A Comparative Study of the Value of Asian NFT Art on OpenSea, with a Focus on Art Incorporating Asian Characters

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Abstract

The emergence of Non-Fungible Tokens (NFTs) has revolutionized the landscape of digital art, providing artists with new avenues for creation, distribution, and monetization. This research investigates the landscape of NFT art collections featuring Asian characters, specifically Japanese kanji and Korean hangeul, on the OpenSea platform. Theoretical frameworks drawn from digital art valuation, cultural representation in art, and blockchain technology guide the analysis. Findings reveal diverse manifestations of cultural identity and artistic innovation within the analyzed collections, reflecting the intersection of tradition and modernity in Asian art. Economically, prominent artists command substantial sales volumes, while others experience more modest transactions, underscoring the growing interest in NFT art within the global market. Culturally, NFT art collections serve as platforms for preserving and promoting traditional scripts and symbols, contributing to the global dissemination of Asian cultural heritage. Technologically, the adoption of blockchain technology empowers artists to assert ownership over their creations and establish new paradigms of value and authenticity. In conclusion, this research highlights the transformative potential of NFTs in reshaping the landscape of art and culture, emphasizing the need for continued exploration and collaboration to amplify cultural voices and expand artistic horizons in the digital age.

Keywords: NFT art, Asian digital art, kanji art, hangeul art, asian characters

1. Introduction

In 2021, non-fungible tokens (usually abbreviated as NFT) gained significant attention from the mainstream media, artists, celebrities, and investors. So-called NFT boom refers to a period of widespread interest and adoption of NFT that took place primarily during the first half of 2021. During this period, the NFT market experienced a surge in transaction volumes, sales, and overall market capitalization. While the intense hype and media attention around NFT may have subsided since the peak of the boom in 2021, the market for NFT remains active and evolving. Many art critics say that the NFT era is the art's digital revolution: we live in the time where digital art has gained an economical value, just like traditional art. Record-breaking sales and rise of cryptocurrencies' value attracted the attention of many artists. And as it is often the case in modern art, there are always some artists who include their national identity and traditions to their art. Analyzing the trends of the NFT art industry in Asia, we have noticed that Asian digital artists, particularly those from Japan and Korea, have been incorporating their language's letters in their NFT artworks, leveraging the recent popularity of East Asian pop culture. This trend reflects a cultural exchange and the artists' desire to express their identity and heritage through their art. In this study, we focus on the analysis of NFT art collections featuring Asian characters, specifically Japanese kanji and Korean hangeul, on the OpenSea platform. By examining the economic value, cultural representation, and artistic expression within these collections, we aim to shed

light on the intersection of technology, art, and culture in the digital realm. Through the analysis of the unique characteristics and cultural nuances of Asian NFT art collections, we hope to deepen the understanding of the evolving landscape of digital culture and its impact on global artistic expression.

2. Theoretical framework and literature review

The analysis of NFT art collections featuring Asian characters, particularly Japanese kanji and Korean hangeul, will be guided by a theoretical framework that integrates concepts from digital art valuation, cultural representation in art, and blockchain technology.

Digital Art Valuation:

Digital art valuation theory provides insights into the economic significance and market dynamics of NFT art collections. It encompasses discussions on factors influencing the value of digital artworks. For instance, the article on Binance (2021) suggests considering the following indicators when evaluating NFT art: utility, rarity, community size, potential of the NFTs, provenance, and personal taste. According to Bsteh (2021), the factors that determine the value of digital artworks on the secondary market include the price, the history of artists and the innovations they implemented. This may include various aspects such as the use of new technologies, algorithms, games, communication methods, and the overall brand of the artist. They also add that, in general, the aesthetic value and personal taste are significant factors when considering investments in NFT art. The increased transparency facilitated by blockchain technology and the inclusion of smart contracts are expected to enhance the perceived security associated with investing in NFT art (Bsteh, 2021). Dylan-Ennis (2021) claims that blockchain art is often valued for reasons that go beyond the aesthetics. For example, certain NFTs like Cryptopunks are highly sought after due to their age, just like valuable antique items in the blockchain world. Despite appearing as simple pixel art, the most expensive Cryptopunk was sold for a significant amount. Dylan-Ennis (2021) emphasizes that what makes Cryptopunks desirable is not just the artwork itself, but rather their metadata, such as their longevity on the blockchain, and to truly understand the value, one must look beyond the art and consider the medium. Russell (2022) emphasizes that while previous research on NFT has shown that the connection to prominent collectors and visibility on popular crypto platforms are the indicators of the expected price of an NFT, it is crucial to consider a variety of difficult-to-quantify factors. While measurable forms of influence hold significance, the ability of an artwork, whether associated with an NFT or not, to gain discursive enrichment is essential for its long-term value and recognition as historically and culturally significant. This enrichment should be independent of the opinions or motivations of individuals who stand to gain financially from its reevaluation (Russell, 2022). As noted by K□l□çaslan and Ekizler (2022), the concept of "digital scarcity" enabled by blockchain technology contributes to the perceived value of NFT art, shaping consumer preferences and investment behavior. By examining sales data and total volume metrics from platforms like OpenSea, we aim to elucidate patterns and trends in the valuation of Asian NFT art.

