: Routledge, pp. 141–44.

Kalbermatten, Syra, and Christoph Rausch. 2021. Bidding Better Online in Belgium: The Value of Auction House Expertise during the COVID-19 Pandemic. *Arts* 10: 75. [CrossRef]

Karpik, Lucien. 2010. *Valuing the Unique: Economics of Singularities*. Princeton: Princeton University Press.

KMSKA. 2023. Word 'Mede-Eigenaar' van Een Ensor. Available online: https://kmska.be/nl/word-mede-eigenaar-van-een-ensor (accessed on 28 August 2023).

Lindqvist, Katja. 1990. Museum Finances: Challenges Beyond Economic Crises. *Museum Management and Curatorship* 27: 1–15. [CrossRef]

Lottie, Laura. 2019. The Art of Tokenization: Blockchain Affordances and the Invention of Future Milieus. *Media Theory* 1: 287–320.
Macdonald, Susan, and Caroline Cheong. 2014. *The Role of Public-Private Partnerships and the Third Sector in Conserving Heritage Buildings, Sites, and Historic Urban Areas*. Los Angeles: The Getty Conservation Institute.
Maecenas. n.d. Frequently Asked Questions. Available online: https://www.maecenas.co/faq/ (accessed on 29 August 2023).
Masterworks. n.d. Available online: https://www.masterworks.com/ (accessed on 9 May 2023).
Mei, Jianping, and Michael Moses. 2005. Beautiful Asset: Art as Investment. *The Journal of Investment Consulting* 7: 1–7.
Merriman, Nick. 2008. Museum Collections and Sustainability. *Cultural Trends* 17: 3–21. [CrossRef]
Morgan, Jennie, and Sharon Macdonald. 2018. De-Growing Museum Collections for New Heritage Futures. *International Journal of Heritage Studies* 26: 56–70. [CrossRef]
O'Neill, Jacqueline. 2018. What You Need to Know about Art Tokenization and Investment. *Medium*. October 10. Available online: https://medium.com/blockchain-art-collective/what-you-need-to-know-about-art-tokenization-and-investment-13523d3b5f1d (accessed on 29 August 2023).
Orléans, Andre. 2014. *The Empire of Value: A New Foundation for Economics*. Cambridge: The MIT Press.
Particle Collection. n.d. Particle Collection. Available online: https://www.particlecollection.com/ (accessed on 29 August 2023).
Petterson, Anders. 2022. Fractional Ownership of Art. *ArtTactic*. June 22. Available online: https://arttactic.com/editorial/fractional-ownership-of-art-part-i/ (accessed on 13 January 2022).
Picinati di Torcello, Adriano. 2010. *Why Should Art Be Considered an Asset Class?* Luxembourg: Deloitte. Available online: https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/financial-services/artandfinance/lu-art-asset-class-122012.pdf (accessed on 29 August 2023).
Post, Erik, and Filipe Calvão. 2020. Mythical Islands of Value: Free Ports, Offshore Capitalism, and Art Capital. *Arts* 9: 100. [CrossRef]
Pownall, Rachel. 2009. Art as a financial investment. In *Collectible Investments for the High Net Worth Investor*. Edited by Stephen Satchell. Amsterdam: Elsevier, Amsterdam: Academic Press, pp. 119–50.
Rausch, Christoph, Léonie Bouwknegt, Jeroen Duijsens, and Frank Assendelft. 2020. Dirty Money, Pretty Art. *Justitiële Verkenningen* 46: 28–40. [CrossRef]
Riches Think Paper 07. 2016. Public-Private Partnerships for Cultural Heritage: Opportunities, Challenges, Future Steps. *RICHES Resources*. April 19. Available online: https://resources.riches-project.eu/riches-think-paper-07-public-private-partnerships-for-cultural-heritage-opportunities-challenges-future-steps/ (accessed on 9 May 2023).
Robertson, Iain, and Derrick Chong. 2008. *The Art Business*. Abingdon: Routledge.
Rubey. n.d. Available online: https://www.rubey.be/ (accessed on 9 May 2023).
Sazandrishvili, George. 2020. Asset Tokenization in Plain English. *Journal of Corporate Accounting & Finance* 31: 68–73. [CrossRef]
Schiller, Ben. 2023. Crypto Winter Is Over. *Nasdaq*. October 30. Available online: https://www.nasdaq.com/articles/crypto-winter-is-over (accessed on 30 December 2023).
Simon, Nina. 2010. *The Participatory Museum*. Santa Cruz: Museum 2.0.
Smith, Charles. 1989. *Auctions: The Social Construction of Value*. Berkeley: University of California Press.
TESSA. n.d. TESSA. Available online: https://www.tessa.art/ko (accessed on 29 August 2023).
The Guardian. 2015. France and Netherlands to Jointly Buy Rare Rembrandts. September 30. Available online: https://www.theguardian.com/artanddesign/2015/sep/30/france-netherlands-rembrandts-louvre-rijksmuseum (accessed on 20 December 2022).
Velthuis, Olav. 2005. *Talking Prices: Symbolic Meanings of Prices on the Market for Contemporary Art*. Princeton: Princeton University Press.
Velthuis, Olav, and Erica Coslor. 2012. The Financialization of Art. In *Karin D. Knorr-Cetina and Alex Preda*. Oxford: Princeton University Press, pp. 471–87.
Vergo, Peter. 1989. *The New Museology*. London: Reaktion Books.
Vlaams Kenniscentrum Publiek-Private Samenwerking. 2018. *Praktische Handleiding*. Brussel: Vlaams Kenisscentrum PPS. Available online: https://publicaties.vlaanderen.be/view-file/28270 (accessed on 20 December 2022).
Weeks, Samuel. 2020. A Freeport Comes to Luxembourg, or, Why Those Wishing to Hide Assets Purchase Fine Art. *Arts* 9: 87. [CrossRef]
Whitaker, Amy. 2019. Art and Blockchain: A Primer, History, and Taxonomy of Blockchain Use Cases in the Arts. *Artivate: A Journal of Enterprise in the Art* 8: 21–47. [CrossRef]
Whitaker, Amy, and Roman Kräussl. 2018. *Blockchain, Fractional Ownership, and the Future of Creative Work*. Center for Financial Studies Working Paper Series, No. 594. Frankfurt am Main: Goethe University Frankfurt, Center for Financial Studies (CFS).
Woodward, Simon. 2012. Funding Museum Agendas: Challenges and Opportunities. *Managing Leisure* 17: 14–28. [CrossRef]
Zarobell, John. 2017. *Art and the Global Economy*. Oakland: University of California Press.
Zarobell, John. 2020. Freeports and the Hidden Value of Art. *Arts* 9: 117. [CrossRef]