Regaining the Technological Competitive Advantage by Supporting NFT Self-Governance

Hugh Harsono

The governmental response to how art-based non-fungible tokens (NFTs) are regulated will be a potential turning point for participants in strategic competition over emerging technologies. These responses will provide innovators with insight into governmental acceptance of the overall NFT ecosystem—and emerging technologies in general. The ability for a country to incentivize technological innovation within its borders will be critical for driving political, economic, and social growth for that country, enabling it with greater potential as an innovation hub. Some countries have already highlighted their views on disabling free-market growth of Web 3.0-at-large within their borders through the use-case of cryptocurrencies. China, Bangladesh, and Qatar are among a group of countries that have already banned digital currency usage by restricting their populations' abilities to handle cryptocurrencies through traditional financial institutions, such as banks. The response to how NFTs are governed will offer a crucial secondary data point into nation-state decision-making that either embraces

Hugh Harsono *writes regularly for multiple publications such as the* South China Morning Pos*t and* The Diplomat*, on topics of cyberspace, economics, foreign affairs, and technology. His research interests include blockchain, digital currencies, and emerging technologies' impact on international security, technology policy, and strategic competition. Hugh is currently completing a Master of Business Administration (MBA) at the Haas School of Business at the University of California, Berkeley. He also completed his Bachelor of Arts (BA) at the University of California, Berkeley, where he studied economics. He has worked for Ripple, an American technology company, where he focused on central bank digital currencies (CBDCs), and has previously served in the 1t Special Forces Group (Airborne) of the United States Army.*

or shies away from emerging technologies and can therefore potentially shift the balance of world power in the digital arena.

INTRODUCTION

Non-fungible tokens, also known as NFTs, are unique digital assets that have a variety of enterprise level applications. NFTs have been applied to create COVID-19 vaccine passports,[1] one-of-a-kind gaming objects, and even blockchain-enabled event tickets.[2] Many of the applications of NFTs focus on their capabilities to prove undisputed ownership over a specific item, with provenance being one of the most disputed aspects for high-value collectable items such as sports memorabilia and other types of sought-after rarities.

The rise of art-based NFTs, which can be defined as literally anything with artistic value that accompanies a blockchain-enabled digital certificate of ownership and authenticity, presents an interesting conundrum for regulators. While the art itself is not a regulated industry, the unethical nature of many art-based NFT projects raises questions for governments, enterprises, and ecosystem participants alike. Understanding the difference between art-based NFTs that have an artistic value, in contrast to schemes like commonplace pump-and-dump NFTs, must be held as a top priority for the art-based NFT industry. The example of pump-and-dump schemes in the art-based NFT world is directly modeled after pump-and-dump fraud in traditional securities, where stock prices are artificially inflated through misleading positive statements, thereby enabling select insiders to sell these previously-purchased inexpensive stocks at a higher price for financial gain. In this respect, enabling the occurrence of industry self-governance to protect the art-based NFT world and other emerging technologies, should be a priority that top NFT producers should increasingly consider implementing as part of their regulatory frameworks.

Governments' responses to NFTs—specifically art-based NFTs—through different acts of legislation will have significant primary and secondary effects on participants within the strategic competition ecosystem. The ability for a country to incentivize technological innovation within its borders will be important for driving political, economic, and social growth, and will enable that country to have more potential as an innovation hub. Some countries have already highlighted their stance on enabling free-market growth through the future of technological innovation and Web 3.0-at-large within their borders through their legislation on cryptocurrencies. China, Bangladesh, and Qatar are among a group of

countries that have already banned digital currency usage by restricting their populations' abilities to handle cryptocurrencies through traditional financial institutions such as banks.[3] The response to how art-based NFTs are governed offers a crucial secondary data point into the United States' decision to either embrace or shy away from emerging technologies, which can potentially shift the balance of world power in the digital future.