Cultural Representation in Art:

Theoretical perspectives on cultural representation in art elucidate how artworks reflect and shape cultural identities, narratives, and values. According to Hall (2015), cultural identity is a dynamic construct shaped by historical, social, and political contexts, manifested through symbols, languages, and artistic expressions. In the context of NFT art collections featuring Asian characters, the incorporation of kanji and hangeul symbols serves as a means of cultural representation and preservation. As highlighted by Economou (2015), digital art platforms like OpenSea facilitate the global dissemination of cultural heritage, enabling artists to share their unique cultural perspectives with diverse audiences worldwide. Saul (2020) explores the notion of cultural symbols in art and argues that they play a crucial role in communicating cultural meanings and identities. He suggests that cultural symbols serve as vehicles for expressing

collective experiences and traditions. In our analysis, we consider how Japanese and Korean artists utilize their respective scripts, kanji and hangeul, to express cultural heritage and identity. Through qualitative examination of artwork designs and artists' statements, we explore the ways in which Asian characters serve as symbols of cultural authenticity in the NFT art domain.

Blockchain Technology:

Theoretical framework on blockchain technology elucidates its transformative impact on various industries, including the art market. According to Tapscott and Tapscott (2016), blockchain enables decentralized and transparent transactions, ensuring the integrity and authenticity of digital assets. In the context of NFT art collections, blockchain technology facilitates the creation, distribution, and ownership of digital artworks, revolutionizing traditional notions of art ownership and provenance. As noted by Catalini and Gans (2020), blockchain-based platforms like Ethereum and Klaytn provide a secure and immutable infrastructure for trading NFTs, empowering artists to monetize their creations and engage with global audiences without intermediaries. Additionally, Kochetkova (2020) highlights the potential of blockchain technology to democratize access to the art market by eliminating intermediaries and reducing transaction costs. She argues that blockchain-based platforms enable direct peer-to-peer transactions, fostering greater inclusivity and transparency in the art ecosystem. Blockchain theory informs our analysis of NFT platforms like OpenSea and the implications of utilizing decentralized ledgers for art ownership and provenance. We will examine how blockchain facilitates transparent transactions and empowers artists to monetize their creations in novel ways.

3. Methodology

Our study relies on a mixed-method approach combining quantitative and qualitative data collection methods. Quantitative data, including total volume metrics, sales data, and pricing information, are gathered from OpenSea for each analyzed NFT art collection. Additionally, qualitative data, such as artists' statements, collection descriptions, and visual analyses of artworks, are collected to provide context and insights into artistic intentions and cultural representations. The collected data will undergo a systematic analysis to fulfill the objectives of our research. Quantitative analysis will involve examination of total volumes of the selected NFT art collections. Qualitative analysis will entail thematic coding of artists' statements and visual elements of artworks to identify recurring motifs, cultural themes, and aesthetic choices. Comparative analysis between collections will elucidate distinctions in artistic approaches, cultural interpretations, and economic outcomes. The findings from our analysis will be interpreted within the theoretical framework outlined above. This combined theoretical framework and methodology will facilitate a comprehensive examination of Asian NFT art collections on OpenSea, providing insights into their cultural significance, economic value, and technological implications.

4. Explaining NFT

Wang, et al. (2021) define non-fungible token (NFT) as a type of cryptocurrency, which was firstly proposed in Ethereum Improvement Proposals (EIP)-721 and further developed in EIP-1155. They mention that the reason why NFT differs from other cryptocurrencies is that NFT is a unique, non-fungible digital asset, unlike classical cryptocurrencies where all coins are equivalent and indistinguishable. For our research, it is important to explain NFT in the context of art. NFT art is digital art that is tokenized, meaning it is turned into an NFT, which is then recorded on a blockchain. What sets NFT art apart is its indivisibility, authenticity, and scarcity. Each NFT art piece is one-of-a-kind, verifiable as the original work, and its ownership and transaction history are permanently recorded on the blockchain, making it nearly impossible to duplicate or counterfeit. This fusion of technology and creativity has transformed the art world by allowing artists to sell their digital creations directly to collectors and providing a new way to estab-

