

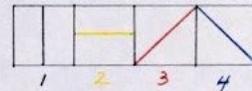
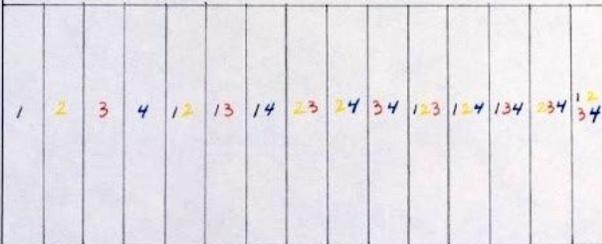
NFTs: Modern Masterpieces— or Money for Nothing?

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Sol Lewitt

DIAGRAM



This is a diagram for the Sol LeWitt wall drawing number 49. It should accompany the certificate if the wall drawing is sold or otherwise transferred but is not a certificate or a drawing.

CERTIFICATE

This is to certify that the Sol LeWitt wall drawing number 49 evidenced by this certificate is authentic.

A wall divided vertically into fifteen equal parts, each with a different line direction and color, and all combinations.

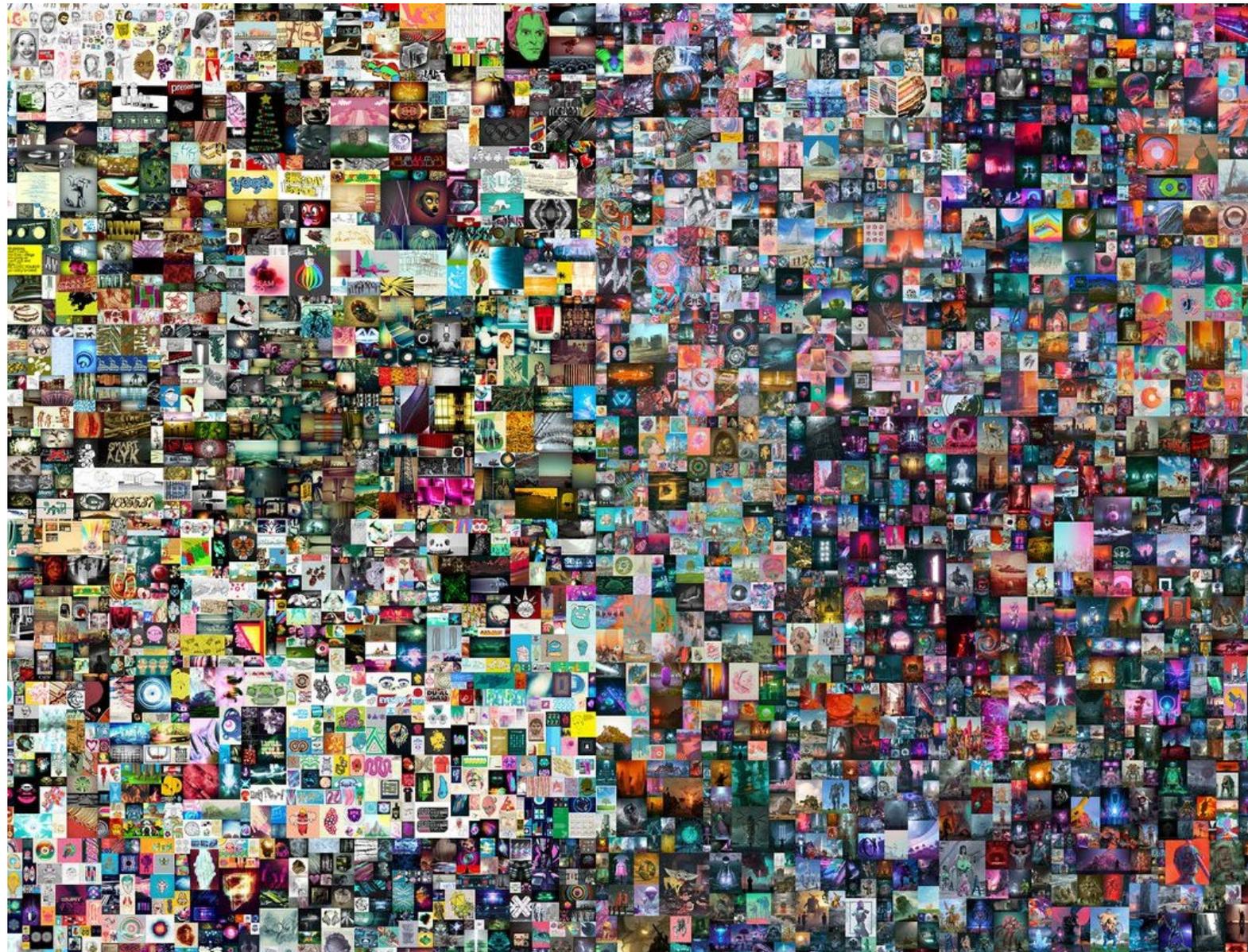
Red, yellow, blue, black pencil
First Drawn by: Chris Hansen, Nina Kayem,
Al Williams
First Installation: Jewish Museum, New York, NY.
June, 1970

