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Gamers' Reaction to the Use of NFT in AAA Video Games

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Abstract

The use of non-fungible tokens (NFTs) in AAA games is a very controversial topic, which leads to negative reactions from the gamer community. The objective of this article is to relate some of these cases that presented visibility in the press and to analyze the reactions this theme generates. To achieve this, we present some cases that had more relevance in the specialized press and, in the sequence, we present a discussion about the main problems pointed out, such as the state of the art of blockchains, energy efficiency, frauds, and currency evasions. Finally, we present some hypotheses to glimpse how NFTs, and their use in games, may happen in the near future.

Keywords: Non-Fungible Token (NFT); blockchain; games; user; feedback.

1. Introduction

Technology and the video game industry have been partners for a long time. Certain technologies gain popularity and visibility when applied to video games, and their use then increases in importance in other areas, as was the case

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with virtual reality. At other times, the opposite happens, with a certain technology gaining momentum in other fields and its use in the context of video games being subsequently explored. The latter is the case for blockchain technology, which could be regarded as “a public ledger and all committed transactions are stored in a list of blocks” [1], which gained notoriety for being the foundation of the digital currency bitcoin. Beyond the initial application supporting digital cryptocurrency transactions, the potential of blockchain technology quickly started to be explored and researchers found that it can be applied to a wide range of fields. A systematic literature review made by [2] resulted in the classification of blockchain-based applications in some main domains: Financial, Integrity Verification, Governance, Internet of Things, Health, Privacy and Security, Business and Industry, Education, and Data Management. The evolution of blockchain technology and the development of new platforms enabled the integration of smart contracts, a self-executing computer code stored across a blockchain network, containing “the terms of the agreement between interested parties”, aiming to “facilitate, verify, or enforce the negotiation or performance of a contract” [1]. The characteristics of these smart contracts allowed the storage of a type of digital assets, unique, not exchangeable, and with proof of ownership, called non-fungible tokens (NFT). NFTs are “digital assets that are representative of physical or digital creative work or intellectual property including music, digital art, games, gifs, video clips and more” [3], and where is it possible to trace the origin and know “who owns, previously owned, and created the NFT, as well as which of the many copies is the original” [4]. As can be seen, the scope of applicability of blockchains, in general, and of NFTs, in particular, is quite comprehensive, more and more attention is being given to their use and, of course, video games are no exception. In this article, we see how this technology is being applied in the context of games and we try to understand the perspective of different stakeholders, with special attention to player feedback. Companies are experimenting, or considering, using NFT in their products. But the public's reaction has not been the best and the pressure on social media has led to the cancellation of some projects, postponing their bet on the NFTs. Even the company's employees are critical of the technology and disagreements arise between studios and publishers. There is no consensus regarding the adoption of NFT in games, and it is noticeable a duality of opinions between players, companies and designers.

In the next sessions of this paper, we begin looking at how video game companies are trying to use NFTs in their games, what the players think about that and to what extent that community reaction impacts companies' plans as well as the point of view of some game designers and artists (session 2). Then, we peek at the technology involved in blockchain games (session 3) and analyze the truths and prejudices of the most common problems presented by the players, most of them related to environmental, legal and economic areas (session 4). To conclude, we make an appreciation of the current reality of the use of NFTs in games and what their future could be (session 5).

