

# Web3 : A Detailed Societal Analysis

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**Abstract** - Web3 is the future heir to modern day internet. It enriches the internet with the ability to create self-governing entities, making it considerably robust and adamant with the widespread distribution of power. In web3, developers are no longer restricted to producing applications that run on a single server or store data in a single database. Instead, it gives rise to an environment in which applications run on a collective server, a mutual peer-peer network. In other words, this shared space is referred to as the blockchain. All forms of exchange are carried out on this digital infrastructure and users interact directly with one another, eliminating the need for trusted intermediaries. In this paper, we explore the potential societal impact of Web3 and the technologies it enables.

**keywords** - Web3, crypto, metaverse, NFTs, DAOs, Web2, Future of Society, Future of Work

## I. INTRODUCTION

Most of us have been conditioned to function on web2.0. A space that is built around centralized services and solitary facilities run by large corporations such as: Google, Apple and Amazon. However, this centralized system tends to generate significant drawbacks. Businesses that run on this arrangement are likely to last a predictable and adverse lifeline. In order to add value to their initiative they begin by recruiting third party complements as in developers, external agencies and other exterior entities along with a prominent effort to attract users. Eventually, their relationship with these compliments experiences a major shift, moving from cooperation to competition as these centralized platforms start to extract important user data and compete with other developers and creators over audiences and profits in order to experience greater growth [2]. This leads to a noticeable breach of privacy and online vulnerability, as well as lack of overall trust amongst all network participants. Essentially, we see how egocentric these businesses are and the eminence of the negative effects of that condition.

Web3 serves to solve the problems that arise with a centralized network by giving people access to a more transparent world in which innumerable affairs are made public. One such example could be the problem of network governance and how a certain set of individuals are held unaccountable for the selection of different algorithms used to filter information and control users in a social society. Web3 allows the community itself to make these decisions using open and transparent mechanisms similar to that of a democratic society, thereby establishing trust and promoting credibility [2]. Web3 is built around Cryptonetworks that aim to prevent the repercussions of vast growth and the bait and switch of centralized platforms. They are networks which are built on top of the internet using the digital infrastructure of the blockchain while also using cryptocurrency to provide an incentive for these network participants. A few commonly known cryptonetworks are Ethereum, Bitcoin, Golem and Filecoin each with their own individual purposes. The contracts between cryptonetworks and their participants are stored in open source code. These participants are given the freedom to speak up through community governance and are allowed to exit the network at any time by selling their tokens [2].

Ultimately, the interests of the cryptonetwork are aligned with that of the network participants as they share the common goal to grow the network and increase the value of their respective token. This collective target not only emphasizes on trust but also creates a stronger bond amongst the community and allows the cryptonetwork to grow exponentially without significant drawbacks.

## II. THE UTILITY OF WEB3.0

Having said that, web3 opens a whole new world of possibilities. The new age of the internet is enrap in the idea of a communal pursuit. Decentralized autonomous organizations (DAOs) are an example of that initiative. DAOs serve as a shared bank account or a digital hub where users can combine capital to make various purchases [3]. They are similar to investment or venture capitalist firms however its differences lie in the fact that it is collectively owned and run by its members with the absence of a CEO or an independent governing body. The foundation of a DAO is its smart contract that declares the rules of the organization and holds the combined treasury [4]. This contract is stored on a blockchain, prohibiting individuals from making any changes to the rules as well as spending capital without united approval. Essentially, the entire organization makes decisions collectively and payments are authorized as soon as the votes pass. In retrospect, DAOs can be used for various occasions such as a charity where individuals come together to make donations and support a particular cause or a venture fund where people pool in to make considerable investments and vote on ventures to endorse.

