

Art for Space

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We investigate the overlapping of the concepts of prestige and success in art. To this end, we invited a group of art experts and a group of artists to select a small number of artworks that they deemed of high quality among those the crypto art gallery SuperRare displays. We then matched the selections with indicators of market success for the same artworks. We find that prestigious artworks selected by art experts and artists are also successful in the gallery marketplace, tracing an interesting link between prestige and success in the art context. We also observe a clear divergence between the roles of art expert and art maker (artist).

CCS Concepts: • **Applied computing** → **Media arts**; • **Information systems** → **Digital libraries and archives**;

Additional Key Words and Phrases: Blockchain, crypto art, art metrics

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1 INTRODUCTION

Crypto art are rare digital artworks associated with unique and provably rare tokens that exist on the blockchain. The concept is based on the idea of digital scarcity, which allows you to buy, sell, and trade digital art as if it were physical. Popular early examples include CryptoKitties, CryptoPunks, Rare Pepe, CurioCards, and Dada.art [1, 2].

Art curator Jason Bailey identifies a series of common factors that have shaped the aesthetic and community thus far [2]:

- (1) *digitally native*: artwork can be created, editioned, bought, and sold digitally;
- (2) *geographically agnostic*: artists participate from all over the world;
- (3) *democratic*: everyone is encouraged to participate;
- (4) *decentralized*: tools and guidelines are designed to reduce the power of gatekeepers and middlemen and increase the autonomy of artists;
- (5) *anonymous*: use of pseudonyms allows artists and collectors to create, sell, or buy art while staying anonymous (if preferred);

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- (6) *memetic*: crypto artworks are often literally memes valued for their ability to spread quickly;
- (7) *self-referential*: crypto artists often play with references to key events and personalities within cryptocurrency and blockchain culture;
- (8) *crypto patrons*: crypto art is often collected by a group of savvy technologists and investors who got into cryptocurrency early;
- (9) *pro-artist*: blockchain platforms often take little to no commission from artists; artists are often remunerated for every future sale of a single work;
- (10) *dankness*: literally anyone can make something highly expressive or potent even if they have zero training.

Crypto art draws its origins from *conceptual art* [10]—sharing the immaterial and distributive nature of artworks, the tight blending of artworks with currency, and the rejection of conventional art market and institutions. Many characteristics that were endemic to Duchamp’s practice, and later conceptual art in the 1960s and 1970s, are now visible in the immaterial and distributive logic of crypto art. See Ref. [4] for a parallelism between conceptual and crypto art and Ref. [7] for a crypto art position paper written by artists, collectors, gallerists, art historians, and data scientists.

The *status* of an actor in a social context is determined by two factors: the total number of endorsements the actor receives from other actors and the prestige of the endorsing actors [8]. We cite from Ref. [9] the following example:

An author of pulp detectives may sell many books, but may not have earned the respect of literary critics. Conversely, a Nobel Prize in Literature winner may be highly valued among literary experts, yet never make the New York Times bestseller list.

Similarly, in *bibliometrics*, the status of a journal, of an article, or of a scholar in the academic setting is commonly defined in terms of the number of citations received by other journals, articles, or scholars (known as *popularity*) as well as in terms of the importance of the citing actors (known as *prestige*). In bibliometrics, it has been observed that prestige and popularity typically do not overlap significantly [6].

In the context of (crypto) art, an artwork can be endorsed in different ways: by placing a bid on the artwork, by purchasing it, by casting a like, or simply by viewing the artwork. All these are signals of market *success* for the art piece. On the other hand, the same artwork can be praised by art experts. We refer to this different kind of endorsement as *prestige*.