2. Attempts to implement NFTs and player reaction

Nowadays the use of NFTs in games occurs on two fronts: either new companies that are born under the NFT premise or video game companies that already have consolidated franchises, with a fan base loyal to their franchises and favorite characters. We will focus on major video game companies that produce AAA games, namely: Sega, Ubisoft, Electronic Arts, and Square Enix. This type of game is characterized by large investments, franchises involving several titles [5], lots of characters and long narrative arcs, and a large fan base loyal to these characteristics. In November 2021, SEGA stated part of its 100 billion Yen investment for the next 5 years "we are considering M&A [mergers and acquisitions] and investment in new fields such as NFT" [6]. The following month the company stated while it wants to experiment with the use of NFT in various ways, it has doubts about using the Play-to-Earn model, in which players play a blockchain game and earn monetary rewards for doing so [7]: "In terms of NFT, we would like to try out various experiments and we have already started many different studies and considerations but nothing is decided at this point regarding P2E [Play-to-Earn]." [8]. The company had already been criticised by consumers and developers in April 2021 by announcing a partnership with Double Jump Tokyo for NFT sales as early as 2021 [9]. Despite the criticism, the plans towards NFT are moving forward, as in January 2022 name registrations were requested for the new brands, such as [10] and SEGA Classics NFT Collection [11]. SEGA follows the trends of other big gaming companies like Ubisoft, EA, and Square Enix. But unlike SEGA, Ubisoft is betting on the Play-to-Earn model: "It will imply more play-to-earn that will enable more players to actually earn content, own content, and we think it's going to grow the industry quite a lot." [12]. Ubisoft would have already invested $65 million in

Blockchains and NFT through Animoca Brands [13], owner of products such as the game Play-to-Earn REVV Racing, among several others [14].

Ubisoft has been investing in projects for cryptocurrencies and blockchains since 2018 [15]. On 7 December 2021, a video on Youtube [16] announces that its first game using NFT will be Tom Clancy's Ghost Recon Breakpoint [17]. That generated a big negative repercussion, reflected in the ad video, which presented a 96% Dislike Ratio metric on the Youtube platform [18]. Although YouTube hides the number of dislikes, it is possible to visualise it using browser extensions made for this purpose. In this video, the Quartz platform is presented [19] as well as the NFTs, called Digits. The video also draws attention to the fact that these NFTs are playable and "energy-efficient technology", as players' reactions to the energy consumption of NFTs have been known to be quite negative. The Quartz platform, on which Ubisoft runs its NFTs, uses the Tezos Blockchain, [20] which has its own cryptocurrency, Tezos [21] It uses a Proof-of-Stake consensus protocol, which is more energy-efficient than the Proof-of-Work consensus protocols used in Bitcoin, among others. Quartz's website states that "One Ubisoft Quartz transaction powered by Tezos blockchain consumes 1 Million times less energy than a Bitcoin transaction" [22]. This caution, however, was not enough, as not only were consumers irritated by the announcement, but even the company's employees reproved the initiative: "How can you look at private property, speculation, artificial scarcity, and egoism, then say 'yes this is good, I want that, let's put it in art?' [23]. While some employees still point to the energy efficiency problems, the company tried to mitigate in its announcement, the issues raised were others, from financial market speculation to the possibility of scams, and fraudulent deals. Protos, an independent agency specialising in blockchains, points to problems with the NFT market, from its boom on 3 May 2021 to a collapse of almost 90% in just one month [24]: with an approximately 70% reduction in the number of active portfolios between June 2020 and June 2021; and with a massive predominance in the collectibles, arts and sports memorabilia markets, relegating the other markets such as gaming and metaverse. As such, some of these employees see NFT as a kind of bubble that lasted 4 months and had already burst.

In November 2021, Electronic Arts CEO Andrew Wilson said that NFT and "play-to-earn" games "will be an important part of the future of our industry." [25], [26] and only 3 months later seems more cautious [27] by saying that "We'll evaluate that over time, but right now it's not something that we're driving hard against" [28]. The executive probably noticed the negative fan reactions that caused NFT projects for games like Worms and Stalker to be canceled in a matter of days, but also the launch of Ubisoft's Tom Clancy's Ghost Recon Breakpoint NFT that had very low demand from gamers [27].