On other hand, web3 gives rise to another collaborative initiative known as decentralized finance (DEFI). DEFi is an open and global financial system that runs on a public blockchain, providing services to anyone with an internet connection. It gives

users direct control over their money rather than having to rely on traditional banks. Additionally, transactions take place seamlessly and the market is always accessible. Participants are exempt from providing any form of identity, thereby, remaining pseudonymous. The only requirement to gain access is to create a cryptocurrency wallet. Finally, It is established around transparency, giving users the ability to view product data and transactions at ease [5]. In all, DEFI advocates for a more convenient, and efficient approach to financial trade. In the end, web3 aims to eliminate the need for intermediaries. Producers are encouraged to trade directly with their consumers.

This renders the opportunities for creators as significantly more appreciable. The world of NFTs is a prime example. Non-fungible tokens (NFTs) are digital records stored on the blockchain, signifying various pieces of media such as: art, music, games and even simple text. These NFTs are built around trustworthy documentation that indicate their origin and history. The absence of intermediaries alludes that the power will be shifted to creators and users and that the benefit for both parties will be maximized, no longer having to suffer from the exploitation of external entities [6]. The concept of decentralization allows users to be established owners. Once they invest in a particular commodity such as a BAYC NFT they become immediately interested in the growth of the brand and its overall success, since their growth is directly linked to a financial benefit for these consumers and this status as an owner creates a more compelling basis on which to act in benefit for the brand and embrace the collaborative effort. In some sense, they take on the role of a shareholder by buying an NFT, whereas in the real world, consumers buy goods for consumption and have no connection to the brand from which they are buying.

### III. THE POSITIVES OF WEB3.0

Web3 gives way to an invigorating alternative for the current state of the internet. The sense of community and collaboration that it promotes is refreshing. It fosters a drastically new environment for the younger generations who feel trapped under the thumb of tech giants and embraces the rebellion against these all-encompassing entities. An example for a revolution of this sort is the establishment of transparent and collective mechanisms to provide a more welcome alternative to network governance with social media platforms such as Twitter and Instagram. Reddit for example, has an arrangement known as Karma which is an interactive points system that allows users to award points to other 'redditors' as a form of appreciation. This is soon to be converted to Ethereum tokens and will enable users to take decisions as a community. It would have a significant impact on the way in which content is moderated on the platform, shifting to a more decentralized ecosystem and ultimately gaining the upper hand over other platforms that are criticized for their immoral treatment of network participants [7]. Naturally, this displacement of power from one platform to another is an attractive dynamic for future generations who are yet to find their place in the world. The presence of COVID 19 gives way to a more technology dependent environment and applying for a job in the Web3 community would seem like a stable, long term commitment. A survey done in 2020 had conveyed that the coronavirus had accelerated the share of intangible assets to 90% of the S&P 500 market value, thereby signifying the prominence of intellectual capital or traditional intellectual property assets such as domain names, trademarks and patents [8]. Conclusively, the world is shifting to a market that is driven to creating utility rather than capturing it and this will empower the notably creative industries to garner control over economic growth in society.

Nonetheless, Web3 makes way for more efficient value capture as well. It serves to eliminate the intermediaries who have been known to monopolize value and render the creators and consumers of a good as true owners. Therefore, We begin to see how people shift from passive consumers to active creators with websites such as Wix, Shopify and even Tiktok each with their own unique target audience, focused on embracing the creator mindset [9]. This sense of innovation that is derived from being able to produce and design so effortlessly is something that holds great significance to the youth of this generation, captivated by the concept of reclaiming authority and asserting dominance in the world, especially represented through modern day 'cancel culture'. On the other hand, web 3.0 proposes an entirely new digital economy, disrupting the traditional capitalist system and giving way to a more sustainable and viable structure. Some groups also see it as a way of distributing wealth and power from large monopolies to individual masses, giving them a larger proportion of traded capital as well as eminent ownership with the eradication of intermediaries. In the end, Web3 provides a more democratic and autonomous society in which users are encouraged to share their thoughts and embrace a more active role in the community, subsuming individual diversity while also promoting collaboration and unity.

