BE MORE CONCEPTUAL REGARDING NON-FUNGIBLE TOKENS (NFTs) AS ART

Kensuke Ito, Endowed Chair for Blockchain Innovation, The University of Tokyo, Hongo, Bunkyo-ward, Tokyo, 7-3-1, Japan. Email: k-ito@g.ecc.u-tokyo.ac.jp

Abstract

This statement presents the author's proposition—"Let's be more conceptual!"—in response to the attempt to interpret Non-Fungible Tokens (NFTs) as contemporary art. In the context of NFTs, this opinion has the significance of finding artistry in the underlying decentralized autonomous consensus-building, and in the context of contemporary art, it has the significance of leading to the revival of early conceptual art. The second half of this statement covers the novelty and feasibility of this opinion, referring to precedents in art and engineering.

Focusing on the Novelty of Consensus Building

Due in part to recent market growth (Fig. 1), Non-Fungible Tokens (NFTs), "transferable and unique digital assets on public blockchains" [1], attract many attempts to interpret them as contemporary art. Like everything else, we can place NFTs in a variety of art contexts by focusing on their different aspects. For example, if we focus on the new medium of public blockchain, NFTs can be media (or digital, Internet) art. If we focus on the automatic image generation in several projects (e.g. *CryptoKitties* [2] and *ArtBlocks* [3]), NFTs can be generative art. Even the opinion that NFT is an emerging culture unrelated to fine art will eventually be in the pop art context.

Considering these different aspects, I believe that we should focus more on the underlying consensus-building process, i.e. the incentive mechanism of public blockchains that allows anonymous nodes to determine true on-chain transaction records in a decentralized, autonomous manner. This focus applies best because consensus-building is the novelty that distinguishes NFTs from existing digital data. Specifically, given that duplicable and programmable digital data has relied on a centralized authority (e.g. a market administrator) to ensure its provenance, consensus building—a method for breaking free from dependence—is the essential novelty through which we should find artistry.

Connecting with the Context of Conceptual Art

Next, seeking an art context to connect with this novelty, I choose (early) conceptual art, which has challenged institutional authority more explicitly than other movements.

Early conceptual art has fostered various attempts to question the role of authority in the distribution and evaluation of artworks, such as conducting a duplicable exhibition on paper (*The Xerox Book*) [4], or classifying gallery visitors by age, gender, religion, ethnicity, social class, and occupation (*Gallery-Visitor's Profile*) [5]. However, this trend did not lead to design of an alternative form of institution without authorities. For that reason, in the 1970s, many discourses on the *failure of conceptual art* were developed by those involved in conceptual art themselves; they generally pointed out that conceptual art had the potential to transform institutions but was now stuck in institutional critique within existing institutions [6]. Given this context, the consensus-building behind NFTs can be interpreted as a strong counter to the discourse of the *failure of conceptual art* (or as a revival of early conceptual art) in that it has finally designed an institution with no centralized authorities, albeit in the limited scope of distribution (i.e. transfer records).
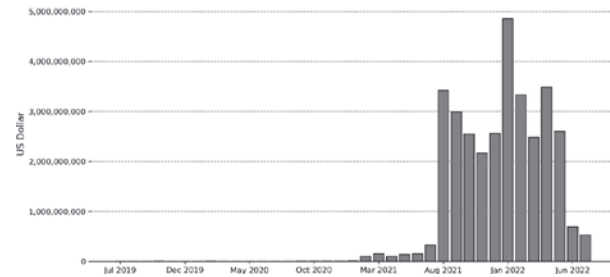

Fig. 1. Monthly Volume of NFTs in OpenSea, the world's largest NFT marketplace. (© Kensuke Ito) (Source: @rchen8 / OpenSea monthly volume, dune.xyz/queries/3469/6913, accessed 30 July 2022).

Based on the above, we may find artistry in the Bitcoin protocol [7], the first to design such consensus building, and its components (e.g. mining machine, full node). Furthermore, we could state that *one of the possibilities of NFTs as art is institutional design that extends the scope of consensus building to the evaluation of NFTs and other artworks; here, the institution (protocol) itself becomes contemporary conceptual art*. This institutional design leads to an alternative evaluation axis that is different from (but compatible with) existing ones such as market prices and reviews by art historians. The norm there might be the amount of staked tokens or citation relationships of NFTs, as discussed below.

Of the many approaches to interpreting NFTs as contemporary art, the author believes that this one—combining consensus building and conceptual art, thereby finding artistry in institutional design—is the most essential.

Precedents in Art

To the best of my knowledge, this statement is an intersection of two (interrelated) approaches in artistic precedents to NFTs and blockchains.

One approach is to create artworks while incorporating the essence of consensus building. For example, *Plantoid* [8], a series of self-replicating sculptures, incorporates blockchain-based consensus-building (and evolutionary algorithms) to determine the visual and functional features of its progeny; *The Currency* [9], an NFT project with 10,000 pieces, requires buyers to make a choice between an NFT and a corresponding physical artwork within a year. These precedents generally use consensus-building (or something like it) as one component of media art or neo-conceptual art. In contrast, this statement aims to make consensus building the core of artworks and emphasize its connection to conceptual art (hence the output becomes the institution itself, which is less visual and emotional but more decentralized and autonomous).