This certification is the signature for the wall drawing and must accompany the wall drawing if it is sold or otherwise transferred.

Certified by Sol Lewitt
Sol LeWitt

© Copyright Sol LeWitt. _____ Date

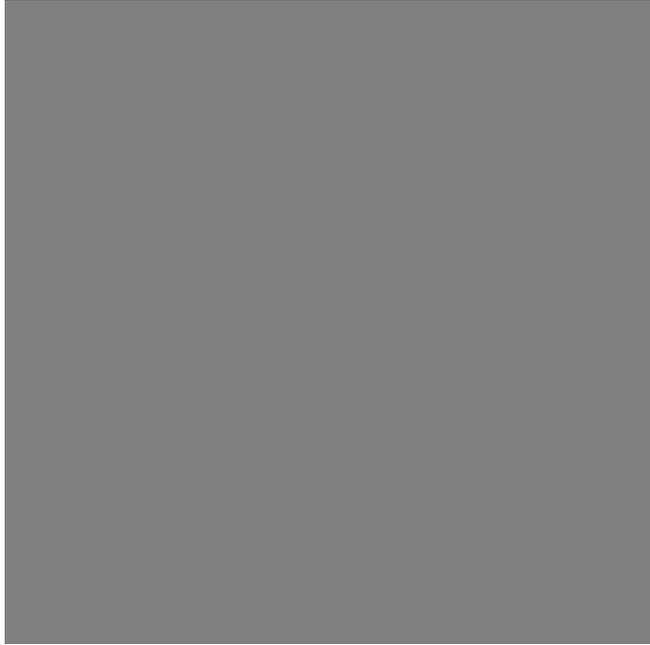
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- **Beeple** created a piece of art in a **file**
- He created a **hash** that uniquely, and unhackably, identified that file
- He created a **metadata file** that included the hash to the artwork
- He created a **hash** to the metadata file
- He uploaded both files (metadata and artwork) to the **IPFS** darknet decentralized file sharing service
- He created, or **minted a token** governed by the **MakersTokenV2 smart contract** on the Ethereum blockchain
- Christies created an **auction** for this token
- The auction was concluded with a payment of \$69 million worth of Ether cryptocurrency. However, nobody has been able to find this payment on the Ethereum blockchain, the money was probably transferred through some private means.
- Beeple **transferred** the token to the winner, who **transferred** it again to this final **Metakovan** account

Source: SecurityBoulevard.com

Beeple



The Pixel by Pak

Auction

A tiny* piece of art statement.

Auction Ended

--

Current Bid

1,355,555 USD

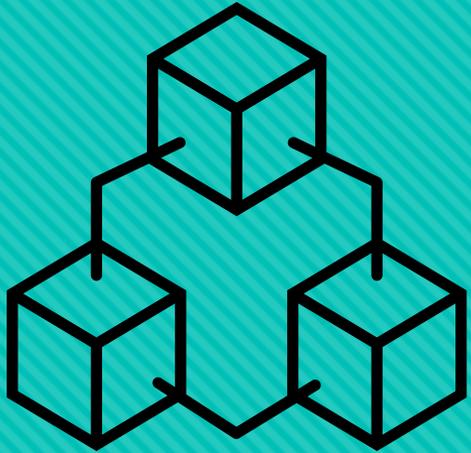
Sold

Description

The Pixel is a single pixel statement. It is created to validate.

The Pixel is a digitally native artwork visually represented by a single pixel (1x1). It is a token that signs the most basic unit of a digital image in a traditional global auction house. It is a tiny mark to carry digitally native art to a potential future history.