### IV. A TALE OF CAUTION

On the flip side, Web3 generates a significant level of artificial hype and enthusiasm as a lot of the excitement is built around the failure to acknowledge the prospective challenges and downsides of web3. Considering that it has the potential to take over as the dominant web structure, people will begin to spend more time than ever on the internet and our dependence on technology will increase drastically, creating a significant level of job insecurity and an overall decrease in the demand for human capital. Nonetheless, an appreciable amount of novel job opportunities will and have come to light, being that cryptocurrency is one of the fastest growing industries in the world. Having said that, most jobs will require knowledge in the field of technology and mechanics, signifying that a gap may be created amongst those who have the ability to afford education in those fields and those who may not.

Additionally, the prospected development in creative industries will instigate a largely similar outcome as individuals may fail to procure the funds to gain an education in the field of art and design, creating greater divergence between the affluent and the impoverished. On the subject of inequality, cryptocurrency generates notable disparity between men and women. As

cryptocurrency is a vital component of web3 it is important to acknowledge its shortcomings. According to a survey conducted by CNBC and Acorn, twice as many men as women invest in cryptocurrency (16% of men vs 7% of women), mimicking the gender gaps in ownership of individual stocks (40% of men vs. 24% of women), bonds (14% of men vs. 11% of women) and real estate (36% of men vs. 30% of women). Additionally, cryptocurrency does not promote vast diversity in terms of race. White-identifying citizens capture a larger proportion of the crypto market with approximately 62% as recorded by CNBC. This deficit of diversity between investors means that a large proportion of the public are missing out on the opportunity to participate, making it exclusive and limited in terms of influence [10]. The introduction of web3 has brought about the assumption that problems regarding internet privacy and the misuse of personal information will be solved. However, a lot of research can be compiled to counter that premise. Numerous DEFI sites have been found to rely on third parties to whom they frequently leak ethereum addresses. Google is one of the organization's that is the most well-known for collecting this data. The company has the potential to link these ethereum addresses to the respective personal identifiable information (PII) as well as the blockchain transaction history which is completely transparent and open to the public. Ultimately, Google monetises this data for the purpose of advertisements and the absence of internet privacy persists [11].

## V. THE EFFECT ON JOBS

When it comes to the job market, web3 opens a whole new world of possibilities. As mentioned, creative industries are developing under the influence of markets driven by creating utility rather than capturing it. The job of a digital fashion designer or a metaverse world builder has the potential to come to light under those conditions. The development of web3 and the metaverse will allow people to seek jobs in a digital space and the concept of working from home will be embraced. Our lives are slowly returning to normal after being conditioned to working remotely for so long. However, people have learnt that working remotely makes way for new opportunities to grow, collaborate and prosper, even though it all seemed so strange at the start of the covid19 pandemic. Therefore, the transition to a virtual reality will be a convenient and simple switch, considering that a lot of time will be spent working remotely [12]. Besides digital art which is evolving along with the introduction of NFTs, the field of architecture also has the potential to grow in the digital world as a lot of infrastructure is required to populate the fast-growing metaverse. Naturally, this gives way for a lot more designers and creators to thrive, not to mention the various other creative industries that are developing along with the introduction of web3.

On the topic of architecture, the volume of transactions for commercial real estate in the last month has grown dramatically. A company known as the Metaverse Group is one of the world's first virtual real estate businesses and with vast growth in their industry, it becomes evidently clear that there will be demand for virtual realtors, property managers, etc. The Metaverse Group plans to fund the establishment of a series of virtual properties in a world known as Decentraland as well as others including Sandbox and Upland. The Co-founder of the Metaverse Group had stated that the lifestyle that has been brought about by the introduction of the pandemic, sheds light on the potential of the metaverse to become the most popular social network in the world [13]. Having experienced the beginning of virtual concerts in the realm of games like Fortnite and Roblox, the shift to a virtual reality does not seem too far away. The metaverse will establish a separate economy in which laws will need to be redesigned. Thereby, establishing the need for new lawyers and advisors. Lawyers who specialise in web3, in particular the blockchain and smart contracts will be in incredibly high demand this decade along with asset advisors who will be assisting users in buying assets and making investments. Asset advisors will be responsible for observing the dynamics of the market and thereby suggesting investments with regards to those observations [14]. Finally, Web3 will give way to a drastically new environment in which users will be enabled to working remotely in a virtual world, transcending from real to virtual world jobs, overcoming the challenges that are faced with working in a physical environment and embracing the benefits of working in a flexible, free and comfortable digital society.