STRATEGIC COMPETITION

The United States' lead in technological innovation as part of the strategic competition has declined significantly in the past several decades. Artificial Intelligence (AI) related research and development (R&D) presents an excellent example of how, when it comes to innovation, American firms are falling behind their Chinese peers, with individuals and organizations in China spearheading a 34.5 percent increase from 2019 to 2020 in AI-related research publications[4] With China also being the current leader in terms of AI patent filing in the world.[5] In contrast, research into the top fifty global defense companies, the majority of which are American, revealed that only 11 out of the 50 have pursued AI development and have acquired six AI-focused entities from 2013 to 2020.[6]

The lack of emphasis on AI development in America when compared to China's tremendous rise in the space demonstrates an alarming lack of technological growth in the United States. As such, the American government needs an innovative way to incentivize development to regain the technological competitive advantage within the realm of strategic competition. Having a self-governance approach to the art-based NFT market provides the United States with this opportunity, incentivizing technology futurists to develop their products within the United States' borders owing to more favorable conditions for R&D and future profits in the long-term.

THE DYNAMIC WORLD OF ART-BASED NFTS

Ensuring the value of art-based NFTs is something that can best be defined as a proverbial regulatory minefield. On one hand, governments have little place in determining what the definition and value of art are, particularly given commonly held fundamental ideals of freedom of speech, freedom of expression, and the intangible value of art itself. On the other hand, private companies are incentivized to sell NFTs regardless of their actual value, with many organizations eager to participate in an ecosystem generating some $25 billion dollars of sales in 2021.[7]

However, protecting the validity of art-based NFT projects with true value and utility, in contrast to art projects that are clearly digital cash grabs, is critical to protecting the NFT industry as a whole. The confusing nature of the myriad different NFT projects in existence makes it easy to dismiss the entire NFT and Web 3.0 ecosystem, with many individuals fearful of falling victim to the growing number of NFT-related scams.[8] Gaining mainstream legitimacy is critical for a burgeoning and emerging art-based NFT market. Failure to achieve credibility, given governance concerns, could cause a major blow to further NFT adoption by the global community.

While some companies selectively target short-term profits to capitalize on the skyrocketing interest in NFTs, the long-term benefit to ensuring the validity of art-based NFT projects presents an opportunity for even greater financial gain, thereby forcing companies to give self-governance significant consideration. While the free market does dictate the value of these unique items, thought must be given to the potential utilization of mechanisms, such as algorithmic-enabled price labeling. An example of this might be tagging a specific art-based NFT in a trading ecosystem, if that NFT is undergoing regular occurrences of price increases at multiple standard deviations away from sector growth in that ecosystem. In this case, individual actors could still transact for that item, but with the additional information, signaling the market's recognition that such price fluctuations are atypical when compared to the rest of the industry. While this method may result in loud discontent from naysayers, chief among them pure NFT maximalists, the ability to self-govern such a market would be a positive factor to drive widespread NFT adoption.

Some art-based NFT ecosystem participants are beginning to recognize that self-governance is needed in a community where fraudulent schemes run rampant. This is where decentralized autonomous organizations (DAOs) can play a critical role. A DAO is a transparent community that emphasizes bottom-up decision-making in contrast to having a centralized authority, with DAOs being organized around a specific set of rules enforced on a blockchain.[9] DAOs help to ensure automated consensus-based governance while providing the resources to ensure irrevocable decision-making. CXIP, one of the largest NFT minting software companies for creators and marketplaces, established its self-titled CXIP DAO in November 2021[10] to tackle three issues within the marketplace: "royalties, creator-owned smart contracts, and permanence." In this case, self-regulation is conducted through supporting emerging technologies such as smart contracts, enabling creators to vote on proposed features, and those features being implemented in an immutable manner.

CHALLENGES AND POTENTIAL SOLUTIONS TO THE PUBLIC SECTOR ENABLING PRIVATE INNOVATION

Establishing a framework for private enterprises to govern themselves could help incentivize innovation in the United States. Developers and innovators see the United States as a technological land of opportunity due to this potentially demonstrated capacity to work with, rather than against, dynamic companies.[11] However, ensuring that private companies are incentivized to do what is in the best interest of the consumer, in contrast to targeting profitability, can lead to a variety of challenges. Three specific use-cases can be seen through the current global, regional, and local discussions over misinformation, data privacy, and celebrity endorsements.

Some individuals may posit that there is no need for self-governance by the art-based NFT industry. These same individuals may argue that unethical, and perhaps even illegal behavior is simply reflective of a free-market enterprise. While these individuals may be correct to a certain extent, the fact remains that the threat of bad actors, whether that be in misinformation, data privacy, or celebrity endorsements, have the potential to harm entire industries in the case of long-term adoption. Therefore, it is in the best interests of the art-based NFT industry to pursue self-regulation to not only ensure legitimacy, but also to ensure the proper execution of consumer protections in an ethical, yet profitable, manner.