Pak



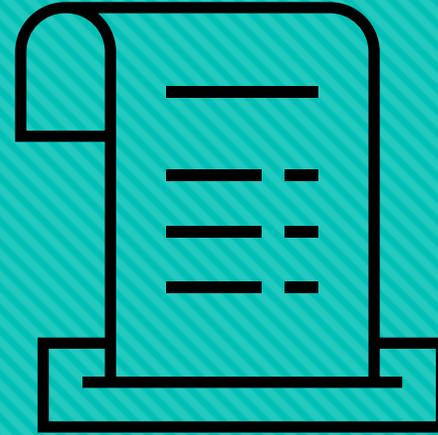
Blockchain



**Token
Smart contract**



URL?
IPFS?



Metadata



URL?
IPFS?



Digital file

NFTs

The Easy Question: What Are You Buying When You Buy an NFT?

- A unique ledger entry that refers to (the metadata associated with) a digital object
- Bragging rights
- A sense of patronage
- The ability to resell the token

- You are thus (typically) not getting:
 - Other rights related to the artwork (e.g. copyright)
 - A more “authentic” copy of the artwork than non-NFT owners

More Difficult Questions

- Can the owner of the NFT call him/herself the “owner” of the artwork?
 - The NFT owner is not “owning” the underlying artwork in any meaningful way, unless the art market starts giving that meaning
- Why need for cryptocurrency?
- What stops me from issuing an NFT on somebody else’s creation?
- Who ensures that digital object remains online somewhere? Who ensures continued existence of (hyper)links between token and file with metadata and between metadata and digital object? Who ensures survival of required platform/software?
- Is there a future for a market in NFTs on *physical* objects?
- What about the environmental damage caused by energy consumption associated with confirming and registering transactions?

Opportunities

- Certification of “ownership” and creation of artificial scarcity enable emergence of market for digital art:
 - Artists can monetize their creations
 - Art lovers can start putting together “collections” of digital art
 - Speculators gonna speculate
- This new market is arguably relatively transparent given public nature of blockchain
- Minting an NFT on an exchange can be cheap (“gas fees”). More meritocratic art world?
- Smart contracts often give % of resale revenues to artists (“droit de suite”)
- Potential to change relation between artist and collector (e.g., allow to modify or reconstruct original artwork)



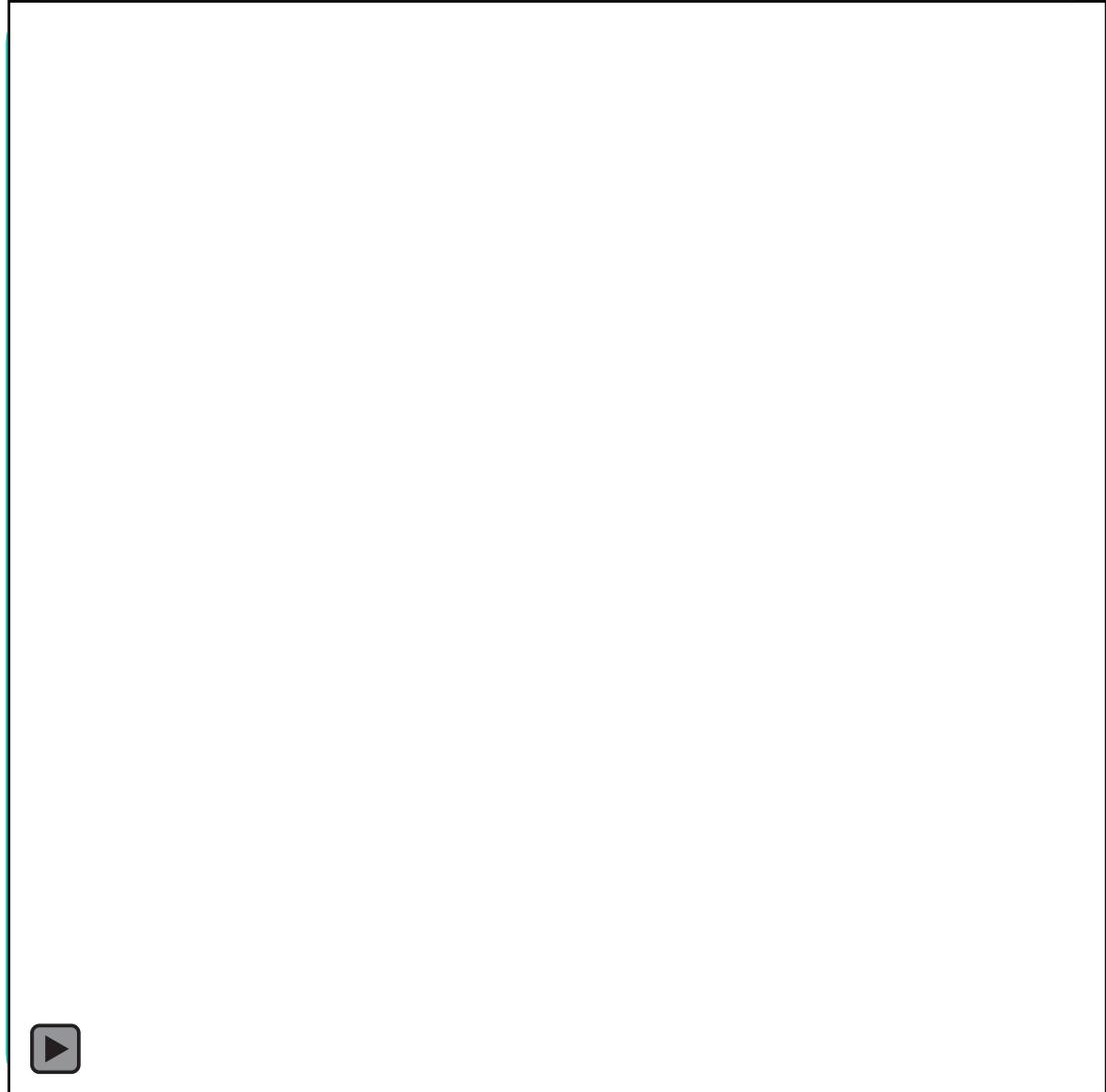
Many Types of NFT “Art”