lish provenance and value in the digital art market. Blockchain technology is foundational to the concept of Non-Fungible Tokens (NFTs). Firstly, it provides the decentralized infrastructure necessary for NFT creation, storage, and transactions. Each NFT is typically minted or created on a blockchain, which records the ownership and transaction history of that token in an immutable and transparent manner. This ensures the scarcity and authenticity of the digital asset. Secondly, blockchain technology enables the secure and transparent transfer of NFTs. The ownership of NFTs is recorded on the blockchain's ledger, and ownership can be transferred between users with cryptographic signatures, ensuring provable ownership and provenance. Caxton, et al. (2022) explain the blockchain as a secure database without any need for a centralized authority to update or maintain the data on it which makes blockchain's use-cases endless, and blockchain networks customisable. A blockchain is a decentralized and distributed ledger technology that records transactions across a network of computers. The key feature is decentralization, meaning no single entity controls the entire network, enhancing transparency and security. The most well-known NFT marketplaces like OpenSea predominantly operate on second-generation blockchains, including Ethereum, Polygon, and Klaytn (Prasad, et al., 2023). Ethereum, Klaytn, and Polygon are all distinct blockchain networks, each with unique characteristics. Ethereum, the first and most well-known of the three, is a decentralized platform primarily used for smart contracts and decentralized applications (DApps). It employs a Proof-of-Stake (PoS) consensus mechanism, transitioning from Proof-of-Work (PoW), to improve scalability and energy efficiency. Klaytn, on the other hand, is a blockchain developed by the South Korean tech giant, Kakao. It focuses on providing a user-friendly environment for businesses and developers to build DApps, with a particular emphasis on mass adoption. Klaytn employs a hybrid consensus mechanism, combining PoW and PoS elements for enhanced security and efficiency. Polygon, formerly Matic Network, is a layer 2 scaling solution for Ethereum, designed to tackle Ethereum's scalability issues. It allows faster and cheaper transactions on the Ethereum network by utilizing sidechains and PoS. Polygon aims to enhance the user experience for DApps and DeFi projects on Ethereum, providing a bridge between the Ethereum ecosystem and other blockchains.

5. Analysis of NFT art collections

暗号漢字 -CryptoKanji-

暗号漢字 -CryptoKanji- is an Ethereum-based NFT art collection fully created by famous Japanese NFT artist mera takeru. It is listed on OpenSea (https://opensea.io/collection/cryptokanji). Mera takeru is also known as a pioneer of crypto art in Japan, as he was one of the first Japanese artists who started creating and selling NFT art. He is highly recognized in the Japanese digital art community and has showcased his work in numerous exhibitions, both domestically and internationally. He is also known as an advocate for NFT and digital art, frequently participating in online seminars and talk sessions to promote new forms of art. 暗号漢字 -CryptoKanji- consisting of 139 art works (current state: June 11, 2023) represents different Japanese characters kanji. It's important to say that in the interview for Japanese web-portal Atarashii keizai (2021), mera takeru mentioned this art collection. During the interview, he said the following: „Japan is still a closed island country, so I think there are many authentic cultural elements that are still unknown to the world. As I've already said before, crypto art easily crosses the ocean, so I am conscious of incorporating these elements of Japanese culture into my art works. 暗号漢字 -CryptoKanji-, where each kanji is joined with an English word, is one of these works" (Atarashii keizai, 2021). While the statement that kanji, characters originated from ancient China, are the part of Japanese authentic culture might be controversial to some people, this is the artist's opinion and we can see from that statement that his 暗号漢字 -CryptoKanji- collection was made to promote kanji overseas (he is most likely referring to the West). In terms of design, all artworks in this collection feature a minimalist design with a clean white background and a bold black kanji letter placed prominently (refer to Figure 1).

Figure 1: 神. 暗号漢字 -CryptoKanji- collection by mera takeru (2020). (Source: OpenSea.io)

The simplicity of the composition allows the letter to take center stage, capturing attention. The contrast between the black letter and the white background adds to the overall clarity and readability of the artwork. At the moment of writing this paper, the total volume of 暗号漢字 -CryptoKanji- collection on the OpenSea is 3 ETH, which is approximately $5212,35. The significant total volume of this NFT collection can be attributed to the artist mera takeru's prominence and popularity within the NFT art industry. Checking the sales of this collection on the OpenSea, we noticed that most of the artworks of this collection were sold. The highest sale was the 0,1 WETH (approximately $173,89) purchase of the artwork titled 神 (kanji character meaning 'god'). The artwork titled 幻 (kanji character meaning 'phantom') was the second-highest sale, with a purchase of 0,099 WETH (approximately $172,15), while the third highest sale was 0,07 WETH (approximately $121,85) purchase of the artwork titled 空 (kanji character meaning 'sky').

