

Aaron Doerfler

Professor Atle Kjosén

MIT 3216 The Culture of Consumption

April 21, 2021

### Non-Fungible Tokens, NBA Top Shot, and the Future of Material Culture:

A non-fungible token (NFT) is a ‘one-of-a-kind’ unit of data on a digital ledger called a blockchain that each represents a unique asset and has no tangible form (BBC News). The National Basketball Association (NBA) created a digital service called “NBA Top Shot” where users can own NBA highlights through buying packs and then either add them to their collection or sell them on the marketplace for a profit. To what extent do non-fungible token services like NBA Top Shot create a de-materialized culture, and shape the future of digital consumption in modern society? I first briefly introduce the rise of e-commerce from the shopping mall as presented by Rao, and then explore the relationship between online shopping and material culture as presented by Lehdonvirta. I then discuss how blockchain and non-fungible tokens are challenging traditional forms of material culture, and finally, I use this framework to explore and analyze NBA Top Shot and determine its impact on the future of consumption.

To begin, Fujie Rao discusses the impact of e-commerce on the retail industry. Rao states that two main changes have occurred from the rise of online retailing, “first, the rise of online retailing stimulates a diverse range of novel material shopping space... Second, the boundary between the material and digital shopping space increasingly blurs” (Rao 3). At one point in time, the shopping mall was the backbone of the economy. Cities built highways, housing, and community centers all close to consumer spaces, creating the easiest access possible for

consumption. However, as Rao emphasizes, online retailing has created a new kind of shopping space. For example, he uses the example of the *Sofitel* hotel (3), where they use their rooms as ‘showrooms’ where people can then buy the products they used during their stay, online. Plus, Rao emphasizes the blurriness of the line between material and digital shopping space (3). With both a brick and mortar location and online website, patrons can browse online, try on in-store, and then purchase online. As a result, it seems that material culture has created a hybrid form of shopping experience for the consumer to enjoy.

Furthermore, Vili Lehdonvirta defines the role of material culture in society and states that “material objects enter material culture when they are given a meaning... It has been argued that we are today living in a consumer culture: a particular form of material culture, where consumption is highly separated from production, and has become a primary means of participation in society” (884). Lehdonvirta emphasizes that consumption is the gateway to participation in society. Without consumption, people would be left to grow or make essential goods, like food and shelter, which in the current state of the economy is near impossible unless you have a lot of money. He also provides a concrete definition of material culture, stating that material objects are given meaning when they enter material culture (884). This reveals that objects can only be given meaning in material culture. Within this physical material culture, consumption takes the role of participation and henceforth is used to show status. In many ways, material culture shapes the perception of oneself and is emphasized by the elite as the solution to many problems.

However, Lehdonvirta argues that a rise in digital culture has not created non-materialized culture, but instead has perpetuated material culture further. He writes that

“beliefs and practices cannot be described as non-material culture, because they involve assigning cultural meanings to tangible features of digital architecture... After all, virtual spaces are not incorporeal dream worlds, but real artefacts that are experienced through the senses. Parts of these artefacts enter material culture as people appropriate them for different uses, functional and symbolic” (Lehdonvirta 886).

In other words, the objects, real or imagined, that people consume online have a certain meaning in material culture. They exist within the digital space, but some have real monetary value, which for Lehdonvirta, means that they exhibit a new form of material culture. For example, something virtual like video games has monetary value. One buys it from the store for \$79.99, but even beyond that, they can transfer real currency for digital currency to buy in-game items. The in-game clothing is not tangible and is bought with virtual money. But since virtual money is converted from real money, it has a value in material culture and thus represents a form of material culture according to Lehdonvirta.

On the other hand, how do we value something that has no material form? The blockchain, the technology behind cryptocurrencies is a solution. Wessel Reijers and Mark Coeckelbergh define blockchain

“as a public digital ledger (a book of accounts) that contains all the transactions made within its system. ‘Blocks’ are digital, time-stamped records containing the most recent transactions that are cryptographically signed and added to the blockchain in a designated sequence, in a linear, chronological manner” (106).

After a transaction is reported, the ‘miners’<sup>1</sup> validate it and add it to the public blockchain which means that the same object cannot be recorded twice. In short, the blockchain turns digital assets into unique, and so-called common public goods. It introduces a new financial asset where that is also disassociated with a traditional currency.

---

<sup>1</sup> Bitcoin miners are auditors. They are verifying the legitimacy of the coins in an attempt to keep Bitcoin honest. Essentially, they check transactions to ensure no user has illegitimately tried to spend the same coin twice.

Correspondingly, Reijers and Coeckelbergh argue that abstract money technologies like blockchain have a positive impact on emancipating and empowering people. They emphasize that

“technologies like cryptocurrencies become a guarantee for people's inclusion in the realm of economic exchange, regardless of their personal, racial or cultural background and status. This ties in with the promise of decentralisation that is configured by the blockchain. Decentralisation of a currency entails a ‘de-personalisation’ of power: the technology makes it difficult for single human agents to subject others to their will within the system” (126).