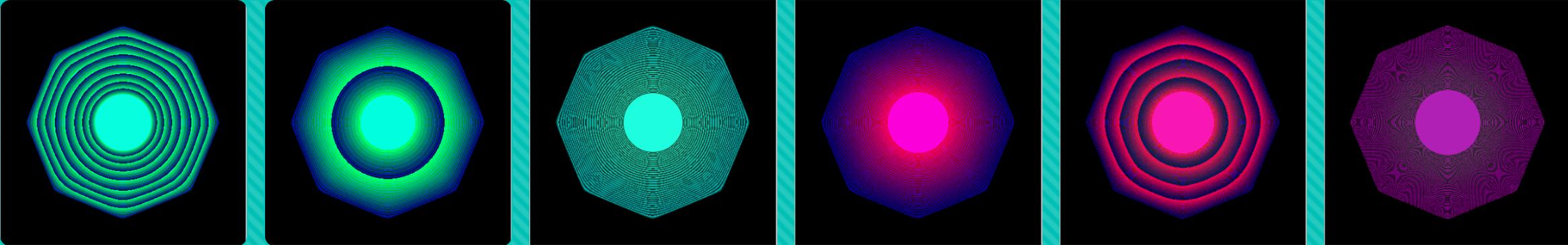
- NFT'ed digital art
- “Native” blockchain and crypto art
- Crypto-collectibles
- Gaming, metaverse, etc.



Kevin McCoy

- “Quantum”
- Originally minted in 2014 on Namecoin blockchain
- Minted again in 2021
- Sold for \$1.5m at Sotheby’s in June





Overview Send coins Receive coins Transaction

All All Enter address or label to search

| Date | Type | Address |
|--------------|----------------|------------------------|
| 5/4/14 10:16 | Name operation | name_firstupdate: mone |
| 5/3/14 17:56 | Name operation | name_update: monegrap |
| 5/3/14 17:53 | Name operation | name_new: monegraph/ |
| 5/3/14 02:36 | Name operation | name_firstupdate: mone |
| 5/3/14 01:00 | Name operation | name_new: monegraph/ |
| 5/2/14 22:40 | Sent to | anil |
| 5/2/14 21:22 | Name operation | name_firstupdate: d41b |
| 5/2/14 19:27 | Name operation | name_new: d41b8540cb |
| 5/2/14 17:48 | Received with | default address |

Synchronizing with network...

ownership recognize herein.

