

Original Research Article

CryptoArt; A Fusion Between Art and Blockchain Technology*

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Abstract

Problem statement: The latest fusion between art and blockchain technology has created a new artistic movement called CryptoArt. This emerging method, which has recently attracted the art world's attention, requires exceptional understanding and reading. The current research seeks to answer what turns this innovative technology into art and tries to determine whether CryptoArt can challenge market-oriented and commoditized art in the capitalist system.

Research objective: The purpose of the upcoming study is to get to know the way technology works in CryptoArt and trace its formation grounds in the history of art, to achieve a better understanding of this new artistic movement, and also to study the emancipatory potential of CryptoArt in the market-oriented field.

Research method: The present study draws upon the opinions of thinkers such as “Lucy Lippard,” “Walter Benjamin” and “Jean Baudrillard” and uses a fundamental purpose and historical-descriptive method to answer its questions. This research attempts to study an example of CryptoArt; The non-random sampling method was purposeful and includes the work of the well-known contemporary artist Damien Hirst, whose project has been reflected in the media, and whose sale price has been significant.

Conclusion: The results make it clear that CryptoArt follows the concepts of contemporary art history to redefine art and show its relationship with life. In this new procedure, technology tries to restore the authenticity and uniqueness of modernism to digital art by adding a virtual asset to the works. Also, the findings indicate that encrypted art can bring opportunities and threats to the art world. On the one hand, it can decentralize and challenge the conventional frameworks of the capital-oriented art market, and on the other hand, it can become a tool to strengthen the commodification process and re-dominate capital over art.

Keywords: *CryptoArt, Non-fungible token, Digital art market, Authenticity of artwork, Walter Benjamin.*

Introduction

On March 11, 2021, a digital artwork was sold at

Christie's online auction for \$69.3 million, making it the sixth most expensive artwork sold in art history, after works by artists such as Jasper Johns, which has been done at Alzahra University, Faculty of Art, Tehran, Iran in 2023.

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Damon Hirst, Jeff Koons, and David Hockney. The result of this auction surprised the art world and even the creator of this work, Michael Winkelman (under the stage name Bleep). This work entitled “Every day: the first 5000 days” is a collection of digital works in different styles that the daily artist has designed for 14 years (Davis, 2021).

Art’s use of new blockchain technology and Cryptographic knowledge has led to the emergence of a new phenomenon called ‘CryptoArt’, which requires new and appropriate analytical approaches due to its hybrid and interdisciplinary nature. The current economic prosperity in this new form of presenting art can be a strong motivation for its continuation in the future. However, using different theoretical approaches in the place of interpretation and evaluation tools can lead to this new method being more accepted by the art world. Moreover, it also helps predict CryptoArt’s future maturity trend. Finding suitable aesthetic systems, using contemporary theories, and tracing the formation contexts in art history will help the various executors of this artistic method to face each other more effectively. Digital artists will need to understand cryptographic art to create more worthy works in this field, art market practitioners need such knowledge to value and set prices. Similarly, such knowledge can help curators and managers of museums and galleries to classify and distinguish the quality among a large volume of existing cryptographic works. Based on this necessity, the upcoming study aims to get to know and understand this new artistic movement better while getting to know the way technology works in CryptoArt and tracing the grounds of its formation in the history of art. The hypothesis examined in the current research is based on the assumption that CryptoArt is related to other anti-art trends in art history, which challenge the nature and conventional definitions of art and aesthetics, and through this connection and a similar approach, A CryptoArt is considered art. This article also examines the hypothesis that artworks falling under CryptoArt can decentralize and challenge

capital-oriented art markets, and at the same time, it has the potential to become a tool for greater control of capital and official institutions over art. Like many other technological achievements, the method of use has advantages and disadvantages.

Research Background

Considering the novelty of the research topic in Iran, the sources that directly deal with the subject of CryptoArt are in English. The most studied articles include technical issues about digital currency, economic and market challenges, copyright and smart contracts, judicial protection in the non-digital space, classification of works, valuation criteria, and theoretical discussions. Also, the researches deal with the negative aspects of digital currency expansion, environmental challenges, money laundering, and cyber theft. Among the available articles is “CryptoArt: A Decentralized View,” by Massimo Franceschet et al. (2021) This article presents a collection of perspectives on CryptoArt from experts, including artists, collectors, gallerists, art historians, and digital scientists, and presents CryptoArt as an emerging field with challenges. Another study entitled “CryptoArt, Currency, and Capital” was published in 2021 by Alia Aluma and discusses the economic significance of CryptoArt in legitimizing digital currency. The essay “Contemporary Art, capitalization and the Blockchain: On the autonomy and automation of art’s value,” published in 2016 by Laura Lotti, shows that the ways of valuing contemporary art increasingly reflect the logic of capitalism and, on the other hand, shows the liberating potential of technological technology in the field of culture and evaluates art. Elena Sidorova’s (2019) essay “The Cyber Turn of the Contemporary Art Market” examines the conceptual evolution of the contemporary art market under the influence of new digital technologies and argues that the Internet has shifted from an art marketing tool to an independent sector of art with unique characteristics.