Self-Governance and Misinformation

Misinformation governance, particularly delineating between individual freedom of expression and false information being propagated by entities and/or threat actors, is one issue that has challenged public-sector regulators since its first widespread appearance through alleged Russian interference in 2016 presidential elections in the United States. A developing example of this is Singapore's Protection from Online Falsehoods and Manipulation Bill (POFMA), a piece of legislation designed to counter the spread of fake news and false information. POFMA currently faces significant criticism from local and international organizations due to the strong potential of censorship in conjunction with totalitarianism behaviors that could be executed by the Singapore government under POFMA. While POFMA does place the authority of fact-checking information on the government, a similar piece of legislation enacted in other countries would simply be unfeasible to sustain, particularly due to the prevalence of social media applications in the digital age today.

American regulators' support of industry self-governance regarding misinformation or wrong information in the case of art-based NFTs might take form in the NFT industry by weeding out or identifying such information on a cross-platform basis. Public regulators could create a framework to incentive private companies to weed out this information. This would help private platforms to gain increasing legitimacy and potential financial gain. One example could be in the highlighting and potential removal of specific art-based NFTs from marketplaces if the entities selling said art-based NFTs were deemed to be threat actors. This could help identify instances of "wash trading," where groups of fraudsters trade a fraudulent NFT between themselves for an increasingly higher price until an outsider purchases the NFT, believing it to be the legitimate item.[12] The benefit to both public and private enterprises in protecting the consumer would ensure greater long-term growth for both entities, enabling better opportunities for all.

Data Privacy and Self-Governance

Another example where self-governance remains highly prevalent in everyday life is that of data privacy. Some public organizations have taken a hardline stance on attempting to ensure consumer data privacy, with a primary example being the European Union's General Data Protection Regulation (GDPR). The GDPR aims to enhance individual consumers' rights over their data, while directly regulating enterprises entrusted with this same information. However, the GDPR has only achieved mixed success in its goals, with opaque enforcement rules, and insufficient "consistency mechanism" designed to be applied throughout the EU's 27 different countries, and disparate differences in resources between GDPR regulators and technology enterprises challenging the effective implementation of the GDPR itself.[13] In the case of the GDPR, the question remains: how can governments effectively mandate compliance with ensuring consumer data privacy, particularly if this data is the key to private enterprise profits?

Self-governance offers a potential solution to this problem, with one approach being the use of GDPR as a base framework for private companies to self-regulate data, allowing companies to introduce their controls on behavior and usage before the introduction of problematic government regulations like the GDPR, which many see as an ineffective legislative enforcement tool abhorred by public and private entities alike. Allowing companies to enforce previously industry-developed and agreed-upon standards while under the watchful eye of a public entity could set a precedent

for both data privacy organizations and the art-based NFT industry. In this case, a DAO could help provide transparency to data ownership on art-based NFT platforms, automating the destruction of unused data in a manner capable of being seen by individual consumers and regulators alike. Additional protections, such as automated compliance reporting mechanisms could also be built into this solution, further helping governments address Anti-Money Laundering/Know Your Customer (AML/KYC) concerns, a well-known issue given the potentiality of money laundering in the art-based NFT space.[14]

Celebrity Endorsements and Consumer Protections

One last use case highlighting the need for industry self-governance within the digital world is that of celebrity endorsements. While a seemingly light-hearted issue when compared to misinformation and data privacy, industry self-regulation of celebrity endorsements is an issue that needs desperate addressing, particularly due to the increasing prevalence of social media influencers and their large followings. The commonplace nature of "pump-and-dump schemes" in the digital world is reaching new heights every day, with one example being the since-failed EthereumMAX (EMAX) cryptocurrency. A January 2022 lawsuit alleges that influencers such as Kim Kardashian, Floyd Mayweather, and former Boston Celtics star Paul Pierce violated California's Unfair Competition Law by promoting the cryptocurrency which has since lost most of its value.[15] This law bans "any unlawful, unfair, or fraudulent business act or practice," with EMAX's rise and fall mimicking behavior akin to pump-and-dump scams. While some states do have laws aimed at preventing harm to consumers, federal legislation offering similar protections is relatively limited and nascent, necessitating private companies to come together and self-regulate bad actors to prevent such organizations from wreaking havoc on ecosystems.