We are interested in investigating if success and prestige are strongly associated in the context of the new artistic trend known as crypto art. To this end, we concocted the following experiment. The role of art curators is to inform and arrange artistic content in a structured way so that the story behind a collection of artworks or artefacts can be communicated at different levels. We invited art curators and crypto artists to make a selection of artworks on the digital gallery SuperRare. One of the major crypto art galleries, SuperRare was born in April 2018. At the writing time the gallery features 7,125 artworks, more than half sold at least one time with an average resale value of +895%, for a value of \$446,626 earned by more than 200 artists. Nine crypto art curators and nine crypto artists accepted to participate to the research, namely:

- Chiara Braidotti (curator)
- Chloe Diamond (curator)
- Eleonora Brizi (curator)
- Fanny Lakoubay (curator)
- Jason R. Bailey (curator)
- Serena Tabacchi (curator)
- Stina Gustafsson (curator)
- Tom Van Avermaet (curator)

- Judy Mam (curator)
- artonymousartifakt (artist)
- Bård Ionson (artist)
- Hackatao (artist)
- Jörn Bielewski a.k.a. shortcut (artist)
- Marko Zubak a.k.a. MLIBTY (artist)
- Neel Yadav (artist)
- Ophelia Fu (artist)
- XCOPY (artist)
- Zack Yanger a.k.a. roses (artist)

We asked these actors to enter the SuperRare gallery with a blank mind and select 10 works (among 4,585 artworks) published in the gallery before September 15, 2019 that would be worth saving for future generations according to their curatorial taste, while justifying their choice. We explicitly requested artists not to choose their own works. Moreover, we invited all actors to make their choices regardless of the market success of the artworks, evaluating only the intrinsic quality of the works.

The collected data (artwork selection and motivations) have been processed as follows. First, we make a word frequency analysis on the text that curators and artists used to motivate their choices. This allowed us to identify important topics for both curators and artists, and to cast a first separation line between the two roles (art experts and art creators). Then, we correlated the choices made by the group of experts and artists with metrics of success of artworks in the SuperRare marketplace, hence, investigating the association between prestige and success in the context of crypto art. This also allowed us to further investigate how the curatorial role differs from that of an artist.

For all analyses in this work, we used tidyverse R packages for data science and tidytext R package for text mining [11, 12].

2 EXPLORING ARTWORK SELECTIONS

We start our investigation by exploring the selections made by curators and artists. Artworks are identified by their token id, a number from 1 to 4,585, where smaller numbers correspond to older pieces. Artworks chosen by curators are well-distributed over the life of the gallery, with a peak in the initial stages of the gallery development. The median token number is 2,006 over 4,585 tokens (see Figure 1). The age of artworks chosen by artists has two peaks, old and new artworks, while tokens in the middle of the gallery life are rarely chosen by artists. The median token number is 1,757 (see Figure 2).

We now give the ranking of artists chosen by at least three curators and that of artists chosen by at least three artists (Tables 1 and 2). For each artist, the nominators variable is the number of curators (or artists) that chose an artwork of the artist, and the nominations variable is the number of artworks of the artist chosen by curators (or artists). The compilation is sorted by nominators and then nominations.

- As for the curators' selection, artists Robbie Barrat (a.k.a. DrBeef_) and Hackatao were chosen by the majority of curators (six over nine), followed by XCOPY and Ophelia Fu. The most chosen artwork by curators is *AI Generated Nude Portrait #1* by Robbie Barrat (three preferences);
- As for the artists' selection, Robbie Barrat and Hackatao confirm their leaderships. XCOPY is more appreciated by artists than by curators, while the opposite holds for Ophelia Fu. The most chosen artwork by artists is *Skeletal garden* by Kryptocromo (three preferences).

2.1 Word Frequency Analysis

We make a word frequency analysis on the text that curators and artists used to motivate their choices (see Figures 3 and 4):