The upcoming research tries to better understand

this nascent phenomenon by linking CryptoArt with other concepts and achievements of contemporary art history and philosophy. Also, based on the ideas of two contemporary thinkers: Walter Benjamin and Jean Baudrillard, examine the effects of this new technology on art and the art market. Due to the novelty of integrating blockchain technology with art, scientific research in Iran is currently limited; hence the study and investigation of this phenomenon from different angles are needed. A correct understanding of CryptoArt and effective synchronization with global developments requires scientific research. Due to the lack of reliable Persian sources about CryptoArt, there is a need for research with a broad perspective to solve a novel and interdisciplinary topic in art and economics. In this regard, this article first deals with different aspects of CryptoArt art and then studies its emancipatory potential in the art market and also tries to look at this phenomenon from the perspective of thinkers who have received less attention in other research. It is worth noting that the dynamic and evolving nature of CryptoArt highlights the need for up-to-date research, which is why this paper uses platforms, websites, and other relevant online resources whose content has not yet been reflected in scholarly articles.

Theoretical Foundations

• Digital art

Digital art includes movies, pictures, music, stories, and other forms of art that are captured using a digital code” (McIver Lopes, 2017, 195).

• Cryptography knowledge

The fundamental idea of encryption is to protect data from unauthorized access, similar to a digital lock of a door or a bank safe. “Like locks and keys in the real world, keys are used for protection in cryptography” (Drescher, 2019, 195).

• Peer-to-peer system

Peer-to-peer systems are distributed software structures consisting of nodes (independent computers). The peer system turns his computer

from the network with the same features and functions as others (ibid).

• Blockchain technology

Blockchain is a set of technologies that can be used with its cryptography and algorithm to manage a decentralized peer-to-peer network and embrace a variety of applications, including managing the ownership of digital assets or cryptocurrencies (ibid.).

• Smart contract

Some contracts are concluded on the blockchain platform under the supervision of artificial intelligence and digital cryptocurrencies. Due to the lack of specific rules in various legal laws, these were considered subject to the rules of general contracts, and according to the principle of freedom of contract, they are considered valid contracts (Nasser & Razavi, 2018, 33).

• Non-fungible Token(NFT)

Tokens are digital assets that can represent a digital or material product in the virtual space, and possessing it means acquiring the ownership of a material or immaterial product or having a right to it. (ibid.) A non-fungible token is a type of cryptographic token that uses blockchain technology to create a digital variant that cannot be duplicated (Farivar, 2021, 40).

• CryptoArt

CryptoArt is a recent artistic movement in which the artist produces works of art, typically still or animated images, and distributes them via a CryptoArt gallery or their own digital channel using blockchain technology (Franceschet, et al., 2021, 402). To create CryptoArt, a unique digital file containing information, including smart contract terms and the artist’s electronic signature, is created and linked to an artwork; Establishing this connection is called tokenization of the work of art. It has a digit created in a blockchain network that can be exchanged, and due to the non-blockchain structure, the exchange is based on the agreement of all network members. Tokenized artworks cover a wide variety of areas. Among the most popular is a collection of 10,000 images of cartoon monkeys called “Bored Ape Yacht

Club” (Fig. 1). Ownership of a Bored Ape NFT also provides an exclusive membership pass to the community’s various activities, such as access to virtual events and parties in a private online club. The popularity and pervasiveness of this collection are such that the sale of its non-fungible tokens will have exceeded 1 billion dollars by February 2022 (Lee, 2022).

Research Method

This research, with a fundamental purpose and a historical-descriptive method, measures the assumptions mentioned above and in this way, first through the description of the technical principles of CryptoArt, the method of using smart contracts, and the ownership of works, it pays attention to the general understanding of this phenomenon. Then it raises its harmful effects, such as environmental challenges, money laundering, and cyber theft. In the following section, we will introduce two examples of platforms for buying and selling encrypted works

and explain the performance of these online markets. We will discuss the impact of encrypted art on the art market and the feasibility of its contribution to liberating art from commodification under the capitalist system. This article uses contemporary art history experiences and the opinions of thinkers such as Lucy Lippard to identify related and shared concepts with cryptography. In the current research, we have used the ideas of Walter Benjamin and Jean Baudrillard to investigate the effects of blockchain technology in the field of art and to show the importance of creating “authenticity” and “uniqueness” through unique tokens, these are the thinkers who raise issues related to the dominance of technology on society and modern Human thought, as well as concerning the concepts of authenticity and uniqueness of artworks. In the following section, we examined a sample of CryptoArt; the non-random sampling method was purposeful and included the work of a well-known contemporary artist, Damien Hirst, whose project has been reflected in the media,



