

Games: An NFT-powered revolution?

A lot of what the metaverse looks like comes from the world of video games. Second Life, the iconic game from Linden Lab, is arguably one of the oldest metaverses on the internet. In future, you may enter games through a headset and feel them through a haptic suit, but at their core, the experience of entering a metaverse is likely to bear many resemblances to how players today immerse themselves in Second Life, Roblox, Fortnite, or Minecraft.

On the other hand, web3 adds a far more disruptive element to the picture: the inclusion of decentralized technology, blockchain, and non-fungible tokens (NFTs). The world of crypto games is growing fast and is slowly spanning another sector altogether.

So, what will change?

Web3 games are powered by blockchain technology and decentralized governance regulated by smart contracts, allowing players to collect game-specific assets in the form of NFTs. Play-to-earn allows players to earn rewards in the form of NFTs, which can be exchanged for cryptocurrencies that can be converted into fiat currency. One of the first “play-to-earn” games in the cryptocurrency market to really gain traction was Axie Infinity. Axies are token-based creatures that players can collect, breed, nurture, battle, and trade.

Axie Infinity is a prominent example of how the business model behind video games is being re-invented by web3. Web2 games used to measure their success based on player engagement since the more time someone spends in the game, the more likely they are to purchase in-game assets. Web3 play-to-earn games add a financial incentive to that time. NFT-based games promise to make the labor of fun into compensated labor, and some even claim that they are training the workers of the future - as humanity moves closer to living and working in the metaverse. In a play-to-earn model, the more players play, the more money they earn. In Axie Infinity, the basic cycle of gameplay works like this: completing levels creates stronger Axies to win matches, which provides players with tokens that allow Axies to “breed” and thus create new Axies to be sold or used for play.

The NFT opportunity

Video game makers are all looking at NFTs, and the topic leaves no one indifferent. Large companies like Ubisoft have already taken the first step and are creating their own proprietary line of NFTs to be used in their game properties, while others, like Mojang, the studio behind Minecraft recently decided to ban them from their game, arguing that “NFTs can create models of scarcity and exclusion that conflict with the Guidelines and the spirit of Minecraft.”

For game makers, incorporating NFTs into their business models has potential. NFTs can be sold to players in the same way other downloadable packs can: as a product sold from a store, where the initial sale includes a profit for the developer. But these tokens can be coded. And it has become a feature of NFT smart contracts to allow each resale to automatically trigger a payment to the originator of the token – in this case, the game developer. The model allows game makers to monetize items again and again, using the prospect of future player-to-player sales to generate an ongoing revenue stream.

Play as labor

The lines between play and labor in video games have long been blurred. For example, *Eve Online*, a massively popular multiplayer online game, is a 19-year-old game that is reliant on player labor to generate new items in the game and to keep the in-game economy flowing. Players of *Eve Online* lead and work on various spaceships, which can be optimized for either mining in-game resources or building specialized combat vessels. Once enough materials are mined, they can be sold in a marketplace for real-world currency, and the raw materials can be crafted into new spaceships.

In many online games, players have to “do a job” to advance through the game world. But the “grind” of doing repetitive or time-consuming in-game tasks unlocks better characters, new levels, or skins rather than real-world money. “Playbor” is a term that was coined by researchers to describe the behavior of engaging in ordinary play that also generates income, whether virtual or real. Whether players earning money from playing a game count as employees, contractors, or neither has created an unregulated space that will undoubtedly brush up against employment law in a near future.

Protecting and educating players

The incorporation of NFTs into games restricts access to those players feeling savvy and confident using complex, not-easy-to-understand, and volatile financial instruments. Players of web3 games are therefore exposed to financial risks. The safeguards, which may well be needed to protect the most unsophisticated players from being manipulated or hacked (for example, by approving trades they don’t understand), may come from finance regulation, but clearly call for consumer law regulation, too. The *Axie* hack earlier this year is indicative of the risks built into the evolving nature of video game marketplaces, and it demonstrates the need for regulators to implement better monitoring and consumer protection schemes.

Perhaps in response to these risks, some video game publishers are putting their own restrictions on the ways in which games can incorporate cryptocurrencies. Steam, the largest digital storefront for PC games, made a stand by banning all blockchain games from its platform and updating its policy documents to reflect the change, thus placing a huge barrier to wider adoption of the technology in games. The co-founder of Valve, the company behind Steam, cited the high volume of fraud and scams being perpetrated through crypto-assets like NFTs as the motivation for the ban. In contrast, Epic, the publisher of *Fortnite*, has said it is open to cryptocurrencies and NFTs in its game stores, but only if they strictly adhere to reporting and tax laws.

Looking into the future

Multiple countries are starting to tax cryptocurrency transactions and have imposed due diligence and know-your-customer rules on crypto exchanges. These regulations are meant to make crypto-assets trade, including NFTs, “safer,” but as ever, implementing national rules to worldwide endeavors continues to cause major headaches to regulators and it may be a few years before we see the effect of these policies.


It remains to be seen whether play-to-earn really does become the future of gaming, and whether NFTs will be at the centre of it. Clearly, some players are attracted to the idea of unlocking “better” property rights for their in-game assets, but for others, including parents of young players, safety and fun are values that may not be compromised. As of today, web3 games seem far more likely to develop into their own new sub-sector than disrupt a flourishing and mainstream games industry.