## VI. WHO HAS THE UPPER HAND IN WEB 3.0?

The kind of knowledge that is required to work in the metaverse as a backend or frontend engineer, which is currently one of the most highly demanded jobs on the market, includes experience with Javascript, React, Typescript, NodeJS, and other programming languages. Nonetheless, aiming to work as a metaverse world builder or a character artist would require knowledge in areas such as rhino, blender, Maya and other 3D modeling softwares as well as experience with Unity or Unreal engine. Besides from having experience with various software, the most essential element includes having the ability to work in a digital environment, individually, interacting artificially and spending a significant amount of time with numerous forms of technology. The benefit of working remotely, is that collaborating with people from all over the world can be done a lot more conveniently and recruiting talent and hence finding those most suited for the metaverse, becomes a lot easier. Those who hold positions in the gaming industry have the upper hand in the metaverse. Their experience with creating, managing and marketing digital worlds, renders them as the perfect candidates to pioneer the development of the metaverse. Game developers have the tools required to maintain a sustainable virtual world and eventually bring the metaverse to life.

Blockchain and smart contract developers as well have great responsibility when it comes to Web3 and those with comprehensive programming knowledge will be able to prosper in the realm of crypto and decentralised networks. The aim for present programmers who are excited to see the development of web3 would be to learn more about blockchains and smart contracts along with other important components of the emerging web space in order to tailor their knowledge of programming to be used in a relevant and prominent field of present as well as future interest. As for digital artists, their skills can be easily integrated into the world of NFTs and virtual reality. Lawyers and real estate agents will be in a position to familiarize themselves with the conditions of Web3 and transition from a singular reality to one in which digital and real



worlds co-exist. Eventually, It becomes increasingly important to stay up to date and comfortable with the new age of technology, whether it's digital art, 3D modeling or computer programming. Therefore, the younger generations are at the center of initiating the evolution of a new web structure and an ecosystem in which digital-meets-reality.

## VII.PREPARING FOR THE FUTURE

The first step towards actuating the development of web3 involves educating others and ourselves on its components and spreading the word across all platforms. There has already been large fanfare around the emergence of web3 and the metaverse. This ensures that a larger proportion of the population is up to date with the evolving internet and in a position to easily adapt to the potential changes in the job space and new opportunities that might be available in the metaverse. It makes it easier to embrace modern innovation. Having said that, a group of Web3 experts had created a virtual educational institute known as the republic realm academy in order to promote education about the metaverse and everything that web3 has to offer. Ultimately, initiating the arrival of a Web3 operating world [15]. Furthermore, projects like Solana and Braintrust offer grants and tokens to users who develop new projects with the help of their ecosystem [16]. This form of appreciation for those who choose to learn more about the web3 community, encourages others to do the same. Web 3.0 makes it exceptionally important to value connections and form meaningful communities. Since, the majority of the semantic web is run by decentralized systems, the significance of bonds created between participants soars considerably. For example, the success rate for most contemporary NFTs is determined by the type of community that they foster and the level of harmony that is established amongst their members. A considerable number of emerging NFT projects are built around the motive of a quick cash grab. There is a lack of responsibility and diplomacy, establishing suspicion and a deficit of trust amongst all participants. Training creators to cherish the society that they build and the interactions that come along with it, will hold great value in the future of Web 3.0.