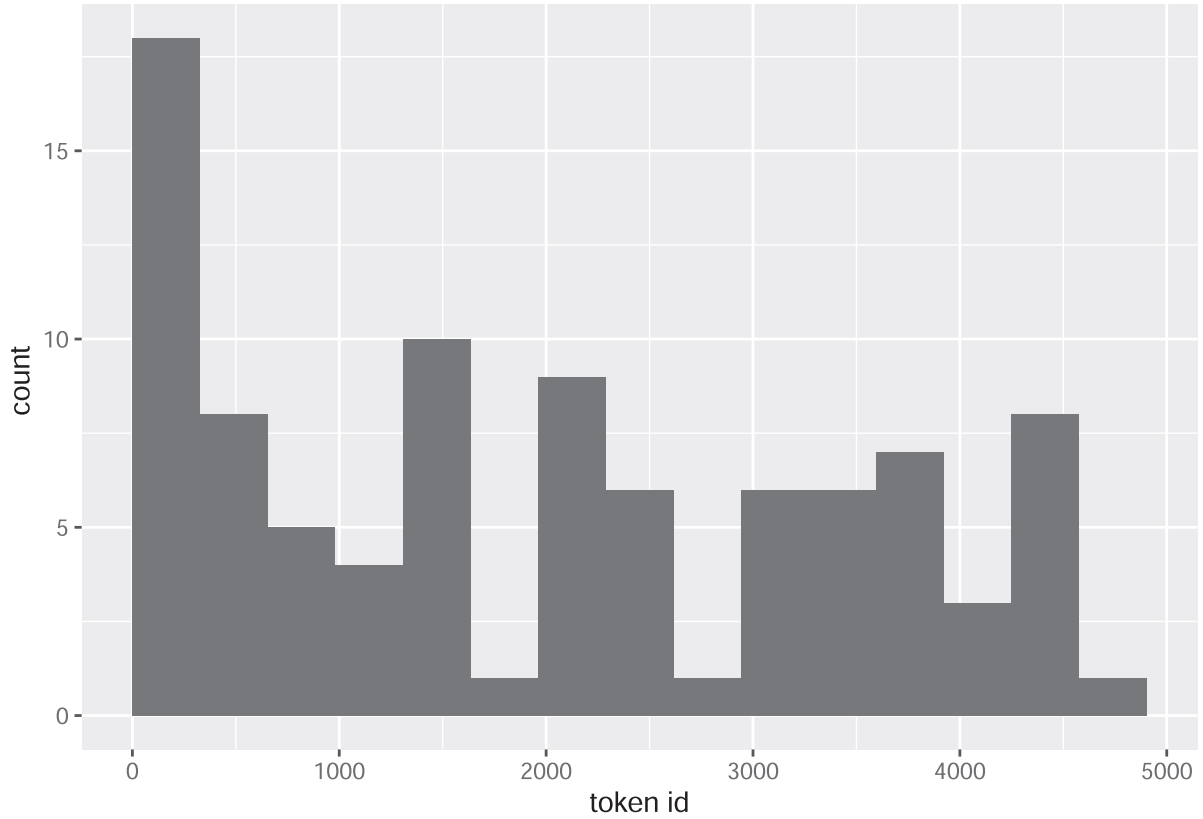


Fig. 1. Histogram of numeric ids of artworks selected by curators.

Table 1. Artists Chosen by at Least Three Curators

username	nominators	nominations
DrBeef_	6	9
Hackatao	6	7
XCOPY	4	8
opheliafu	4	5
hex6c	3	6
coldie	3	3
LoveArtHate	3	3
triplecode	3	3

- the most used word by curators is *viewer*, followed by *political*, *AI*, and *love*;
- on the other hand, the most popular word among artists is *love*, closely followed by *AI*. Notably, the words *political* and *viewer* are never used by artists.

The word *viewer* used so often by curators always refers to the actor viewing the artwork; for instance, it is used in sentences like “invites the viewer to think up a story” or “the artwork makes the viewer become part of