Golden Kanji

Another NFT art collection incorporating Japanese kanji into its artworks is Golden Kanji. It is a Polygon-based NFT collection listed on OpenSea (https://opensea.io/collection/goldenkanji). This collection consists of 2136 artworks, each of them representing one kanji from the list of jōyō kanji (常用漢字) - list of kanji characters designated by the Japanese government as "commonly used" and officially recognized as literacy baseline in written Japanese. The creator of the Golden Kanji collection, Japanese artist Nekoraisu, describes this collection as follows: "Golden Kanji is Polygon based NFT collection of animated Golden Japanese Kanji. The first season of this collection consists of 2136 Jouyou Kanji officially established by the Japanese Ministry of Education. This project is dedicated to Japanese language learners around the world and the expression of gratitude to our ancestors that bring these awesome characters and are still used in today's world" (Golden Kanji, 2021). In terms of design, all artworks in the Golden Kanji collection are the animated images where the shimmering outlines of the kanji letters appear first, and then the gold-colored kanji letter appears in full (refer to Figure 2).

Figure 2: #0033 Golden Jouyou Kanji 侍. Golden Kanji collection by Nekoraisu (2021). (Source: OpenSea.io)

Each artwork shows a light up kanji letter with a black background. Each animated kanji letter is glowing brightly, illuminating the area around it and casting an abstract blur of light onto the surface behind it. At the moment of writing this paper, the total volume of the Golden Kanji collection on the OpenSea is 0,0192 ETH, which is approximately $33,36. Checking the sales of this collection on OpenSea, we noticed that only five artworks from this collection were sold. However, one of them, #0026 Golden Jouyou Kanji 何, was sold to the two users, which means that there were two sales for this artwork. The artworks that were sold are #0033 Golden Jouyou Kanji 侍 (kanji character meaning 'samurai'), #0011 Golden Jouyou Kanji 乙 (kanji character meaning 'duplicate' or 'strange'), #0004 Golden Jouyou Kanji 並 (kanji character meaning 'row' or 'line up'), #0573 Golden Jouyou Kanji 沖 (kanji character meaning 'open sea' or 'offing'), and #0026 Golden Jouyou Kanji 何 (kanji character meaning 'what'). All five artworks were sold at the same price of 0,0032 ETH (approximately $5,56).

Replica Kanji Flowers

The last NFT collection with Japanese kanji characters we want to mention in this paper is a Polygon-based NFT collection Replica Kanji Flowers, which is listed on OpenSea (https://opensea.io/collection/replica-kanji-flowers). This collection comprises a total of 2220 artworks. The author behind this idea is Kenta Suhara, Japanese Web3 developer and the CEO of Japanese IT company Pontech inc. He is well-known within the NFT community in Japan as he launches various NFT projects and participates in various blockchain technology events quite often. Firstly, Kenta Suhara launched the project Kanji Flowers at the website https://kanjiflowers.xyz, where he allowed the users to mint the artworks on Polygon blockchain platform for free. This project gained huge attention in the Japanese digital art community as all artworks were minted and taken within two hours from the release time. Then those newly created artworks were sold by the users who minted them at OpenSea. This collection has an interesting design as all artworks from this collection present one kanji character, which is circularly repeated (or replicated, as the name of the

collection suggests) in order to create a shape of a flower (refer to Figure 3).

Figure 3: 少. Replica Kanji Flowers collection by Kenta Suhara (2021). (Source: OpenSea.io)

The shape changes along with the size in correspondence with the user's mouse movement. While this idea is interesting, it is not new: the artist openly admits that he borrowed the concept and code from the project Cyberflowers done by peilingjiang. The background of each artwork is grayish white, while the main kanji character is colorful and all his duplicated versions (replicas) are black. At the moment of writing this paper, the total volume of this collection on the OpenSea is 0,8886 ETH, which is approximately $1561,97. Upon reviewing the sales data of the Replica Kanji Flowers collection on OpenSea, it is evident that the most significant transaction involved the acquisition of the artwork named 少 (kanji character meaning 'little') for a price of 0,2 ETH (approximately $351,56). The second highest sale price was 0,05 ETH (approximately $87,89) and four artworks were sold under this price. Those artwork are 乃 (kanji character meaning 'from'), 福 (kanji character meaning 'luck'), 詩 (kanji character meaning 'poetry'), and 化 (kanji character meaning 'change'). The third highest sale price was 0,032 ETH (approximately $56,25) and the artwork titled 水 (kanji character meaning 'water') was sold under this price. It is also interesting to add that one month after the release of the Replica Kanji Flowers, Kenta Suhara also launched the project Replica Jukugo Flowers, which was intended only for the owners of Replica Kanji Flowers artworks. In this project, Replica Kanji Flowers art owners could mint their jukugo NFT if they had at least two Kanji Flowers artworks. Jukugo (熟語) are Japanese kanji compound words: several kanji characters together can compose an idiom. The design of Replica Jukugo Flowers was identical to Replica Kanji Flowers, with the only difference that instead of one kanji and its numerous replicas, each artwork of this collection had two original kanji characters that were replicated in the flower shape.