The need for art-based NFTs to self-regulate these celebrity endorsements is also apparent given art-based NFTs' popularity with social media personalities. These personalities have been able to leverage their followings to contribute to scalable pump-and-dump scams, affecting the legitimacy of the entire art-based NFT industry. Popular NFTs, such as CryptoPunks, are not exempt from this type of behavior, with social media influencers such as Gary Vaynerchuk, Logan Paul, Jimmy Donaldson (MrBeast), and others openly admitting to market manipulation of CryptoPunks through direct collusion in conjunction with exploitation of their respective social media followings.[16] The need to regulate this type of behavior to protect

consumers is something that the art-based NFT industry must realize and could take place through the removal of these bad actors by the NFT industry itself. Preventing such openly fraudulent behavior will be crucial for the art-based NFT industry to achieve mainstream popularity, particularly in the face of limited government regulation. It must be noted that in the traditional securities market, such behavior would warrant judicial action by regulatory organizations like the Securities and Exchange Commission, with such actions in the art-based NFT world generally being ignored due to a lack of government clarity on NFTs.

The example of the art-based NFT industry highlights that there is an increasing divide between public sector regulation and private innovation. Increasingly prevalent issues such as misinformation, data privacy, and controversy over celebrity endorsements highlight the inability of governments to take action but provides significant chances for private enterprises to self-regulate. This, in turn, presents significant opportunities for countries such as the United States that are involved in a strategic competition to regain their former lead in technological innovation. If the United States chooses to enable industries to self-regulate, developers and innovators may seek to grow their technologies within the United States, incentivizing growth in emerging technologies that other countries have already identified outright bans against.

UNDERSTANDING THE NEED FOR SELF-GOVERNANCE FROM THE PRIVATE SECTOR

Achieving mainstream credibility is critical for emerging technologies that desire to be implemented within the fabric of society. This need for self-governance opens significant opportunities for both enterprises and individuals to provide industry leadership in public and private sectors, with some private organizations supporting governance in these spaces in conjunction with public regulator efforts. In parallel to leaders of the art-based NFT market, key leaders in the cryptocurrency market have recognized a distinct need to self-regulate, with the Crypto Market Integrity Coalition (CMIC) formed in February 2022.[17] CMIC brings together companies including Solidus Labs, Coinbase, Huobi, and Bitmex in combating market manipulation and abuse within the cryptocurrency world, a move made necessary given the proliferation of failed cryptocurrencies with zero intrinsic value.[18] CMIC demonstrates a clear understanding of emerging technology industry's identification of the need to self-govern in light of governments' more cumbersome path to do so themselves.

Therefore, understanding the benefits of bilateral partnerships between public and private entities to implement emerging technologies is critical for both parties. Utilizing self-governance to help highlight the openness for cooperation is critical for strategic competition participants, enabling countries with this understanding to foster better growth and innovation in these future technologies.

CONCLUSION

While DAOs and other self-governance tools have their issues, the fact remains that some form of governance is needed to reign in the rampant abuse and exploitation of emerging technologies seen in the world today. In the case of art-based NFTs, governments can advocate for increased consumer education only to a certain point, however, given the intangible nature of art-based NFTs, it makes it difficult for governments to regulate this market in the first place. This problem is further compounded by the significant differences in pace between technological innovation and government regulation, with digital assets like cryptocurrencies and their constant evolution far outpacing government legislation to regulate, and at an even lower level, define, such digital assets.

At the same time, governments must begin to understand that enabling innovation and growth with limited public barriers to entry has the potential to kickstart emerging technology research and development efforts. The age of Web 3.0 has highlighted that first-mover advantages to incentivizing domestic technological growth can do wonders to drive corresponding innovations across different technology industries. With this in mind, emerging technologies that find a method of self-governance in the absence or with the direct support of government legislation will achieve mainstream popularity, with this demonstration of accountability affording these enterprises increased legitimacy on behalf of their industry and technology. This approach to consumer advocacy and protection enables bridging of the public-private enterprise divide, enhancing cooperation for successful technology implementation, and harnessing of technology for greater growth in the present and future. ***f***

ENDNOTES

1 Joel Mark Harris, "Are NFTs the future of vaccine passports?" *NYFTX*, October 4, 2021, https://nyftx.com/are-nfts-the-future-of-vaccine-passports.