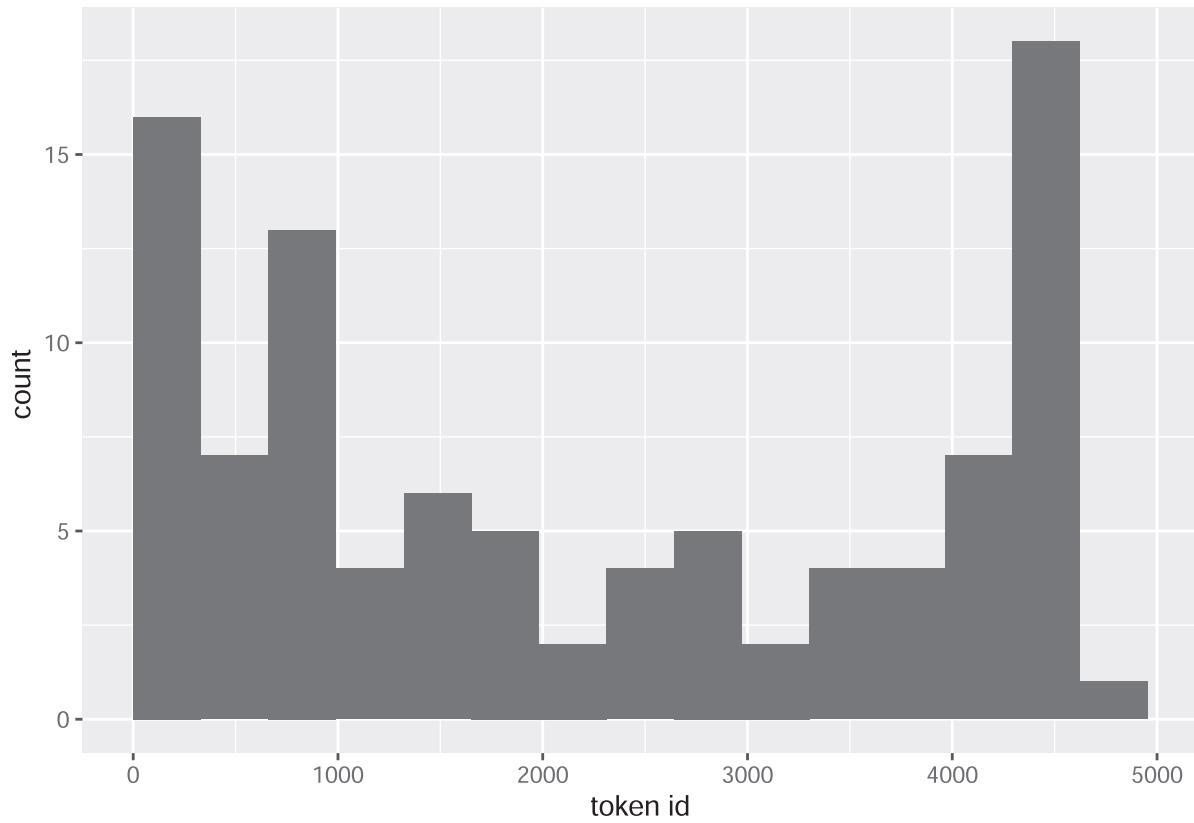


Fig. 2. Histogram of numeric ids of artworks selected by artists.

Table 2. Artists Chosen by at Least Three Artists

username	nominators	nominations
XCOPY	7	8
DrBeef_	6	7
Hackatao	6	7
coldie	4	5
hex6c	4	4
oficinastk	4	4
saito	4	4
artonymousartifakt	3	5
Roses	3	5
Kryptocromo	3	4
triplecode	3	4
MLIBTY	3	3
opheliafu	3	3