In his New Year's letter for 2022, Square Enix president Yosuke Matsuda says the company will invest in the metaverse and its technologies, directly citing Artificial Intelligence (AI), cloud and blockchains: "To address these changes in our business environment, the medium-term business strategy that we unveiled in May 2020 identified AI, the cloud, and blockchain games as new domains on which we should focus our investments, and we have subsequently been aggressive in our R&D [Research and Development] efforts and investments in those areas", as well as making clear the interest in NFT and play-to-earn games [29]. In March 2021, Square Enix had already done a successful NFT experiment [30] with Million Arthur [31], an old franchise, and decided to expand this type of project.Several of its producers, such as Yoshinori Kitase (Final Fantasy), Yosuke Saito (Nier), Noriyoshi Fujimoto (Dragon Quest) and Masashi Fujiwara (Final Fantasy origins) show interest in exploring NFT and the Metaverse, but the gamers community once again reacted badly to the announcement [32]. The day after the letter was published, on the Reddit forum, the vast majority of the community was against the idea, and even recalled Ubisoft's unsuccessful attempt [33, p. 94]. Meanwhile, just 4 months later it is announced that Square Enix is selling its Western studios (Eidos, Crystal Dynamics, and Square Enix Montreal) to the conglomerate Embracer Group, which owns over 850 franchises and over 100 game development studios [34]. Although these studios own major franchises, such as Tomb Raider and Deus Ex, their profits have not performed well: in 2021, Crystal Dynamics posted a profit margin of 3.6%, while Eidos Montreal posted just 0.65% in the same year [30]. In Square Enix's Q3 2021 financial results presentation by [31] it is possible to observe that the games performing better were in the smartphone and Massive Multiplayers Online areas, and Square Enix preferred to sell these studios to invest more in the Metaverse and its technologies: "the Transaction enables the launch of new businesses by moving forward with investments in fields including blockchain, AI, and the cloud." [35].

3. Blockchain Games

Currently, the most common NFTs authenticate digital art, content (video clips), collectibles (trading cards), and virtual real estate, becoming attractive for use in games and virtual worlds or the metaverse. As proof, interest in blockchain gaming has gradually increased in recent years. According to the Q1/2022 report of data tracker DappRadar, the blockchain gaming activity has grown 2,000% and the number of 'active' blockchain games doubled to almost 400 between 2021 and 2022 [36]. Some of the main features of this type of game are that: they operate on decentralised blockchain platforms such as Ethereum [37] or Solana [38]; the decision-making in all are ruled by smart contracts [39]; and earning rewards by playing them is the main aspect on which the game design is based.

Despite the differences in operation between blockchain games and traditional games, the game design of the former does not bring anything new compared to traditional games. In fact, some of the most successful cases of blockchain games bear extreme similarities to well-known blockbusters in the gaming industry. This is, for example, the case of the game Axie Infinity [40] which is considered one of the most popular blockchain-powered games of its kind [41] and which is described by many as "Pokémon on the blockchain" [42]; or Sandbox 3D [43], considered a virtual Metaverse, which is a mixture of Minecraft and Roblox; or even the Super Crypto Kart [44] whose similarities to the Super Mario Kart game extend beyond the name itself. This aspect may be understandable since little or none of these studios or companies have a background in the gaming arena, hoping that this will change when more experienced gamers enter the blockchain games market. Although the supply of blockchain games is still limited and the games are still very simple, it is already possible to find the most diverse types of games such as MMPO, tower defence, card games, and mobile games. In [39] the authors identify a set of advantages that blockchain has brought to the gaming industry such as rule transparency of games, through a smart contract; asset ownership, players own game assets; assets reusability, the blockchain ecosystem allows players to reuse their characters and virtual items across different games; user-generated content (UGC) that belongs to the user, who can sell or share it between different multiple games. A study [7] shows that play-to-earn and metaverse tokens are characterized by positive performance in the long run, with players being rewarded with tokens for their activity. De Jesus et al. [45] conclude that playing Axie Infinity is not as easy as it seems, and players get worn out psychologically and emotionally in the long term due to lack of rest and pressure to meet their quota, among others. At the economic level, there is high volatility in the prices of NFTs and an absence of correlation between the market return and the characteristics of the NFTs, causing discrepancies between the financial value and the real value [7]. Although the transparency of rules and decentralisation are some of the advantages of blockchain games, there are, however, reports and suspicions about the use of bots to cheat [46], [47]; commonly referred to as "farming boot". While in a traditional game it can only lead to players' frustration, the same is not true in a play-to-earn game where it can ruin the entire game economy and cause serious damage to the players.