Klminjeongeum NFT

Switching from Japanese kanji characters to Korean hangeul letters, there is an NFT collection that has to be mentioned. It is Klminjeongeum NFT, a Klaytn-based collection listed on OpenSea

(https://opensea.io/collection/klminjeongeum). Klminjeongeum NFT is a collection made by the NFTKLE team, a team of NFT artworks and technology enthusiasts based in Korea. Klminjeongeum NFT was their first project which they launched in September 2021. The creators of this collection define it as "the first & greatest hangul NFT that contains all Korean letters" (NFTKLE.co, 2021). The name of this collection comes from the Hunminjeongeum (훈민정음), the document describing hangeul - an entirely new script for Korean language invented by King Sejong. However, the first syllable from Hunminjeongeum was changed to Kl as Kl of Klaytn, the blockchain platform utilized for creating this particular NFT collection. Nevertheless, the creators claim that Klminjeongeum is not related to the content of Hunminjeongeum at all, but mention that Klminjeongeum embodies the fundamental concepts of yin-yang and the five elements found in oriental philosophy (NFTKLE.co, 2021). There are 11172 artworks in this collection. NFTKLE team explains that "399 characters without consonants are level 2, accounting for 3.5% of the total number. The remaining letters with consonants are level 1, and 10,773, which is 96.5% of the total number" (NFTKLE.co, 2021). In terms of design, all artworks in this collection feature minimalistic visuals (refer to Figure 4).

Figure 4: KMJ Hangul #1765. Klminjeongeum NFT collection by NFTKLE (2021). (Source: OpenSea.io)

The background of all artworks has a brownish color, while the foreground consists of a large black hangeul letter. The hangeul letter appears to be written in bold font, and it stands out against the plain brownish background. The letters are written in the traditional font. The design of these artworks showcases a composition that combines elements of traditional Korean aesthetics with contemporary minimalistic presentation. Klminjeongeum NFT is the only collection mentioned in this paper that is based on Klaytn. As we mentioned before, Klaytn is a blockchain developed by the South Korean Kakao Corporation. Unlike all other collections mentioned in this paper which use global blockains, Klminjeongeum NFT's creators use the blockchain developed in their own country, South Korea. Therefore, this collection is sold using the cryptocurrency WKLAY. WKLAY is based on Klaytn blockchain platform. It's not a surprise that an NFT project that claims to

promote Korean culture uses blockchain developed in Korea. At the moment of writing this paper, the total volume of the Klminjeongeum NFT collection on the OpenSea is 92133,6545 KLAY, which is approximately $13353,06. The highest sale price was 500 WKLAY (approximately $72,66) and thirty-two artworks in total were sold at this price. The second highest sale price was 400 WKLAY (approximately $58,12), and the third highest price was 299 WKLAY (approximately $43,45).

Hangul NFT

Hangul NFT is a Polygon-based NFT art collection created by GimbapTeam, a team of artists and engineers in Seoul creating Korean-inspired NFT collections. This collection was made specifically to commemorate Hangul Day (한글날), Korean national holiday which is celebrated annually on October 9th. It is listed on OpenSea (https://opensea.io/collection/hangul-nft). At the moment of writing this paper the collection contains 1009 artworks. In terms of design, all artworks in this collection showcase a simple, but vibrant and dynamic composition (refer to Figure 5).