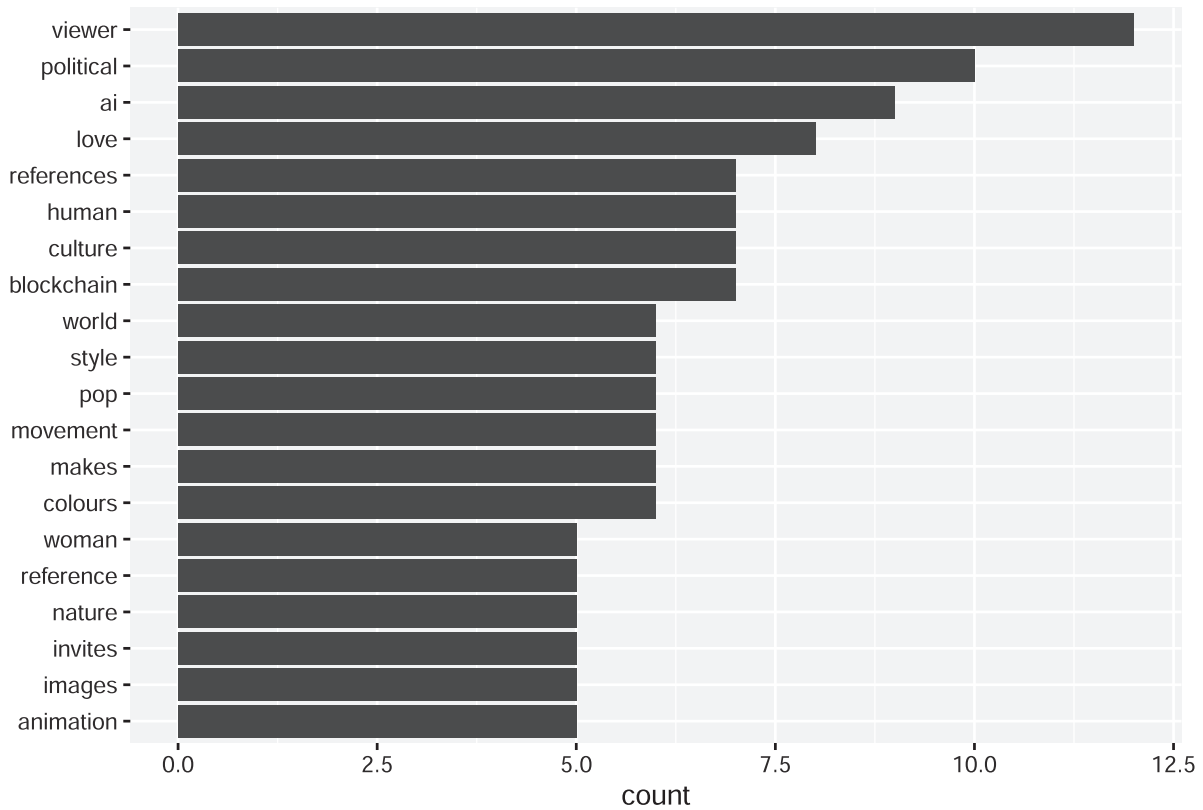


Fig. 3. Most frequent words used in motivations of curators.

the image.” It is a clear reference to the interest of art curators in the effect of the artwork on the observer. Also, the frequent use of the word *political* by curators is symptomatic. It is included in contexts such as “*their work is utterly political*” and “*he deals with political and important issues of our time.*” Curators are, evidently, quite attracted by artworks expressing a political view. Interestingly, these two terms, *viewer* and *political*, are never used by artists. Significant artworks for artists express emotions, not political opinions, in particular, love and beauty. Also, the term *AI* (Artificial Intelligence) is quite popular among artists as well as curators. This refers to the recent (ephemeral?) stream of artworks that are made by training neural networks.

2.2 Comparing Prestige and Success

In this part, we investigate if there is a correlation between prestige and success of an artwork. We say that:

- an artwork is *prestigious* if it is endorsed by art experts as a *remarkable* piece of art;
- an artwork is *successful* if it is endorsed by art collectors as a *remunerative* piece to buy.

Hence, do prestigious artworks have also market success? To answer this question, in collaboration with SuperRare gallerists, we isolated different signals that determine the commercial success of an artwork:

- (1) *market*: the price amount of all sales and bids made by the artwork (on the primary and secondary SuperRare markets). The amount is expressed in fiat money using the exchange rate of the time of the event (sale or bid);