4. Problems presented by the players

From the players' reactions listed above, we will now develop the most recurrent ones, to check their reasonableness and possibilities of change in the future: energy cost, scams and pyramids, piracy, and currency evasion.

4.1. Energy Efficiency and Carbon Footprint

The most widely used blockchains today, which support the cryptocurrencies Bitcoin and Ether, use this energetically unsustainable protocol, as Ethereum itself assumes on its website, and is therefore migrating to another less expensive consensus protocol, called Proof-of-Stake [37]. For comparison, Bitcoin's annual energy consumption is higher than countries like Argentina or the United Arab Emirates [48], in terms of technology consumes eight times more than Meta (Facebook) and Google combined [49], or in domestic terms, a Bitcoin transaction consumes 1,173 kWh of energy, the equivalent of what a typical North American household spends for 6 weeks [50]. With the evolution of new protocols, blockchains and new cryptocurrencies, we currently have green, energy-efficient currencies like the XRP Ledger [51], which consumes only 0.0079 KWh per transaction, at a cost of approximately USD 0.0002. Other green currencies are Solana, Cardano, DogeCoin, or the new version of Ether (Merge) with very low consumption and costs [49], but the problem is that these coins have little acceptance, and Bitcoin still has a 45% market dominance

[52]. Another problem pointed out by players is the carbon footprint used for NFTs. Although NFT markets based on Solana and other green currencies are emerging, the vast majority of NFTs are still based on the Ethereum network, which will greatly diminish when the Merge project is finished and so Ether coins move to Proof-of-Stake. Right now, the production of a single NFT impacts the planet by 241 KgCO2 at a cost of USD 50.32, and the annual production of 0.21 Megatons of CO2, at a cost of USD 43.77 million [49].

4.2. Scams

For this purpose, we've to consider the dark side of the investment, and gamers and traders must be aware of their high risk. In a recently published study [7], observing the evolution of various play-to-earn and metaverse tokens he conclude that a lot of them lose more than 50% of their value over the four years of the study – October 2017 to October 2021 –, for some players the play-to-earn games are some kind of gambling games [53]. Another problem is the scam schemes around cryptocurrency. Meanwhile, an updated list from May 1, 2022, of Scam News Channel has more than 2,000 crypto scams of all kinds, from currencies to wallets and fake initial coin offerings (ICOs), but only a residual number are related to games [54]. But, we have some examples of scams in NFT games, willfully extorting money from the hype and then abandoning the project causing serious harm to the players. Another indicator to consider a project as a scam is the abrupt fall in tokens value in a short time. Just in the first two months of 2022, we count several NFT games that devalued by 99%, CryptoCars, CryptoPlanes, CryptoGuards [55], Cryptoships and PirateCoin [56]. The game CryptoPlanes shows a bigger rug pull, pushing down the token from an all-time high (ATH) of $6.78 to $0.000002629 only 3 months later [57]. Scam games like these impede the full potential and veracity of real and believable NFT games, leading the gaming community to treat all NFT games as scams [58].

4.3. Piracy and Legal Rights

The most important thing about the NFT trade is the blockchain with its multiple benefits, like security, transparency, all-time registration, and the possibility to save the artwork forever in the block. But, at the same time, the blockchain doesn't have the capacity to analyze the originality of the creative work. And this bought several problems of originality and piracy. The most extraordinary example of this legal rights registration happened in 2018 when Terence Eden's sold in blockchain the Leonardo da Vinci's Mona Lisa / La Gioconda after obtaining a "certificate of authenticity" through the arthouse Verisart [59]. Another great example and most recent, report that Calvin Becerra, owner of three Bored Ape NFT valued at one million dollars, was stolen by a group of hackers, and the main marketplaces OpenSea, Rarible and NftTrader blocks the sale from their platforms. From one side, they do the best they can to protect the NFTs but the community dislikes these operations that are far away from the decentralization of blockchain principles [60].