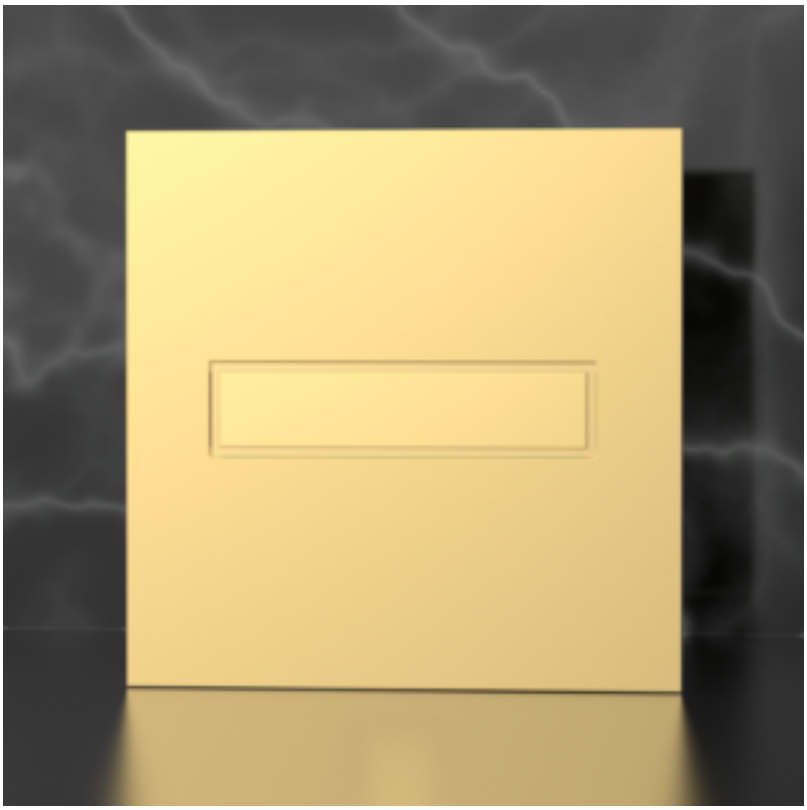

Figure 5: Hangul #945. Hangul NFT collection by GimbapTeam (2021). (Source: OpenSea.io)

With colorful walls and floors as the background, each artwork features a central panel displaying a large, colorful hangeul letter. The panels cast shadows onto the floor, adding depth and dimension to the overall composition. Additionally, some of the panels imitate the wooden texture, further enhancing the visual appeal of the artworks. At the moment of writing this paper, the total volume of the Hangul NFT collection on the OpenSea is 0,0394 ETH, which is approximately $68,46. The highest sale was 0,002 ETH (approximately $3,48) purchase of the artwork titled Hangul #945 (artwork representing hangeul character ㅡ). All other sale prices were quite low, as the second highest price was only 0,0008 ETH (approximately $1,39) for the work Hangul #724 (artwork representing hangeul character ㅆ) and the third highest sale price was 0,0007 ETH (approximately $1,22) for the work Hangul #694 (artwork representing hangeul character ㅓ).

Hangul Art & Charism

Hangul Art & Charism is an NFT art collection fully created by Korean NFT artist HangulArt. It is an Ethereum-based collection listed on OpenSea (https://opensea.io/collection/hangul-art).

HangulArt is a new NFT artist who desires to share the beauty of hangeul letters in the form of art. In the description of his NFT collection, he says that Korean letters hangeul are art themselves, and this collection is made to explore the world of hangeul with the eyes of an artist. This collection is relatively small compared to other collections, as at the moment of writing this paper the collection contains only 70 artworks. Unlike all other collections mentioned previously, this one doesn't have a unified design and all works are unique. It can be also said that Hangul Art & Charism collection's works have much more complicated designs compared to art works in previously mentioned collections. Each artwork incorporates hangeul letters in the work in a unique and authentic way. For example, the work Flower drawn by 1 Million Flower(꽃, Korean Hangul Character) is an animated image portraying the white flower that is completely made by numerous tiny hangeul characters 꽃, which means 'flower' in Korean (refer to Figure 6).

Figure 6: Flower drawn by 1 Million Flower(꽃, Korean Hangul Character). Hangul Art & Charism collection by HangulArt (2021). (Source: OpenSea.io)

Next artwork from this collection worth mentioning is an artwork titled Yun DongJu's face written in his Seosi, Foreword (refer to Figure 7).

Figure 7: Yun DongJu's face written in his Seosi, Foreword. Hangul Art & Charism collection by HangulArt (2021). (Source: OpenSea.io)

In this work, artist created a portrait of famous Korean 20th century poet Yun Dong-ju, which is completely made from the lines of his most famous poem 서시 (Foreword). Another noteworthy artwork that deserves recognition is the piece titled 1M Char Pixels - Mona Lisa I Image : Mona Lisa in 1 Million characters of 11172 Hangul ㅁㄴㄹㅈ (refer to Figure 8).

Figure 8: 1M Char Pixels - Mona Lisa I Image : Mona Lisa in 1 Million characters of 11172 Hangul ㅁㄴㄹㅈ. Hangul Art & Charism collection by HangulArt (2021). (Source: OpenSea.io)

In this work HangulArt made a portrait of Mona Lisa using numerous hangeul characters ㅁ, ㄴ, ㄹ, ㅈ, which are the consonants taken from the Korean spelling of Mona Lisa - 모나리자. In conclusion, each artwork demonstrates the artist's creativity and skill in utilizing hangeul characters to create meaningful compositions. Unfortunately, not being a well-known artist, none of HangulArt's works was not sold as Hangul Art & Charism collection's total volume is 0 ETH.