Another approach would be to critique NFTs, blockchains, and related artworks in the context of conceptual art. For example, as of 2014 (when the term NFT was not common), Rhea Myers analogized bitcoin and blockchain-based artworks to conceptual art, as implying a new art-money relationship [10]; Hito Steyerl, on the other hand, pointed out that the value of bitcoin, like art, comes from collusion and group power rather than decentralization [11]; Tina Rivers Ryan warned of the disconnect between NFTs and the history of conceptual, digital, and even blockchain-based arts that has explored alternative distribution models to the market [12]. These precedents are generally institutional critiques with traditional topics such as the commons and ownership, digital and physical, and publicness and capitalism. In contrast, this statement aims to

address institutional design by focusing on the novelty of consensus-building in order to revive early conceptual art (in other words, to avoid reproducing the *failure of conceptual art*) [13].

Precedents in Engineering

This statement is by no means unrealistic, according to several precedents in engineering.

First, consensus-building has already extended its scope to information outside the blockchain (e.g. election results, customer review). This extension, in applications such as prediction markets [14] and token-curated registries [15], leverages the wisdom of crowds in a decentralized autonomous manner. Consensus-building in these applications, with some variations, basically uses the following token-staking scheme: (i) users can stake any amount of tokens on either accepting or rejecting certain information; (ii) the side that collects more tokens becomes the consensus; (iii) all staked tokens are redistributed among users who chose the consensus side [16]. This scheme assumes 1 token = 1 vote.

It would be natural for the above to cover the evaluation of NFTs. For example, MUSE0 [17], a decentralized NFT collection, lets token holders vote on which NFTs to include in the collection (tokens are issued to the address that provided the NFTs for the collection); SuperRare [18], an NFT marketplace where all artists are curated by the administrator, is considering an update that allows token holders to participate in the curation process or create their own marketplaces with individual curation policies. In both examples, consensus-building adopts a norm of 1 token = 1 vote.

Furthermore, we should not overlook attempts to introduce other norms. For example, the recent trend of token graphs [19]—network structures that visualize NFT transfer/ownership records—could be applied to consensus building, such as giving more weight to the opinions of those who trade/own many NFTs. In terms of network structure, I also see potential in the citation relationship of NFTs themselves. If NFTs had citations like academic papers [20], consensus-building might reflect the expertise of (anonymous) nodes by giving weight to the opinions of those who create largely cited NFTs (just like academic peer-review).

These precedents suggest the solid feasibility of this statement, an institutional design that extends the scope of consensus-building to the evaluation of NFTs and other artworks. For example, I have consensus-building for the evaluation of intellectual products, which leverages citation relationships (as a norm) and game-theoretic reward computation [21–23]. Such a proposal can and should be interpreted in the context of art as well as engineering.

Conclusion

This statement presented the proposition "Let's be more conceptual!" in response to the attempt to interpret NFTs as contemporary art. *Conceptual* here means "an attitude to address institutional design, rather than critique or dependence." That is, "Let's understand the underlying consensus-building and extend it, not just criticize or use existing NFTs. This is obviously not easy (even though feasible) and will require time, money, knowledge, and patience to put into practice. However, I believe that art should respond to NFTs with such an ambitious attitude. Because it would surely update the context of conceptual art, and above all, not challenging it would seem to be dismissive of NFTs and their roots, the thoughts of Bitcoin developers.

References and Notes

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11. Hito Steyerl, "Is Art a Currency?," Verso books (2 April 2019): versobooks.com/blogs/3938-is-art-a-currency-hito-steyerl (accessed 14 August 2022).

12. Tina Rivers Ryan, "Token Gesture," *Artforum* (May 2021): artforum.com/print/202105/token-gesture-85475 (accessed 14 August 2022).

13. Note that this intent does not deny the concepts of commons or public goods but emphasizes the importance of institutional design for consensus-building, which is a necessary condition for their realization.

14. Justin Wolfers and Eric Zitzewitz, "Prediction markets," *Journal of Economic Perspectives* 18, No. 2, 107–126 (2004).

15. Jaspreet Kaur and B. Visveswaraiah, "A Brief Survey of Token Curated Registries," in *Emerging Technologies in Data Mining and Information Security* (Singapore: Springer, 2011) pp. 189–202.

16. Note that this token-staking scheme also presents its own problems, such as the *Keynesian beauty contest* (see Herve Moulin, *Game theory for the social sciences* [NYU Press, 1986]).

17. *MUSE0:* muse0.xyz/ (accessed 30 July 2022).

18. SuperRare Docs Hub: docs.superrare.com/ (accessed 14 August 2022).

19. Simone Casale-Brunet et al., "Networks of Ethereum Non-Fungible Tokens: A graph-based analysis of the ERC-721 ecosystem," *2021 IEEE International Conference on Blockchain (Blockchain)* (December 2021) pp. 188–195.

20. NFTs (or other artworks) with citations can be made possible by treating the attribution in CC BY-SA as a citation. CC BY-SA is one of the licenses offered by Creative Commons that allows anyone to modify and distribute intellectual products, on condition that they attach both an appropriate credit (Attribution) and the same CC BY-SA license (ShareAlike).

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