Fig. 1. Some examples of the Bored Ape Yacht Club collection. Source: <https://www.newyorker.com>

and its sale price has been significant. We analyzed this project as a collaborative event that measures the art world's belief in CryptoArt. At the end of the article, after writing the mentioned results, we have provided a table to compare the opportunities and threats that CryptoArt brings to the Art and art economy.

Technical Principles of CryptoArt

When an artist uploads artwork to a crypto gallery or platform, a transaction is created on the corresponding blockchain. This transaction creates an irreplaceable token uniquely associated with the artwork and simultaneously transfers this created digital asset to the artist's cryptocurrency wallet, which resides on the identical blockchain. The artist digitally signs this transaction using asymmetric encryption to prove the work's authenticity. A unique asset, this signature is permanently associated with the artwork and implies ownership and authenticity. Now it is the turn of the digital gallery to distribute the artwork file to the nodes of the interplanetary file system network. This network, which is a decentralized peer-to-peer file distribution system, names the image with a code that uniquely matches its content. It means that the same image, even if distributed across multiple network nodes, will always have the same name and be conceptually identified as a single resource. After going through these steps, a collector or enthusiast can buy the work. Typically, works of art are sold through auction; buyers make an offer, and the current owner of the property can accept the offer. When the asset is sold, another transaction is recorded, and the corresponding token is transferred directly to the buyer's wallet, while its price is transferred to the seller's wallet in the cryptocurrency used in the associated blockchain. CryptoArtwork can also be traded, or held by collectors like other rare items; these works are tradable on the secondary market, and in some contracts, any subsequent sale will result in a reward to the original artist as well such as 10 percent of the sale price is deposited into the artist's wallet (Franceschet et al., 2021, 402-403).

Smart Contracts and Ownership of Crypto Works

Blockchain technology has caused the transformation of financial markets, the development of e-commerce, and the emergence of new electronic tools for making exchanges; among these tools are smart contracts as the latest electronic contracts. These contracts are concluded on the blockchain platform under the supervision of artificial intelligence based on cryptocurrencies and the need for a digital signature; on the other hand, smart contracts address the need of the contracting parties for the existence of a third party under any title. Other features of these contracts are transparency, speed increase, and cost reduction. The functionality of smart contracts covers a variety of areas; these contracts are used in money and capital market exchanges, especially in secondary markets, and they are used in a variety of virtual goods, electronic services, and digital assets. Also, smart contracts have broad applications in exchanging digital goods, such as tokens, and goods with financial value. Tokens are digital assets that can represent a digital or physical product and own it (Nasser & Razavi, 2018, 35-59). Moreover, in this way, the provisions of the attached contract remain with the work forever. CryptoArt gives the creator the power to take control of the sale and distribution of their work and play a leading role in its commercial exchange. In this way, records of transactions are also recorded, making tracking the authenticity of works much more accessible and even automatic (Finucane, 2018, 34-35).

Environmental Challenges, Money laundering, and Cyber theft

Unfortunately, CryptoArt platforms and websites, often based on a blockchain-centric platform called Ethereum, are costly in terms of the environment. The amount of energy-related carbon emissions associated with the sale of just one single-copy artwork on Ethereum starts at around 100 kg of carbon dioxide (equivalent to an hour of airplane flight) and,

depending on the method used on the platform, its greenhouse gas emissions, can even be equivalent to a more extended flight. As cryptocurrency markets are growing freely, ecological problems require more attention. Although more sustainable paths are emerging, the need to search for alternative ways and platforms that are more transparent and compatible with the environment remains (Akten, 2021). Also, expanding non-fungible token transactions has created one of the most challenging legal issues in digital assets. Trading in these tokens may bring the risk of facilitating financial crimes such as fraud and money laundering. These risks are related to the token's market nature and, in particular, to the anonymity of transactions. Because these markets often do not perform a significant check on the identity of their users, and this causes the risk of possible abuse. For example, someone may pair a digital artwork with an NFT without the owner's consent and attempt to sell it, thereby infringing the artist's copyright; recently, a collector called Pernxy was tricked into paying 100 ETH (about £244,000) to buy an NFT that was falsely claimed to be made by famous street artist Banksy. Also, the issue of anonymity of traders may cause harm in the field of money laundering and terrorist financing. For example, criminal groups may anonymously create a token with an alias, register it on the market, and then buy it from themselves. As a result, these markets need more transparency and regulatory frameworks (Jordanoska, 2021, 716-716).