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NameCoin Explorer Home Whale Tracking Charts Block List Pending Rich List

fa8b9a6ad4d266ffbec4f9a1217e0dbcd657bb1eb3ed49912a2ab1bd3bb48f8d Copy

Included in Block [174923](#)

Time 05-02-2014 21:27:34

Transaction Fees 0.005 NMC

Confirmations 385668

Block Hash [fdd4caa2c878cb28b047e740e9e3617825b0301b471899af9faa5eaedd6e56ea](#)

Transactions **Name operations**

| Transaction | Operation | Name | Value |
|-------------------------------------|------------------|--|---|
| fa8b9a6ad4d266ff... | name_firstupdate | d41b8540cbacdf1467cdc5d17316dcb672c8b43235fa16cde98e79825b68709a | I assert title to the file at the URL http://static.mccoospace.com/gifs/quantum.gif with the creator's public announcement of it's publishing at the URL https://twitter.com/mccoospace/status/462320426719641600 The file whose SHA256 hash is d41b8540cbacdf1467cdc5d17316dcb672c8b43235fa16cde98e79825b68709a is taken to be the file in question. Title transfers to whoever controls this blockchain entry. |

Larva Labs

- “CryptoPunk 7523”
- One of 10,000 Punks
- The CryptoPunks were free to acquire by anyone with an ETH wallet in 2017

- Sold for \$11.8m at same Sotheby’s auction



Bubble component?

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f) + \text{🚀}$$

$E(R_i)$ = capital asset expected return

R_f = risk-free rate of interest

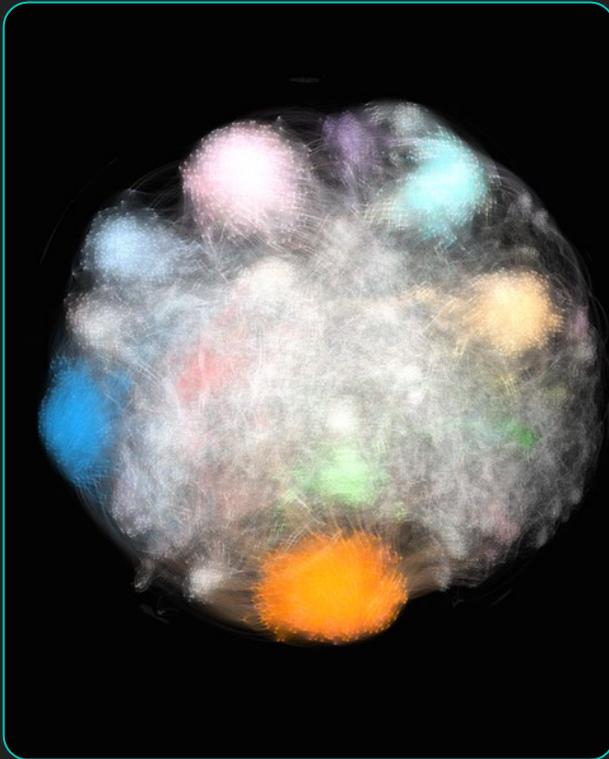
β_i = sensitivity

$E(R_m)$ = expected return of the market

🚀 = expected Reddit enthusiasm

- The “meme economy”
- Also see: GameStop, Dogecoin
- Role of crypto-enthusiasts and (volatile) crypto-wealth?
- Innovations are often initially associated with inflated (short-term) expectations

Prices and Trading



Source: <https://www.nytimes.com/2021/05/07/opinion/nft-art-market.html>

- Prices = $f(\text{artistic quality, technology, community, etc.})$
- Auction sales tip of the iceberg; most transactions through NFT marketplaces like OpenSea, SuperRare, etc.
 - Combination of listings with fixed prices, open offers, (reserve) auctions
 - Some platforms also allow everyone to mint their own NFT
- Large majority of NFTs sell for less than \$10; only 1% sells for more than \$1,600 (Nadini et al. 2021)
- Ownership highly concentrated
- Traders highly specialized



KEVIN MCCOY, QUANTUM (2014)
THE FIRST BETWEEN BLUE AND WHITE

Role of Auction Houses?

- The “buyer’s premium” payable to Christie’s on the Beeple sale was \$9m
- There is arguably a tension between nature of NFTs and having auction houses as intermediary in this market
- Auction houses have reacted very quickly to rise of NFTs with associated changes in the way they do business—primary market, weeklong (online) auctions, accepting payments in cryptocurrency, etc.
- Curatorial role for auction houses?

Some Final Thoughts

- The NFT technology is here to stay
- Given ease of creating NFTs (and infinite pool of digital objects that can be the basis of NFT), we are likely to see excess supply
- Many NFTs have very little monetary value—and even more so will lose whatever market value they have very quickly
- When will “traditional” art collectors start buying?
- What meaning will the art market—and society—give to NFT “ownership”?