Games and metaverse issues

The infrastructure prerequisite. For the metaverse to be an alternative to the real world, it's going to have to resemble it with almost complete verisimilitude. Luckily, there is no need for governments to pour trillions of dollars into this sort of infrastructure. The processor and graphics technologies have been incentivized by a red-hot video games market for years, and today we inch closer and closer to absolute realism. Intellectual property and licensing issues will increasingly dominate the conversation as publishers and console manufacturers design and build with those technologies.

Because video games can be seen as prototypes for the metaverse, it is impossible to escape the inherent limitations of that model when applied to a vision of interoperability. In some ways, the NFT and related tokenization issues are relatively more solvable than those that relate to the underlying infrastructure of the metaverse. Do we have any more reason to believe that the metaverse will resemble one planet on which all human life can love, hate, fight, reconcile, exploit, and heal than we believe one gamer account (e.g., its crypto wallet) can be used across all games and all platforms? It is the promise. The intellectual property and attendant license are far more likely to result in multiple metaverses,



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divided at least by platform configurations if not also by content, genres, and publishing rights. The profit incentive that has ignited the development of the technology will be the very reason the technology will form walls around competing worlds. In this sense, the video game model for the metaverse foretells the limits that are baked into the infrastructure that will form the metaverse.

There may be those who envision a metaverse that transcends the boundaries of jurisdiction and platform, but they will run headlong into the reality of intellectual property, antitrust, privacy regulation, and the capitalistic spirit that has powered the video game industry for decades. And, speaking of power, the infrastructure for the metaverse is again going to bring with it questions about the energy usage required to run the processors and graphics chips. Video games and the infrastructure providers who pave the way for the next generation of games and, perhaps, some version of the metaverse again provide a useful guide. Energy usage and issues surrounding sustainability and conservation will become distinguishing factors for companies competing for adoption in games and platforms. With public opinion on a global basis appearing to bend toward a joint goal of sustaining our planet, those seeking to drive the video game experience toward complete immersion will likely need to consider how to be ecologically responsible (both in terms of energy usage and use of sustainable construction materials) rather than just create larger and more voracious appetites for the Earth's resources.

Human nature and the limits of moderation. Another lesson from the online world of video games is that unchecked, they can devolve into dangerous places. The recent adoption of the Digital Services Act in Europe has been hailed as the biggest change to internet laws in a century – placing an onus on all streamers and user-generated-games companies to protect their users, and in particular children, from harassing, bullying and harmful content. This EU initiative will complement other initiatives taken by other jurisdictions who are likely to be measured against the new EU standard.

In the UK, the Information Commissioner's Office (ICO) Age Appropriate Design Code, which became effective in September 2021, focuses on the processing of personal data of children (up to the age of 18) and recommends certain default settings for services that are likely to appeal to children, including taking into account the best interests of children when designing any data processing in services; providing a child-appropriate service to all users by default, with the option of an age verification mechanism to enable adults to opt out of these safeguards; identifying the ages of children by using robust age-verification measures; providing all relevant privacy information, clearing terms, and community standards by using age-appropriate design codes and appropriate content presentations that can be easily read and understood by children; and prohibiting the use of data that is detrimental to children's physical or mental health and well-being, or goes against industry codes and government regulatory provisions.

In Germany, the Federal Protection of Young Persons Act (Jugenschutzgesetz - JuSchG), effective from May 2021, is aimed at the protection of children and young persons against harm resulting from media use and to ensure that media is only distributed or made available in accordance with the applicable age rating. This includes media and other publications with, among other things, immoral and violent content; presentation in detail of acts of violence, murder, and massacre for their own purpose; or a recommendation of the "law of the jungle" as the only proven tool by which to obtain supposed justice.

In the United States, the Child Protection and Sexual Predator Punishment Act (CPPA) and amendments via the Securing Adolescents From Exploitation-Online Act (SAFE) create several duties for online service providers, including a duty to report evidence of apparent child exploitative activities of which the provider becomes aware. The penalty for knowingly and willfully failing to report can result in an initial fine of \$150,000 with subsequent violations carrying a fine of \$300,000.

The law provides a limitation of both civil and criminal liability for providers performing reporting or preservation responsibilities under the statute. Beyond this specific law that focuses on sexual predators who might be engaged in criminal acts in a context such as a virtual world, the U.S. Congress appears to have an appetite to revisit section 230 of the Communications Decency Act. Possible changes to section 230 could include incentives for online platforms to address illicit content and create exemptions for immunity in the areas of child abuse, terrorism, and cyber stalking.

The world of video games is increasingly being subjected to governmental oversight to address online harms – at least in the context of children and teens. We have also seen signs in some countries that suggest a willingness to push more liability onto platforms if their programmatic moderation mechanisms fail to moderate content that is deemed to be offensive or unlawful. The fact that dangers can present themselves in various interactive media contexts, including interactive video games, and that regulators in many countries have taken affirmative steps to address them suggests that the metaverse would be subject to similar considerations.

Yet, in the metaverse, it is unclear whether governments could reasonably seek to regulate or promote the sort of moderation that they currently do in the context of video games. If the concept of “platform” becomes fully decentralized, what liability could attach to a foreign developer who does not impose anti-online harm moderation? Would national regulators need to engage in the virtual world, almost like Agent Smith in “The Matrix?” The limitations of moderation in a decentralized metaverse conception pose interesting questions about the governance of the world we are building for our children.

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