CryptoArt Platforms and Internet Markets

The "Super Rare" platform is a blockchain-based online marketplace for buying and selling, that describes itself as "the intersection of Instagram and Christie's." Artists create a profile to present and sell their works on this platform. To do this, they should send their specifications and samples of their works to their website through a form. On this platform, 85% of the purchase price is given to the artist for an initial sale, and the platform receives a 15% commission. Also, artists are paid 10% of

the transaction for each secondary sale. It is worth noting that all transactions are done with Ethereum digital currency. Another website called "Dada" is a platform for creating and selling digital works of art, where different artists from all over the world paint on a virtual canvas with tools specific to the site and share it, and another person responds with their painted image. In the end, a collaboratively created work is sold on this platform. This site has a motto, "Experience the magic of visual conversations." It is committed to showcasing the breadth and depth of the CryptoArt movement and asserts that blockchain, as an open-access and permissionless network, has embraced global talent and redefined the creative economy. In each initial sale on this platform, 70% of the sales amount will be divided equally between the artists, and 30% will be awarded to the platform. In secondary sales, 60% is paid to the seller, 30% to the artists, and 10% to the platform. These amounts are also settled with Ethereum digital currency.

Tracing CryptoArt in art History

Today, aesthetics is facing new conversations that are not often discussed in the classical aesthetics of the 18th century. The emergence of new arts has brought recent and diverse challenges. Cinema, photography, video, new communication media, and the products of the informatics revolution are new methods that have caused new aesthetic experiences. Even the old ways of art, such as painting, music, and literature, have found new functions that require a new attitude (Ahmadi, 2008, 19). The unprecedented multiplicity of styles, forms, media, and artistic agendas is evident in the comparison of today's art with the past. The abundance and variety of contemporary art experiences have their roots in not-so-distant history. At the beginning of the 60s, visual arts could still be attributed to one of the two main realms of painting or sculpture. Although the idea of accepting photography was raised to be accepted as art in the previous decades, this idea was challenged by the collages of Cubists, the performances of Futurists, and the events of Dadaists. However, the prevailing

opinion was that visual arts were inevitably the product of Human creative effort in two areas: painting and sculpture (Archer, 2010, 4-7). The rebellion against these traditional interpretations of art can be traced back to the Dadaism art movement. Dadaist artists defied the standards of taste that seemed selective and old, and they believed that the art of one generation should not be allowed to determine the task of the art of the next generation. The value of Dadaism is not only in its innovative or adaptive methods or its inspiring role in later movements such as Surrealism, but its paramount importance is emphasizing the freedom of the artist and doubting the foundation of artistic values and forms (Bigsby, 2007, 38-48). The Dadaists rediscovered their anti-art mentality in the works of the French artist Marcel Duchamp. However, unlike the pioneering Dadaists in Zurich, Duchamp was more interested in raising new questions about art to discover new borders for its territory than destroying and mocking it (Elgar, 2011, 84). By questioning the traditional rules and values in art and expanding what can be considered Art, Dadaism advances the history of art towards pluralism and multiplicity of artistic styles and movements. For example, the artists of the pop art movement used ready-made images. Along Duchamp ready-made art, which can be considered objects due to their objective forms. Pop artists chose their sources in a society where consumerism and the massive influx of mass media were prominent. Without being interested in defending or criticizing this consumer society, they were only trying to include all of reality in their artistic language and technique. The prevalence of serigraphy in their works was a reflection of the modern production process (Parmezani, 2011, 148-150). Andy Warhol, one of the founders of pop art in America, considered the commodity nature of art to be inevitable, to the extent that he called his studio a "factory." According to Warhol, art and all other cultural products are the only goods made for the capitalist economy. The consequence of such a perception makes thinking about the aesthetic or