2 Rachel Wolfson, "Showtime: NFT tickets take the stage in 2022, connecting artists and fans," *CoinTelegraph*, January 19, 2022, https://cointelegraph.com/news/showtime-nft-tickets-take-the-stage-in-2022-connecting-artists-and-fans.

3 Marco Quiroz-Gutierrez, "Crypto is fully banned in China and 8 other countries," *Fortune*, January 4, 2022, https://fortune.com/2022/01/04/crypto-banned-china-other-countries.
4 James Vincent, "Artificial intelligence research continues to grow as China overtakes US in AI journal citations," *The Verge,* March 3, 2021, https://www.theverge.com/2021/3/3/22310840/ai-research-global-growth-china-us-paper-citations-index-report-2020.
5 "China Leads the World in AI Related Patent Filing," *World Intellectual Property Organization*, September 28, 2021, www.wipo.int/about-wipo/en/offices/china/news/2021/news_0037.html.
6 Tom Temin, "How the defense industry is playing catch-up in artificial intelligence," November 12, 2021, in *Federal Drive,* MP3 audio, www.federalnewsnetwork.com/artificial-intelligence/2021/11/how-the-defense-industry-is-playing-catch-up-in-artificial-intelligence/.
7 Elizabeth Howcroft, "NFT sales hit $25 billion in 2021, but growth shows signs of slowing," *Reuters*, January 11, 2022, www.reuters.com/markets/europe/nft-sales-hit-25-billion-2021-growth-shows-signs-slowing-2022-01-10/.
8 Samantha Hissong, "NFT Scams are Everywhere. Here's How to Avoid Them," *Rolling Stone Magazine*, January 24, 2022, www.rollingstone.com/culture/culture-features/nft-crypto-scams-how-to-not-get-scammed-1286614/.
9 Nathan Reiff, "Decentralized Autonomous Organization (DAO)," *Investopedia*, last modified September 24, 2021, www.investopedia.com/tech/what-dao.
10 Mark Westall, "CXIP Announces DAO for Creators to Govern and Oversee the Future of NFT Technology," *FAD Magazine*, November 19, 2021, www.fadmagazine.com/2021/11/19/cxip-announces-dao-for-creators-to-%E2%80%8Bgovern-and-oversee-the-future-of-nft-technology.
11 Mir Sadat, "Why innovation is so important to America's global leadership," *The Hill*, November 22, 2020, https://thehill.com/opinion/technology/526535-why-innovation-is-so-important-to-americas-global-leadership/.
12 David Birch, "NFTs: New Fraud Targets," *Forbes*, February 20, 2022, www.forbes.com/sites/davidbirch/2022/02/20/nfts-new-fraud-targets/?sh=6a9d8c7a4f37.
13 Ilse Heine, "3 Years Later: An Analysis of GDPR Enforcement," *Center for Strategic and International Studies*, September 13, 2021, www.csis.org/blogs/strategic-technologies-blog/3-years-later-analysis-gdpr-enforcement.
14 Allison Owen and Isabella Chase, "NFTs: A New Frontier for Money Laundering," *Royal United Services Institute*, December 2, 2021, www.rusi.org/explore-our-research/publications/commentary/nfts-new-frontier-money-laundering.
15 Samantha Hissong, "Kim Kardashian and Floyd Mayweather Sued For Allegedly Promoting Crypto Scam," *Rolling Stone Magazine*, January 11, 2022, www.rollingstone.com/culture/culture-news/kim-kardashian-floyd-mayweather-ethereummax-emax-nft-scheme-1282801.
16 Pleddit, "MrBeast reveals that Gary Vee is responsible for pumping CryptoPunks," YouTube video, September 13, 2021, www.youtube.com/watch?v=cA7RlcvYcCA.
17 Michael Bellusci, "Leading Digital Exchanges Launch Crypto Market Integrity Coalition," *CoinDesk*, February 7, 2022, www.coindesk.com/business/2022/02/07/leading-digital-exchanges-announce-launch-of-crypto-market-integrity-coalition/.
18 Jay Jackson, "What are shitcoins," *Finder*, last modified July 2021, www.finder.com/shitcoins.