

## Metaverse: Blockchain-Based Communication and the Next Step-Change for Human Communication

The metaverse, from niche concept in a 90s cyberpunk novel to current tech buzzword, the popularity of this emerging technology has rippled through society from investors and media alike. The concept generally refers to a virtual world where people can live out fully functional lives. It's enabled by advances in augmented reality (AR), virtual reality (VR) and mixed reality (MR) (which are commonly referred together as XR) - technologies which allow users to better immerse and interact with these virtual worlds through headsets and hand consoles.

Facebook rebranding to Meta in late 2021 peaked public interest in the concept, but for children of the internet such as myself - the concept was anything but new. Immersive online worlds defined the experience of the post-Y2K internet for many now-older millennials. Second Life, World of Warcraft, Minecraft and the Matrix, the sci-fi and gaming imaginaries have been priming digital natives for the eventual coming of the metaverse since Snowcrash.

It is with that digital native lens that I will attempt to imagine the future for this technology and its impacts on our world. My general thesis is as follows;

1. The metaverse is the next step-change in human communication
2. It is a step-change as it will be the 'adoption enabler' for the truly disruptive emerging technology - blockchain
3. Thus the policy approaches to the metaverse must be Web3-native

Amidst a tech-lash, crypto crash and fragmentation across domestic and international lines, it might be naive to take such an optimistic viewpoint. However, in trying to situate this analysis in the wider arc of progression of human communication reveals some lessons that might inform how society should react to this new technology.

Finally, this essay isn't intended to ignore or solve all the valid considerations critics are raising about the metaverse. How will it be accessible, what's needed to drive hardware innovation, how will content moderation or online safety or privacy work, what are the novel use cases and economic opportunities? Are all questions that important questions that governments, industry and citizens should be trying to answer. Instead this essay seeks to draw out how the *process* in which these questions should be answered can avoid the historical pitfalls of corporate capture, technocratic gate-keeping and resistance. And that to do so, the policymaking process should draw upon the attributes of the technology itself.

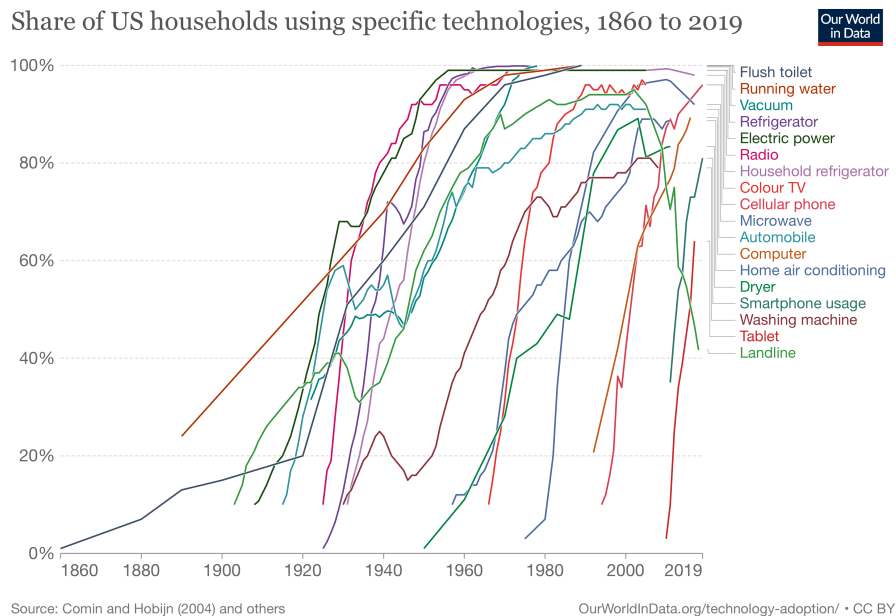
## Communication and its Discontents

Our resistance to new forms of communication and media have historical roots. Socrates famously did not write down any of his thinking, believing it was an ineffective way of communicating.

They will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, but by means of external marks.

*From Plato's Phaedrus*

Communication innovation, by its nature is inextricably linked with social upheaval, disruption and the reimagining of human society. How these impacts actually play out are impossible to foresee, but generally trend in line with their adoption curves reaching mass disruption alongside mass proliferation, and are often accompanied by very familiar critiques; such as children being unable to complete their school assignments due to 'the compelling excitement of the loudspeaker' (said of the radio), and contributing to the 'further vulgarisation of American culture' (said of television).



When Gutenberg invented the printing press, the first invention that truly enabled mass communication, not even the Church at the time could have predicted its impact - and in fact were some of the earliest adopters of this new technology. Fifty years later, most European cities had a printing press and with nearly 8 million books printed, rising levels of literacy sparked the necessary conditions for Martin Luther to usher in the Reformation.

The Industrial Revolution gave us the telegraph, radio and the telephone, but it wasn't until the late 1950's when landline had been widely adopted into most US households, did its utility to facilitate telephone trees become noticeable in the Civil Rights movement. Passing over into a new millennia, we embarked upon one of the greatest experiments in human communication yet, the internet who's adoption was facilitated by the personal computer. Which ultimately set the scene for the social media troubles of the late 2010s enabled through the widespread adoption of smartphones.

This cycle of proliferation and disruption reveal interesting considerations for the future development of the metaverse and its impacts on the world.