Reijers and Coeckelbergh raise a good argument here. The ability of people to have no overarching government that controls the power of centralization is creating a new economy.<sup>2</sup> Sure, people can transfer Canadian or American dollars to Bitcoin, but once that money is transferred, it becomes virtual. It, and the transaction, exist within the digital ledger space.

Similarly, Jim Euchner discusses blockchain, the internet of value, and the next internet revolution with Don Tapscott. Tapscott agrees with both Lehdonvirta and Reijers and Coeckelbergh regarding the impact of the internet on the economy when he says that

“With blockchain, we are talking about the potential for major shifts in the economy and economic models. The Internet didn't fundamentally change business--it just repackaged existing processes in a digital wrapper... With future applications of blockchain, the changes will be very profound at an economic level, not just at an information level” (Euchner and Tapscott 13).

Similar to the argument made by Lehdonvirta, Tapscott emphasizes that the internet did not fundamentally change business, or in other words, material culture. With the internet, the value proposition has not changed. It reveals that the Blockchain is arguably a method by which the entire economic underpinning of society could be changed. However, there is not a lot of

---

<sup>2</sup> Some other scholars have disputed the claim that bitcoin is decentralized.

successful blockchain technology beyond smart contracts. It means that people will still have to work for a living, but blockchain use could still grow beyond cryptocurrencies.

Additionally, Euchner asks Tapscott to articulate how blockchain will change the fundamental make-up of an organization. Tapscott states that

“Blockchain has the potential to devastate... transaction costs... You used to have to go to banks and venture capitalists and do an IPO; now you can do an ICO (Initial Coin Offering), without banks and other financial intermediaries. ICOs have gone from \$165 million in 2016 to \$6 billion last year, and they will be close to \$20 billion this year [2019]” (14).

Similar to the points being made by Reijers and Coeckelbergh, Tapscott reveals how Blockchain could overthrow the traditional economic construction of modern society. The reduction of costs inevitably empowers them. This new form of consumption allows one to buy material objects or services with a decentralized value system that has no real material form. It begs the question, how does this impact material culture?

Fast forward to 2021, and a new form of digital product has arrived: the non-fungible token. As mentioned in the introduction, a non-fungible token is a ‘one-of-a-kind’ unit of data on a digital ledger called a blockchain that each represents a unique asset and has no tangible form (BBC News). From an economics standpoint, something that is fungible can be interchanged, for example, money (BBC News). In contrast, if something is non-fungible, it cannot be interchanged and it has some sort of unique property that makes it that way. For example, a painting from a famous artist like Picasso who has an original painting is a form of non-fungible asset. What the NFT does is tokenize these digital pieces of art to create digital ownership and make them purchasable at various prices (BBC News). This is where the blockchain comes in. It keeps track of who owns the NFT on a digital ledger to ensure there are no duplicates and can be smart contracts that can send the profit to the original artist on any future sale of the token (BBC

News). It raises an interesting question about material culture. In the last two sections, I relied on Lehdonvirta, and Euchner and Tapscott to emphasize how the blockchain can be used to purchase material objects. But now, people can buy non-fungible tokens, that have no real concrete form on a blockchain. The whole idea behind an NFT is that it is a scarcity or a one-of-a-kind, it is almost astonishing considering someone could easily find an image similar on the internet for free.

Putting it differently, Martin Zeilinger explores the impact of blockchain technologies on digital art compensation and copyright. He states that immaterial art objects,

“if their reproduction and circulation cannot be efficiently controlled, may not be seen as valuable investments by gallerists and art collectors. By promising to stabilise the digital artefact itself, blockchain-based technologies seem to offer a fix for this issue, which has been described as contemporary digital art’s most pressing problem” (Zeilinger 24).

Zeilinger frames blockchain as solving a major problem with current digital art reproduction and circulation. With non-fungible tokens, this problem is eradicated through the use of the digital ledger to create a serial number that makes said item unique. In terms of consumption, people are buying these digital artworks for millions of dollars but not being able to hold a tangible item. In a few years down the line, it will be interesting to see how these are displayed as a sort of status. For example, when someone has an expensive painting, they most often want to display it for everyone to see. But with an NFT, that is not entirely possible since it has no material form. Usually, artworks are purchased to display wealth or status, but with nothing to physically show for that, it takes away the charm of owning a painting to a certain extent.

To illustrate this further, let’s explore a recent sports phenomenon: NBA Top Shot. An online marketplace, NBA Top Shot lets basketball fans from around the world trade and collect official NBA licensed highlights, or what they call “moments” (Levin). It was created by a

company called Dapper Labs in partnership with the NBA and the National Basketball Association Players Association. It has gained popularity quickly, with over \$100 million in sales during the last week of February 2021 (Levin). What happens is the user will make an account on Top Shot, and then they can open “packs” containing NBA moments. This perfectly replicates traditional trading card packs that someone would buy from a store. Each highlight has a serial number and a different kind of rarity from common to legendary, and the legendary moments come with a high price tag. For example, on Monday, February 22<sup>nd</sup>, 2021, a LeBron James dunk sold for a whopping \$208,000 (Levin). Basketball fans are paying for NBA moments that cost one-fifth of a million dollars... for something that does not have any material form whatsoever. How is it so popular?