6. Results

The analysis of NFT art collections featuring Asian characters, specifically Japanese kanji and Korean hangeul, on OpenSea yielded valuable insights into various aspects including economic value, cultural representation, and artistic expression. This section presents the key findings derived from the examination of the selected collections: 暗号漢字 -CryptoKanji-, Golden Kanji, Replica Kanji Flowers, Klminjeongeum NFT, Hangul NFT, and Hangul Art & Charism.

1) Economic Value:

暗号漢字 -CryptoKanji- collection, created by Japanese artist mera takeru, emerged as the most economically significant among the analyzed collections. With a total volume of 3 ETH (approximately $5212.35 USD), attributed to the artist's prominence and popularity within the NFT art industry, this collection experienced substantial sales activity, with most artworks being sold. Golden Kanji, comprising 2136 artworks representing jōyō kanji, exhibited a comparatively lower total volume of 0.0192 ETH (approximately $33.36 USD) on OpenSea. Despite the large number of artworks, sales activity was limited, with only five artworks being sold. Replica Kanji Flowers, a collection featuring circularly repeated kanji characters to create floral shapes, demonstrated

a total volume of 0.8886 ETH (approximately $1561.97 USD). Notably, the highest sale price was 0.2 ETH (approximately $351.56 USD) for the artwork named 少 (kanji character meaning 'little'). Klminjeongeum NFT, centered on Korean hangeul letters and utilizing the Klaytn blockchain, showcased a total volume of 92133.6545 KLAY (approximately $13353.06 USD). Significant sales were observed, with the highest price reaching 500 WKLAY (approximately $72.66 USD). Hangul NFT and Hangul Art & Charism collections, both dedicated to Korean hangeul, presented relatively lower total volumes of 0.0394 ETH (approximately $68.46 USD) and 0 ETH, respectively. Sales activity in these collections was modest, with minimal impact on total volume.

2) Cultural Representation and Artistic Expression:

暗号漢字 -CryptoKanji- collection by mera takeru and Golden Kanji by Nekoraisu demonstrated a focus on incorporating Asian characters into digital artworks as a means of cultural representation. Mera takeru's minimalist designs with bold black kanji letters aimed to promote Japanese culture overseas, while Nekoraisu's animated golden kanji letters celebrated the heritage of Japanese language learners. Replica Kanji Flowers by Kenta Suhara showcased an innovative approach to integrating kanji characters into floral designs, reflecting artistic creativity and cultural symbolism. The utilization of circularly repeated kanji characters to form flower shapes emphasized the fusion of traditional Japanese aesthetics with contemporary digital art techniques.Klminjeongeum NFT and Hangul NFT collections highlighted the significance of Korean hangeul letters as a cultural symbol and artistic medium. Klminjeongeum NFT, based on the Klaytn blockchain, emphasized the promotion of Korean culture through blockchain technology. Hangul NFT and Hangul Art & Charism collections celebrated the beauty of hangeul characters through vibrant visual compositions and creative interpretations.

3) Technological Implications:

The adoption of blockchain technology, particularly Ethereum and Klaytn platforms, facilitated the creation, distribution, and ownership of NFT art collections. The use of decentralized ledgers provided transparency, security, and authenticity to digital artworks, empowering artists to monetize their creations and engage with global audiences. The interoperability of NFT platforms like OpenSea enabled seamless trading of digital assets across different blockchain ecosystems, fostering a vibrant and interconnected NFT art market. The integration of Asian characters into NFT art collections transcended geographical boundaries, contributing to the global dissemination of cultural heritage and artistic innovation.

Overall, the analysis of Asian NFT art collections on OpenSea revealed diverse manifestations of cultural representation, artistic expression, and economic value within the rapidly evolving landscape of digital art and blockchain technology. These findings contribute to a deeper understanding of the intersection between art, culture, and technology in the digital age.

7. Conclusion

In conclusion, the analysis of NFT art collections featuring Asian characters, specifically Japanese kanji and Korean hangeul, on the OpenSea platform has revealed a rich tapestry of cultural representation, artistic expression, and economic value. Through a comprehensive examination of various collections such as 暗号漢字 -CryptoKanji-, Golden Kanji, Replica Kanji Flowers, Klminjeongeum NFT, Hangul NFT, and Hangul Art & Charism, we have uncovered the diverse ways in which artists leverage blockchain technology to showcase Asian cultural heritage and creativity. Economically, these collections have demonstrated varying degrees of success, with prominent artists like mera takeru commanding substantial sales volumes, while others experience more modest transactions. Nevertheless, the economic value of these collections goes beyond mere financial transactions, serving as a testament to the growing interest and investment in NFT art