transcendental value of the artwork meaningless and ultimately reduces its value to the amount paid for it. In the conceptual art movement, the physicality of artworks is abandoned in favor of concepts and ideas. Joseph Kosuth, one of the pioneers of the conceptual art movement, considers Duchamp's works to be a turning point that changes the emphasis of art "form" to focusing on "concept." He introduces this moment as the beginning of modern art and conceptual art and believes that the value of artists after Duchamp can be measured by how much they question the nature of art (Finucane, 2018, 5). In *Art after Philosophy*, published in 1969, Kosuth emphasized that the only desire of art is to describe itself, and art is an idea of an idea. This thought goes as far as the American conceptual artist Saul Levitt considers the "idea" itself to be a work of art even if it has not occurred visually. If the past art intended to interpret the reality of things with its tools, today, what remains for it is to question itself and its language. Also, with its immaterial and universal tool, today's art searches for the possibilities of creating a "work concept" to respond to the materiality and intentionality of the world (Parmezani, 2011, 160-177). With the emergence of these progressive movements, the perception of artistic creation changes, and the necessity of the artist's skill gives way to the importance of the theme in the work of art. Also, in many contemporary avant-garde movements, the distinction between art and life is blurred, and art is formed in a fluid context that is constantly changing and reforming, without fixed points of reference, thus constantly trying to answer these questions: What is art, how should it be presented and how can it be evaluated and interpreted (Archer, 2010, 4-7). CryptoArt seeks to answer the same questions as if, from yesterday's ready-made art to today's CryptoArt, a dynamic path has been formed to redefine art. In this new artistic movement, the distinction between art and property disappears. It also reflects the virtual reality added to the world. Just as CryptoArt is related to other artistic trends in art history, which challenge nature

and conventional definitions of art and aesthetics, it could also pave the way for new art styles in the future.

Importance of Authenticity and Uniqueness in CryptoArt

CryptoArt makes a promise that distinguishes it from previous artistic movements and trends, the promise of creating value in a more efficient way for artists and collectors considering this value as the result of the creation of uniqueness and authenticity in artworks with the help of blockchain capabilities (Finucane, 2018, 2). The truth is that CryptoArt is a rare digital artwork associated with unique and provably rare tokens that exist on the blockchain. Like Bitcoin and other cryptocurrencies, trading CryptoArt is based on digital rarity (Baily, 2018).

The authenticity of artworks has attracted the attention of many philosophers and theorists of art, including Frankfurt School thinkers (Baghban Maher and Gholamian, 2010, 44). The Critical Theory of the Frankfurt School is one of the most influential thoughts of the 20th century, which was established in 1930 to study Marxist ideas, but then turned to criticize the culture and way of thinking of capitalism, the process of rationality in modern society, and also aesthetic interests (Bashiriyeh, 1997, 169–170). The critical theory includes criticism of society and various cognitive systems, and its purpose is to reveal more precisely the nature of society and show power relations in cultural environments (Ebrahimi Minaq, Amiri & Ameri, 2007, 85). Some of the theorists of this school are Max Horkheimer, Theodor Adorno, Herbert Marcuse, Erich Fromm, and Walter Benjamin. Benjamin was a German philosopher whose connection between his thought and method with the Critical Theory is undeniable. In his essay “The Work of Art in the Age of Mechanical Reproduction” Benjamin positively evaluates the results of technological development in aesthetics and welcomes the emergence of mass-culture art as a result of technical reproduction. In contrast, others such as Adorno and Horkheimer

expressed the concept of “cultural industry” and looked cynical at the results of this development and evaluated it as destructive (Benjamin, 1987, 23-31). From Benjamin’s point of view, due to technological progress and mechanical reproduction, artworks have lost their ritualistic value and artistic authenticity (aura), so they have relied on politics (ibid). Benjamin considers the loss of the sacred and unavailable space of art due to the emergence of technology inevitable and laudable because it makes art possible to be based upon the praxis of politics and brings it closer to social issues (Rahbarnia & Masdari, 2014, 224-225). Benjamin believes that technology destroys the authenticity and uniqueness of artworks through reproduction, but in CryptoArt, a new technology has emerged that is trying to restore this quality to art, and even its central importance is to make digital works of art unique. It means making a digital artwork unique while it can be reproduced in the simplest and fastest way possible with a few clicks. By providing virtual and artificial uniqueness, CryptoArt makes art as unique and authentic as classical works, but at the same time, it does not remove accessibility from the public, and digital artwork can still be seen and reproduced by everyone. Moreover, the more this art can be consumed by more people regardless of economic status and geographical location, the more its ability to fulfill political and social goals increases. This point can be followed in the ideas of Jean Baudrillard, a postmodern theorist, where, in opposition to Benjamin, he states that the reproduction of an artwork not only does not reduce the importance of its originality and authenticity but also increases the fame and desire to see the original work. Baudrillard argues that society is saturated with information and communication technologies and has entered the age of simulation. He challenges the ideas emphasizing the distinction between the original and the copy and believes that the image becomes a reality through simulacra (Keshmirshakan, 2018, 157-158). Such as open-access articles and research with the possibility of

free and public access to the published content; increasing the number of references to them not only does not reduce their value and importance but also increases the credibility of the articles. From Baudrillard's point of view, art has been irrevocably formed by turning toward everyday life and with excessive implication. At this point, art enters into unlimited reproduction, as art and all that it reproduces, even mundane everyday realities, become aestheticized and subsumed under the umbrella of the signs of "art." Therefore, art and craft can exchange their signs, and art becomes a reproduction device that is nothing but a sign without detracting from being art (Baudrillard, 2002, 29-30). In CryptoArt, art has multiplied along with blockchain technology and virtual reality, which were already added to our daily life, and all have met under the umbrella of art-sign to make an art whose unlimited reproduction does not detract from its being art.