On the other hand, the concept of decentralisation, enables the displacement of power from a singular governing entity to a vast array of individuals. Fundamentally, distributing the responsibility across an enormous network of independent people. Naturally, this gives way to whole host benefits accompanied by notable drawbacks. A prominent issue that presents itself is the absence of obligation. The benefit of operating under a large corporate body is the sense of professionalism and sophistication that they feel obligated to uphold. While, the liberty and freedom of functioning as individuals, presents a strained obligation towards remaining righteous and ethical. Ultimately, it is crucial to teach others to harness the responsibility and power that they have with care rather than exploit it in a corrupt and disreputable fashion. Of course, it is always important to act with well-founded intent, but the magnitude of responsibility that is bestowed upon numerous individuals with the introduction of decentralisation, makes it significantly more paramount and predominant in the success of a Web 3.0 society. The development of Web 3.0 requires modern progression from the current state of workplace operations and numerous companies have set out to solve that, such as: Altoura. Altoura works with companies like Unity, Facebook, Microsoft, Insight and many more. It enables organisations to design spatial 3D experiences for training and collaborative visualization. Altoura gives workers the ability to train on 3D models inside a vast virtual environment, thereby allowing them to remain productive in a remote expanse and almost anywhere at any time. The training that is provided, is applicable to both physical and virtual conditions. Ultimately, Altoura merges the digital and physical world so users can collaborate in a 3D environment and digitally interact with the equipment around them [17].

In the end, businesses will begin to employ technology that allows them to conduct work outside the traditional workspace and collaborate across different settings. Decentralisation will spread responsibility and ownership across a largely widespread group of individuals, making it significantly more convenient to work remotely and interact across different locations. The advantage of working in a virtual environment, eludes that organising events and gathering resources will become a lot easier. Companies can take advantage of the resourceful digital space and give employers access to all sorts of training equipment along with stimulating opportunities like live concerts or virtual reality vacations to boost morale. The set of skills and qualities that businesses have started to look for, in response to the pandemic and the development of web3, is drastically different from the norm. There is a demand for workers who are flexible with time zones, workers who can express themselves effectively, both offline and online. Eventually, the central aim for modern businesses who intend to work in a virtual environment is to be able to foster the workplace atmosphere in a digital realm and keep their employees motivated in both worlds.

## VIII.CONCLUSION

Web 3.0 gives rise to an entirely new lifestyle and ecosystem for the modern world. Companies have the potential to grow exponentially with the emergence of decentralization and blockchain technology. There is a newfound capability for collaboration across a widespread network, considering the changes that the metaverse has made to online interaction and communication. This potential to operate on a large scale, in a drastically new interface will give way to profoundly rich opportunities and novel innovation. Working remotely and cooperating virtually will bring about progression in terms of efficiency, flexibility and comfort. Web 3.0 will shed light on the true owners and creators of both intellectual and physical capital. This shift from capturing utility to creating it, will empower the creative industry to garner control over economic growth and abolish the lack of respect and recognition that creators receive.

Nonetheless, this growth in recognition will give rise to an equivalent growth in responsibility and power. An advanced approach to authentication and security will come into picture, considering the ease with which identity can be connected to any activity on the blockchain. Thereby, introducing obvious opportunities to express uniqueness and utility, as expressed with the emergence of NFTs. NFTs will encourage individuals to monetise their art and procure the value they deserve as intermediaries will be eradicated. The level of authentication that NFTs provide will open up markets for physical goods and luxury commodities like watches, which often encounter competition from fake manufactures and fraudulent goods. Additionally, the absence of centralised power will promote a democratic society in which individuality and distinctiveness is celebrated along with an appreciation for community and alliance. Working together will be encouraged in the environment of DAOs and DEFI, displacing influence from large entities to groups of individuals collectively controlling operations and upholding impartiality. People will have the capability to work together to help charities and procure funds to carry out enormous purchases such as buying the constitution. Fundamentally, the power of unity will be enhanced and embraced in almost all mannerisms. A more technology dependent world will materialise and working, learning and socializing will be heavily shifted to the virtual realm .

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