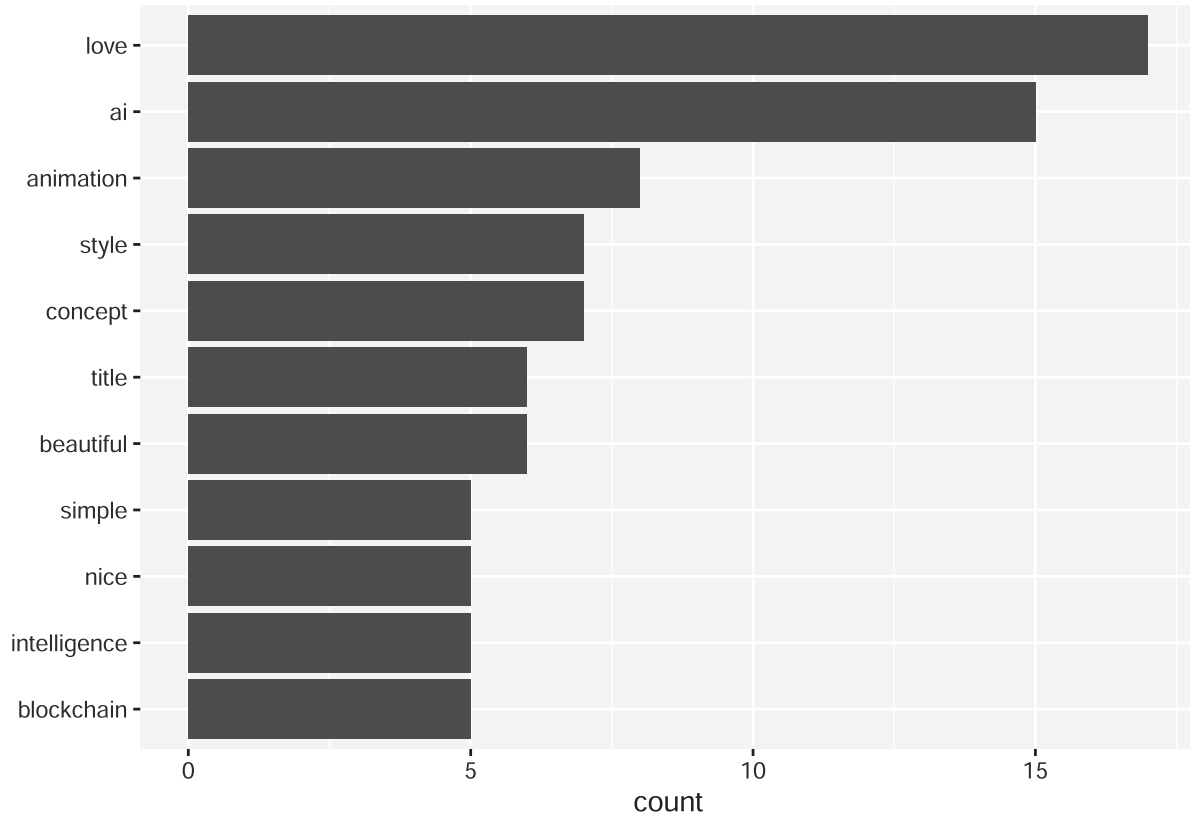


Fig. 4. Most frequent words used in motivations of artists.

- (2) *artist*: the importance of the artist that created the artwork, measured as the overall amount of sales made by the artist. Again, the amount is expressed in fiat money using the exchange rates of the sale times;
- (3) *popularity*: the number of likes and views collected by the artwork on the gallery website;
- (4) *speed*: the speed of the first incoming bid that the artwork received, relative to the artwork creation time.

We define *TokenRank* as an overall artwork rating considering the above facets with different weights. In particular, the metric *TokenRank* is obtained as follows:

- (1) for each facet (market, artist, popularity, and speed), we extract the percentile of the token facet within the gallery facet distribution. The percentile is a number between 0 and 1; the higher the better for the token. For instance, a percentile of 0.75 for a facet of a given token means that 75% of the tokens in the gallery have a lower value for that facet. We used a percentile approach since we observed that the facet distributions are highly right-skewed;
- (2) the final rating is then defined as the weighted mean of the four percentile facets using the following weights: 0.4 for market, 0.3 for artist, 0.2 for popularity, and 0.1 for speed.

In Table 3, we compare the average figures of success signals of all artworks in the gallery with those of artworks in the selections by curators and artists.