The Impact of CryptoArt on the art Market

The Art Market Report, which is published every year by the Art Basel Art Fair in collaboration with a Swiss bank, is one of the most important visual art events to display and sell contemporary artworks at the international level. In 2018, their report identified blockchain and cryptocurrency as the most important developments that have occurred in the global art market. This report mentions three critical potentials and advantages of using blockchain in art market operations: improving the credibility and authenticity of artworks, protecting the privacy of collectors, and tracking the purchase and sale of artworks (Sidorova, 2019, 89). The same report in the following year specifies that the online sale of artworks in 2019 is estimated to be around 5.9 billion dollars, which has decreased by 2% compared to the previous year and has only gained 9% of the sales in the art market (Art Basel 2020 Report¹). However, in the latest report published, despite the overall decrease in the sale of artworks, the value of online sales has more than doubled compared to

the previous year, and with a record of 12.4 billion dollars, it has taken 25% of the market share (Art Basel 2021 Report²).

CryptoArt Potential to Emancipate art from Commodification and Market-Oriented

Lucy Lippard is an American art critic, writer, and feminist theorist who has published more than twenty books on contemporary art and culture. In 1968, in an article entitled "Dematerialization of Art" about the liberation of conceptual arts from market dominance, Lippard believed that the initial impression of the possibility for conceptual arts to avoid conventional commercialization, with the destructive progressive, modernist approach, has been a false hope. In the beginning, few people were willing to pay significant money for conceptual works, and artists seemed freed from the cruelty of markets and commodification. Still, within three years, these works were displayed in the most prestigious galleries and sold for high sums of money. According to Lippard, although the dematerialization of the art object has made achievements in creating new criteria of art criticism and aesthetics, art and artist in the capitalist society remain a luxury (Lippard & Chandler, 1968, 4).

The entanglement of the art market with the dominant economy of capitalism as the current economic system is inevitable. Presuppositions such as "private property" in this system make the work of art also have an exchange value as a commodity. However, whereas the world of free trade increases as production increases and thus profits decrease, the "uniqueness" of the artwork reflects a higher value in the market (Noujeim, 2021, 1). When talking about the capitalist system, it should be noted that changes have been made in the characteristics of this system throughout history based on the mutual relations between economy and culture. For example, in the golden age of Western industrial societies, from the end of World War II to the 1970s, ideals such as "equality of opportunity" and "individual effort" on which the production strategy was based

often were replaced with cultural concepts such as “authenticity” and “self-realization” Based on this dynamic structure of capitalism, in the late 1980s, the quality of “flexible” or “disorganized” was attributed to this system (Glauser et al., 2020, 387-389). In current conditions where the market is ruling as a final ideology, aesthetic independence requires a different contrivance from the policies that romanticism or modernism used for the autonomy of art (Brown, 2019, 181). Many artists tried to rebel against the capitalist authority in art and challenge the concepts of “authenticity” and “uniqueness” favored by the capital-oriented art market with various topics. In this way, artists used different strategies, like modern artists who reduced the creation of the work to change or transform the understanding of artistic creation with the help of technologies and products of the capitalist system in such a way that the artist no longer needed to do the act of creation in a way that only the signature of the artist gives “authenticity” to the artwork. These artists tried to connect the process of artistic creation and the market without reconciling each other. However, despite all the efforts that artists have made to turn away from capitalism, it seems that this system can absorb any resistance and turn it into a profitable product, regardless of the artist’s intention (Noujeim, 2021, 2-5). In other words, art, which wants to confront capitalism as an opposing force, becomes a consumable sign of opposition (Brown, 2019, 182). The action or process of treating a person or a phenomenon as a property with a purely monetary value is called “commodification.” The issue of commoditization is not only the possibility of exchanging goods and services for money, but the main challenge is the desire to maximize profits at the cost of losing non-monetary values; this process reaches a critical point when the market value dominates the consumption value. The concept of commodification appeared in Marxist discussions and was soon accepted by non-Marxist scholars. In the 1970s, the term became common in academic discourses to question some of the effects of market

exchange and monetary valuation methods; Today, it is often used as a critical concept to describe the adverse effects of capitalist development. Commodification and profit maximization can have worrisome effects, such as standardization and homogenization of culture, manipulation of human needs, and Increasing inequality in satisfying social necessities. Accordingly, commodification changes not only the manner of production and consumption of the commodity but also its social meaning (Hermann, 2021, 1-20). Diminution of artwork to a purely economic commodity is problematic to art; for example, if the only intention embodied in artwork’s form is the intention to exchange as an external intention, interpretive tools would be futile to assign any meaning to the work of art. on the contrary If the autonomy of art is analytically available even for a moment, it is when there is something in the work to suspend its commodity character; Although this feature never stops in the work of art, only at such a moment the form arising from the inner intention demands an interpretation (Brown, 2019, 8-13).