In effect, NBA Top Shot has capitalized off of one of the rising collectible industries in the world: trading cards. For example, traditional sports cards are in the midst of a boom with several going for record prices recently, including a Wayne Gretzky rookie card that was sold for \$1.29 million (Campigotto). But NBA Top Shot has made it even easier. Usually, with trading cards, they have to be near mint condition to be worth a large amount of money, but with something that has no material form, it has no real way to get damaged. Another thing to consider is that a lot of these moments exist on sites like YouTube for free. For example, one can easily search up the buzzer-beater Kawhi Leonard made against the Philadelphia 76ers in the 2019 NBA playoffs. What is even more strange is the NBA allows their content to be used in videos on YouTube for free, whereas other leagues like the National Hockey League claim content as copywritten. In a way, the NBA is almost reverting from that claim by making fans pay for these “moments”. Non-fungible tokens are framed as being originals, like artwork from an artist that is a one-of-a-kind piece. NBA Top Shot has tried to emulate that by giving each

moment a serial code that makes it unique and determines the value of the moment. In a way, it has created value out of these moments and acted as a way for people to scale and make more money. For example, one could obtain a rare moment from a pack and re-sell it for a profit higher than what they paid for it. NBA Top Shot has created a whole new type of consumption, but is this creating a new form of de-materialized culture?

It is hard to say. Blockchain at its core represents something that has no material form. However, it can be used to buy real material objects, or as we have seen with NFT's, non-material objects. In a world that is increasingly going digital, it will be interesting to see where this phenomenon goes in the next few years. But with professional athletes like Toronto Maple Leafs forward Auston Matthews selling NFT's, it seems like it is here to stay. What impact will this have on how society consumes? To a greater extent, how will blockchain continue to decentralize the economy and create a whole new space for consumption? One thing is for certain: consumption, digital or material, will always represent status, and it just becomes a matter of where and how it exists.



## Works Cited

- BBC News. "What Are NFTs and Why Are Some Worth Millions?" *BBC News*, BBC, 12 Mar. 2021, [www.bbc.com/news/technology-56371912](http://www.bbc.com/news/technology-56371912).
- Campigotto, Jesse. "Why NBA Top Shot Is Having a Moment." *CBC News*, CBC/Radio Canada, 26 Feb. 2021, [www.cbc.ca/sports/basketball/nba/the-buzzer-nba-top-shot-1.5930166](http://www.cbc.ca/sports/basketball/nba/the-buzzer-nba-top-shot-1.5930166).
- Lehdonvirta, Vili. "Online Spaces Have Material Culture: Goodbye to Digital Post-Materialism and Hello to Virtual Consumption." *Media, Culture & Society*, vol. 32, no. 5, 7 Sept. 2010, pp. 883–889., doi:10.1177/0163443710378559.
- Levin, Tim. "Collectors Are Spending Millions of Dollars Every Day on Virtual NBA Highlights. Here's What to Know about NBA Top Shot." *Business Insider*, Business Insider, 25 Feb. 2021, [www.businessinsider.com/nba-top-shot-virtual-highlights-for-sale-moments-blockchain-explained-2021-2](http://www.businessinsider.com/nba-top-shot-virtual-highlights-for-sale-moments-blockchain-explained-2021-2).
- Rao, Fujie. "Unravelling Material/Digital Shopping Space: An Assemblage Approach." *Geography Compass*, vol. 14, no. 11, 24 Aug. 2020, doi:10.1111/gec3.12539.
- Reijers, Wessel, and Mark Coeckelbergh. "The Blockchain as a Narrative Technology: Investigating the Social Ontology and Normative Configurations of Cryptocurrencies." *Philosophy & Technology*, vol. 31, no. 1, Mar. 2018, pp. 103–130., doi:10.1007/s13347-016-0239-x.
- Tapscott, Don, and Jim Euchner. "Blockchain and the Internet of Value." *Research-Technology Management*, vol. 62, no. 1, 2 Feb. 2019, pp. 12–19., doi:10.1080/08956308.2019.1541711.

The Economist. "What's Wrong with This Picture? Non-Fungible Tokens." *Gale Academic OneFile*, Economist Intelligence Unit N.A. Incorporated, 20 Mar. 2021, go-gale-com.proxy1.lib.uwo.ca/ps/i.do?p=AONE&u=lond95336&id=GALE%7CA655445011&v=2.1&it=r.

Zeilinger, Martin. "Digital Art as 'Monetised Graphics': Enforcing Intellectual Property on the Blockchain." *Philosophy & Technology*, vol. 31, no. 1, Mar. 2018, pp. 15–41., doi:10.1007/s13347-016-0243-1.