within the global market. Culturally, Asian NFT art collections serve as a platform for preserving and promoting traditional scripts and symbols, such as kanji and hangeul, in the digital space. Artists like Nekoraisu and HangulArt have creatively incorporated these characters into their artworks, celebrating the beauty and complexity of Asian languages and cultures. Through vibrant visual compositions and innovative designs, these collections contribute to the global dissemination of Asian cultural heritage and foster cross-cultural appreciation and understanding. Technologically, the adoption of blockchain technology has revolutionized the art market, enabling artists to bypass traditional gatekeepers and engage directly with audiences worldwide. The transparency, security, and immutability provided by blockchain have empowered artists to assert ownership over their digital creations and establish new paradigms of value and authenticity in the digital art realm. In essence, the analysis of Asian NFT art collections on OpenSea underscores the transformative potential of technology in reshaping the landscape of art and culture. As we navigate the complexities of the digital age, it is imperative to recognize the profound impact of NFTs on artistic expression, cultural representation, and economic transactions. By embracing innovation and embracing diversity, we can harness the power of technology to create a more inclusive and vibrant artistic ecosystem for generations to come.

References

- Binance. (2021). 6 Key Indicators for NFT Collectors To Evaluate NFT Projects. Binance, [online] 10 November. Available at: https://www.binance.com/en/blog/nft/6-key-indicators-for-nft-collectors-to-evaluate-nft-projects-421499824684902985 [Accessed 17 March 2023].
- Bsteh, S. (2021). From Painting to Pixel: Understanding NFT artworks. [pdf] ResearchGate. Available at: https://www.researchgate.net/profile/Sheila-Bsteh/publication/351346278_From_Painting_to_Pixel_Understanding_NFT_artworks/links/609280ec92851c490fb7470e/From-Painting-to-Pixel-Understanding-NFT-artworks.pdf [Accessed 19 May 2023].
- Catalini, C., & Gans, J. S. (2020). Some simple economics of the blockchain. Communications of the ACM, 63(7), 80-90.
- Caxton, S. V. M., Naveen, K., Karthik, R., & Bama, S. S. (2022). User-Centered Evaluation and Design Suggestions for NFT Marketplaces. In: 2022 International Conference on Inventive Computation Technologies (ICICT). pp. 1214-1221.
- Dylan-Ennis, P. (2021). NFT Art: The Bizarre World Where Burning a Banksy Can Make It More Valuable. The Conversation, [online] 6 March. 2021. Available at: https://theconversation.com/nft-art-the-bizarre-world-where-burning-a-banksy-can-make-it-more-valuable-156605
- Economou, M. (2015). Heritage in the digital age. In A Companion to Heritage Studies (pp.215-228). John Wiley & Sons.
- Golden Kanji. (2021). What is Golden Kanji? Medium, [blog] 16 August. Available at: https://goldenkanji.medium.com/what-is-golden-kanji-f4b6b5cdf507 [Accessed 10 June 2021].
- Hall, S. (2015). Cultural Identity and Diaspora. In Colonial discourse and post-colonial theory (pp. 392-403). Routledge.
- K□l□çaslan, F., & Ekizler, H. (2022). Factors effecting purchase intention in blockchain and NFT (non-fungible token) technologies. Journal of Research in Business, 7(2), 604-623.
- Kochetkova, M. (2020). BLOCKCHAIN IN THE ART MARKET: Opportunities and Challenges [Bachelor's thesis, LAB University of Applied Sciences].
- NFTKLE.co. (2021). Klminjeongeum. [online] Available at: https://www.nftkle.co/klminjeongeum [Accessed 12 June 2023].
- OpenSea. (2023). [online] Available at: https://opensea.io/ [Accessed 12 June 2023].
- Prasad, C., Rao, B. S., Pujari, J. J., & Hema, C. (2023). Developing a Non-Fungible Token-Based Trade Marketplace Platform Using Web 3.0. In 2023 5th International Conference on Inventive Research in Computing Applications (ICIRCA). pp. 312-316.
- Russell, F. (2022). NFTs and Value. M/C Journal, 25(2). https://doi.org/10.5204/mcj.2863
- Saul, S. O. D. (2020). The Words We Can't Hear: Decoding the Language of Objects Through

the Eyes of Object-Oriented Ontology [Master's thesis, Colorado State University].
- Shitara, Y. (2021). Nihon no kuriputoāto no senku-sha mera takeru wa ima no NFT būmu o dō mite iru ka? (日本のクリプトアートの先駆者 mera takeru は今のNFTブームをどう見ているか). Atarashī keizai, [online] 20 April. Available at: https://www.neweconomy.jp/features/nft/110294 [Accessed 1 February 2022].
- Tapscott, D., & Tapscott, A. (2016). Blockchain revolution: how the technology behind bitcoin is changing money, business, and the world. Penguin.
- Wang, Q., Li, R., Wang, Q., & Chen, S. (2021). Non-fungible token (NFT): Overview, evaluation, opportunities and challenges. arXiv preprint arXiv:2105.07447.