Throughout history, income generation has always been one of the significant concerns of artists, and determining the exchange value criteria of artworks has been one of the challenging issues of the art economy. Nevertheless, in the contemporary era, the daily expansion of virtual space and the necessity of the emergence of new tools and online platforms for the production, distribution, and consumption of art has created a different experience from the past and made the relationship between art and the market more complicated. CryptoArt has also emerged with the pleasant news of the decentralization of the art market, but with great importance for authenticity and uniqueness, and in a short time, it entered galleries, famous auctions, and international expos and was sold at significant prices. Although CryptoArt can be an excellent opportunity to serve the art world and the economic affluence of the art market, It should be kept in mind that the prosperity of this market can come at the cost of imposing the

criteria of the capitalist economy on the cultural and aesthetic values of art and the decline of the creative growth of art.

Studying a Sample of CryptoArt

Damien Hirst, an English artist, has recently started a project called money in CryptoArt. In this project, digital images of ten thousand unique works of art are connected to an NFT and turned into a CryptoArt. These digital images are photos of a series of dot paintings that are one of Hirst's best-known styles and were hand-drawn by him in 2016 (Fig. 2). The titles of the works are created through machine learning and based on a database of the lyrics of the artist's favorite songs. Although the paintings look alike, no two works are the same, and each piece is individually numbered and signed by Hirst; the paintings are physically kept in a protected warehouse in the UK, and their digital photographs, which are converted into CryptoArt, are auctioned in cyberspace with a base price of \$2,000. The different and remarkable thing about this project is that each CryptoArt is connected with a physical painting, and buyers have one year to choose between CryptoArt or physical artwork. Collectors have until 3 pm UK time on July 27, 2022, to decide whether to return the purchased NFT and receive the physical artwork or retain the rights to the blockchain-based artwork and renounce ownership of physical drawings. At the end of the announced deadline, those physical paintings the buyer has given up ownership of to keep the NFT will be ceremonially burned after a public exhibition. Only two months after starting this project, Damon Hirst announced on social media that its sales had reached 25 million dollars (Goldstein, 2021). The artist himself believes that this project is about the relationship between art and people, and it is an event that examines the value of art and its borders with money, how sometimes art becomes money, and sometimes money becomes art. Hirst says that drawing artistic patterns on coins and bills is no accident; governments want us to believe in money because, without art, it is hard for us to believe anything (Shaw, 2021).

This project challenges the relationship between the exchange value and the use value of art and stabilizes the shifted boundaries in the definition of CryptoArt. Damon Hirst has left the art world in suspense about which artwork, physical or crypto, will gain more value in the future. Maybe this opportunity is an incentive to think more about what is happening in art; how, in the contemporary world, the value of art is measured by its financial price. According to Hirst, without art, it is difficult for us to believe anything; CryptoArt can also be a way to bring art into the world of cryptocurrencies to help this world prosper more. It can be said that contrary to Benjamin's prediction as a result of the reproduction in this project, art has not only not approached its political and social goals but has become a tool to stabilize and strengthen a new type of money. According to Baudrillard, art has not lost its uniqueness or Inaccessibility under the influence of technology; the reproduction of artworks has even increased the fame and desire to gain the original. In this project, the art World is waiting to find out whether the paintings are more "authentic" or the virtual reality of CryptoArt. Furthermore, which one is destroyed to make the other unique, and how the constructed "uniqueness" increases the financial price in the art market Cryptart has captured the world's attention with promises to decentralize the art market, but it can also be a tool in the service of capitalism and strengthen its dominance over art. In other words, prioritizing an external intention for art and forming artworks based on its market value, not the use and artistic value, makes art market-oriented and commodified.