Table 3. The Average Figures of Success Signals of All Artworks (Gallery), of Curators' Artworks (Curator), and of Artists' Artworks (Artist)

	market	artist	popularity	speed	TokenRank
gallery	0.694	0.509	0.556	0.207	0.562
curator	0.782	0.648	0.703	0.331	0.681
artist	0.821	0.669	0.781	0.461	0.731

It turns out that:

- (1) artworks selected by curators and artists are significantly more successful than the average artwork in the gallery;
- (2) however, the pieces selected by artists are significantly more successful than those selected by curators.

Assuming that all actors involved in this evaluation made their selection based only on the inherent quality of the artworks and regardless of their commercial success, we conclude that, for the dataset at hand, there exists a significant overlapping between prestige and success at the level of artworks. In other terms, quality art, as identified by art experts, is not ignored by art collectors and investors and makes its way through the market. However, the choices made by curators were much less success-oriented than those made by artists, and this highlights the different roles of curators (art experts, in principle, independent from market) and artists (art makers, typically also related to market and commercial success).

It is worth noticing that we are not claiming that prestige and success match perfectly. Indeed, 32% of the artworks selected by curators were unsold at the time of selection (as a reference, the share of unsold gallery items at that time was 60%). On the other hand, only three artworks in the top-10 ranking according to TokenRank metric have also been selected by curators: *Latent Space of Landscape Paintings #1*, *AI Generated Landscape Painting #4*, and *AI Generated Landscape #6*, all created by Robbie Barrat.

2.3 The Social Impact of Artworks

To gauge the social impact of artworks and to compare it with choices made by curators and collectors, we conducted an additional experiment. We retrieved the top 10 artworks chosen by curators (the ones receiving more nominations) and the top 10 artworks selected by collectors (according to TokenRank metric). Then, for 10 working days, we posted at noon one curator artwork and one collector artwork on both Instagram and Twitter social platforms. Ten days after each post, we took note of the number of favorites collected by each artwork on both social networks.

We found that Instagram prefers art selected by curators more than art selected by the collectors (374 favorites against 344), while Twitter prefers collector artworks more than curator ones (192 favorites versus 154). Hence, for what concerns this experiment, Instagram favors prestigious art, while Twitter prefers commercial art. Combining the two socials, however, there is no clear preference among the two types of artworks.

3 DISCUSSION

In his recent book *The Formula* [3], Barabasi draws an interesting parallel between the concepts of performance and success. While performance is an internal variable that depends on how we played the game, success is an external factor that depends on the recognition we receive from others for our performance.

Your success isn't about you and your performance. It's about us and how we perceive your performance.
Albert-Laszlo Barabasi

In some contexts, for example, in sport, the performance of an athlete is easily measurable and comparable with that of other athletes. In these cases, performance and success are strongly correlated. In other scenarios such as art or cooking, the intrinsic quality of the work is difficult to assess. In these cases, performance is only one of the ingredients of success. Our position within the network in which we work is what determines the rest of the success, according to the findings of Barabasi and co-authors. In art, for example, this network, often invisible, involves artists, collectors, galleries, curators, agents, art historians, and auction houses [5].

Performance drives success, but when performance can't be measured, network drives success. Albert-Laszlo Barabasi

In this work we tested the association between performance (we call it prestige) and success in the very recent art movement known as crypto art. We invited art experts to select meaningful artworks from SuperRare gallery, the major marketplace for crypto art at the moment. Then, we correlated the selected artworks with signals of success of the artworks in the gallery. The outcome was somewhat surprising: curators tend to identify themselves with the observer, and, in doing so, they anticipate the likes of the mass, as artworks praised by them are also appreciated by the market. Finding a balance between popularity and artistic talent is something curators are naturally attracted to. Moreover, we observed that the role of art experts and art makers are different: the former are attracted by the political and reflexive aspects of art and the latter are allured by its emotional and technological facets. It would be interesting to investigate if these findings are confirmed or refuted in the traditional art market.

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