4.4. Ponzi schemes

An argument often used when talking about the use of NFTs in games is the comparison with Ponzi schemes [61], that is, with the promise of making profits to investors by introducing new investors to an unsustainable product [62]. It's important, we think, to clarify that the investment in cryptocurrency or crypto art is different from Ponzi schemes, as we will see below. Bitcoin, the most representative cryptocurrency and the complete differences between that and the previous scheme. Investment Returns Not Promised: First, there is no guarantee of financial returns and, since the beginning, Bitcoin has presented quite the volatility of market variation. Open Source, The Opposite of Secrecy: its design is public and had no secrets or any difficulties accessing its own information. No Pre-Mining: Another argument is the fact that there was no bitcoin mining before its release, with everyone having the same kind of access to the acquisition of the currency, and even his creator, Satoshi Nakamoto, had no priority in its mining. Leaderless Growth: another reason, there is no top management as in Ponzi schemes, it is the users who increase the regulation rules. Unregistered Investments and Unlicensed Sellers: Finally, the warranty of an unregistered investment and an unlicensed seller, otherwise, this could be the only red flag in the cryptocurrency investment, in particular, Bitcoin. Even though, it doesn't mean we have a Ponzi scheme only that is recommended a better and bigger caution of the buyer or investor when he goes to this market without regulation.

4.5. Capital flight and Money laundering

Money laundering it's been an issue in the fine art trade and it's not unique to the NFT world. The art offers to the traders some creative ways to move money, they are easy to carry and move around, have a subjective valuation and guarantee some tax advantages [63]. This problem worsened, above all, in the third and fourth quarters of 2021, with the outflow of currency above a million dollars for each quarter [64], in a market that represents around $10 billion US dollars on each quarter [65]. So, the problem, for now, remains the lack of regulation on NFT. In the European Union, a proposal regarding the Markets in Crypto-Assets (MiCA) has already been presented, for the regulation of digital currencies and, partially, of NFTs. It considers, in article 3, 1. (2) the crypto-asset as "a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology" [66]. It's very important for the NFT marketplaces to implement rules for greater security for users, especially the institutional investors and great brands that want to stay away from solutions that allow money laundering [67]. If these laws and regulations were successful, we could see a massification of the NFT market without fear for all stakeholders.

5. Conclusions

When comparing sections 2 and 3, we can observe two types of games that propose to work with NFT, each with a different community of players. One that comes from blockchains, and whose main attraction is the manipulation of NFT and its respective currencies, which can then be traded in financial markets. Such players do not see these games as entertainment, but as an investment, and becoming attached to an asset is a dangerous thing, which can translate into a loss. The other is triple-A game companies, with consolidated franchises and a player base fan of these titles, their characters and narratives. These companies intend to adopt these technologies as an extra profit factor for their games, through strategies such as collecting or trading financial assets. Nowadays, these strategies are already used through microtransactions, such as selling or gachas (blind purchase) of characters, weapons, clothes, skins, or loot boxes with several items; DLC (Downloadable Content) to increase the content and lifespan of titles; and season-passes, in which the player purchases upgrades and unknown items for a certain period. On the other hand, players who play blockchain games, are primarily focused on profit, that is, the transformation of their time, skills and knowledge, into financial assets greater than those invested in the game. In this way, the concern with its financial return is greater than the concerns inherent to the game, such as its narratives and gameplay, with environmental or economic impact, or consequence in the employability of the artists. Thus, we can see that the profile of players is quite different, and therefore the adoption of NFT in entertainment games could be a segregation factor, since only players of legal age, with brokerage accounts, and with money to invest, would have access to in-game items that many of the players, outside of these conditions, would not. Most likely, over time, the use of NFT in entertainment games will be one of those microtransactions added to games, but at the moment, the number of incompatibilities and disadvantages is still very large, and players are keen to remember that to companies.

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