Conclusion

Following the Dadaist heritage, CryptoArt is trying to extend art definition, and as the pop movement blurred the distinction between art and property, CryptoArt is also a result of artwork and digital asset combination. As Kosuth believed about the conceptual arts, CryptoArt is a description of art itself, a statement of how the idea and technological process of art becomes more pivotal than the artwork itself; art

devoid of materiality becomes an idea that refers to itself. The same as contemporary art tries to redefine its relationship with everyday life in different styles and techniques, CryptoArt also reflects the surrounding virtual reality, which is becoming more prominent every day. CryptoArt approach to artwork is not as an object but as a way to understand the virtual world. As art is constantly redefining itself in today's uncertain situation, CryptoArt is also an art because it is connected with contemporary concepts of art history, trying to expand the realm of art and show its relationship with beauty, life, and the market. However, as Damien Hirst demonstrates in his project, the art world's acquiescence can sustain the expanding boundaries of this new definition. The "money" project examines the relationship between the use value and exchange value of today's art and introduces CryptoArt as a way to believe and understand the world of crypto.

Eliminating third parties in art trades and decentralizing the market are some of the effects of blockchain technology on art, which can lead to eliminating the need for official art institutions as intermediaries. Because prominent art institutions and well-known artists often deal with each other, this digital way of presenting and distributing artworks can effectively enter unknown artists into the art market. Since CryptoArt platforms have wide and global accessibility and transparent and traceable contracts, CryptoArt can effectively maintain

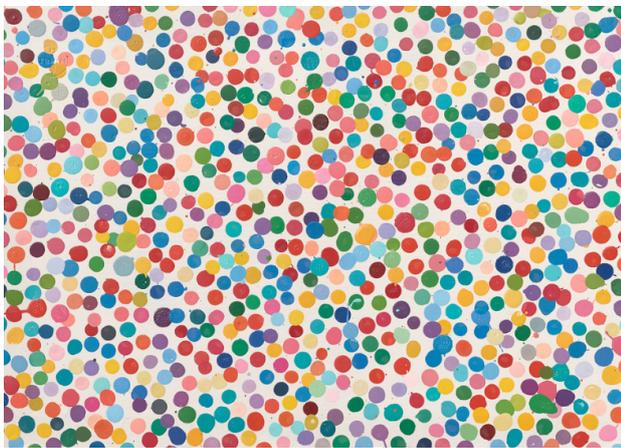


Fig. 2. An example of Damien Hirst's paintings in the "Money" project. Source:WWW. Palm.io.

artists' rights in the market and ensure the contract's authenticity. However, what Lucy Lippard believes about the failure of conceptual art to break free from the market also applies to CryptoArt; the high amounts of buying and selling of crypto works and access to the most famous auctions still show the dominance of capital and official institutions over art. It can be said that CryptoArt, contrary to what it claims, is more than looking for a way to decentralize and protect artists' rights; it is pursuing material reward. Therefore, since digital art lacks the modernist qualities of originality and uniqueness, CryptoArt returns these qualities to digital art to benefit capital and the market. Although from the point of view of thinkers such as Benjamin, technology helps to remove these two attributes from art and, as a result of art's emancipation from dominance, blockchain technology has provided digital and artificial authenticity and uniqueness for CryptoArt by attaching an NFT to artwork; In a way, that benefits from its uniqueness, like a classical masterpiece, and uses the reproduction as Baudrillard believes, to increase its reputation and credibility. In other words, technology in this new artistic movement provides the possibility of combining two goals: First, by tokenizing, in a contractual form, it gives originality and uniqueness to a copy of the work and thus increases the exchange value of this copy. Second, with the endless possibility of viewing and reproducing copies for everyone, it also benefits from the reproduction of the artwork to highlight the uniqueness of the attached NFT and to increase its market value in a double way. Based on these results, it can be said that CryptoArt is like a double-edged sword that brings opportunities and threats to the art economy. On the one hand, CryptoArt can decentralize official institutions and challenge the familiar frameworks of capital-oriented art markets; on the other hand, by strengthening market-oriented and accelerating the process of commodification of art, it can become a tool for extended dominion of capital and official institutions on art and, as a result, the stagnation of art creative growth (Table 1). CryptoArt can take its path of maturity toward newer

artistic methods and help art to rediscover its critical and emancipatory potential.

According to the obtained results, the feasibility of localizing this contemporary artistic practice in Iran, finding the differences in form and content between the most expensive works sold and unsuccessful works, and comparing the views of cryptographic art from different experts are suggested for future research.

Endnotes

1. <https://www.artbasel.com/stories/art-market-report-1>.
2. <https://www.artbasel.com/stories/art-market-report-2021>.

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Table 1. Threats and opportunities in crypto art. Source: authors.

Opportunities	Threats
Decentralization of formal art institutions	Re-domination of formal institutions over art
Challenging conventional art markets	Stabilizing the commodification of art
Authenticity and transparency of contracts	The anonymity of transactions and risk of money laundering
Protecting artists' rights, especially in secondary markets	Cyber fraud and theft
Creating opportunities for non-famous artists	Lack of quality control of works
Wide and global accessibility	Creating environmental pollution

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