1. When new communication technologies are invented, how they will actually impact society is unforeseeable

Even though it seems very in vogue now for every multinational to hire a 'futurist' the business of predicting the future is fraught. From how technology is intended to be use (such as using smartphones for financial services) all the way to the unintended impacts of businesses built to capitalise on a certain technology (such as the targeted advertising business built on social networking platforms), we have traditionally been bad at forecasting exactly how a technology will impact society.

2. Just as rates of technology adoption are dramatically increasing, communication innovation is about increasing our ability to convey greater information density to more and more people

It took 50 years for the printing press to reach a 'disruptive' level of adoption, but just over 5 years for smartphones to hit similar penetration levels. And going from binary communication enabled by the telegraph to TikTok's creator economy The metaverse represents shift in this progression, as we move beyond mere communication to representing potentially tactile and fully immersive experiences that could go beyond the bounds of our current physical limitations.

3. The role of traditional gatekeepers are challenged, and invariably changes

Communication innovation lowers barriers around information - from access to creation. This challenges incumbent dogma on who and how people should be informed.

### **Metaverse will enable Web3**

The metaverse is the next step-change to human communication, after the printing press and the internet, not only because of its immersive nature, but because it will most likely utilise and enable a fundamentally new technology - Web3.

Web3 is a collective term used to describe technologies that utilise distributed ledger technology (such as blockchain). Blockchain technology enables the transmission of data in a way that is publicly verifiable without the need for third-party audit. Networks of computers are used to cryptographically verify public databases (i.e. ledgers), so that any person might be able to check said ledger. This has wide-ranging implications, such as those posed by cryptocurrencies (not needing a central bank to define what has value or should be used as legal tender) and DAOs (blockchain-based governance mechanic that eliminates the need for corporate boards and allows members of the network to collectively decide courses of action instead).

How is the metaverse connected with Web3?

As these virtual worlds are being set up, blockchain technology has become increasingly integrated as a way to facilitate the metaverse economy and society - mainly NFTs (blockchain-based assets which are unique representations to confer property rights) being used to ascribe digital asset ownership and cryptocurrencies facilitating value storage and transfer. As experiences become more and more virtual, blockchain technology will be key to ensuring the formation of individual identities and experiences.

At its most idealistic Web3 enables the next stage of human collaboration, as the technology allows for ways to execute 'trust-less' cooperation by reducing the need for the social systems and structures to ensure follow through. It gives users back 'control' of their data, how it is used and monetised. It is decentralised, challenging and even eliminating the role of intermediary gatekeepers. These concepts are common ways people describe the attributes of Web3, and are particularly revealing as they seem to have embedded attributes of disruption we have seen in previous periods of communication innovation as integral parts of blockchain technology itself.



web1: read  
web2: read / write  
web3: read / write / own

Leaps forward in communication have always needed the 'adoption enabler'. For social networking platforms it was the smartphone, and for Web3 it will potentially be the metaverse. The current dip in the market for crypto has been validating for blockchain critics and galvanising for the web3 community. What it has shown though, is that more thinking around use cases and the technological fundamentals is needed. The 'market' has crashed as the perception of value has evaporated, and fair enough - images of Bored Apes can't sustain a new virtual economy.

As the metaverse develops, the need for how value is stored, obtained and used in a virtual world becomes much more tangible. Thus the metaverse enables the widespread adoption of blockchain technologies, just like smartphones.

### **How should policymakers and regulators respond?**

Whilst the exact shape of how transformative communication technologies land, it doesn't mean that policymakers should shy away from efforts that might guide the development of the metaverse to more optimum outcomes. However, when looking at recent efforts to regulate emerging technology, it seems at times that we over-rely on retrofitting policies over utilising newer trends to achieve the real policy goals.

A classic example is the Section 230 debate in the US and content governance. Whilst there is a clear desire and evidence needed for reform, intermediary liability (which affords online platforms immunity over most content posted on their platforms) has frozen progress on how that might play out. Especially as these laws are often abstracted into fundamental and sacrosanct value systems (i.e. the impact on freedom of expression if liability is removed), means that there is even less willingness to experiment, iterate, and develop the counterfactual.

A hypothesis on why this happens, is that we have yet been able to appropriately incorporate the reasons *why* an emerging technology is disruptive, into the architecture of our response.

Back to the social media example, network effects, a business built on targeted advertising that has engendered an economy that values attention thus leading platforms to pivot their algorithms to serve us personalised content and new dynamics in how private online speech is depending on platform - have challenged how we view the relationship between freedom of speech and technology. How do we recognise these new attributes into the policy response? When the internet was 'read-only', ensuring protections to internet companies was pivotal. These companies now are trillion dollar businesses with a very active role in deciding how you are informed, how is this recognised in our overall approach.

As the metaverse develops, policy approaches should seek to engrain some of the protocols that make Web3 truly disruptive, two of which are proposed below. On a superficial level this will at least build trust, buy-in and capacity, but at a deeper level, could unlock more agile and innovative ways governance decisions are made.

## **1. Prediction Markets - A better way to incentivise consultation**

As if designed to be set up for failure, the craft of policy making is all about how decisions can be made to predict and change the course of the future. We need information to make these decisions, and a mental model on what may or may not if X course of action is undertaken.

Prediction markets are used to forecast future events where market participants place 'bets' on outcomes of these events. Outcomes are usually binary (yes/no) and reward the participants who are correct. This incentivises a 'wisdom of the crowd' as well as generating aggregated

Whilst prediction markets are not a new concept, the potential for their usage can be enabled via blockchain by ensuring transparent and immutable operation. What would it look like if governments ran all Web3 and metaverse policy decisions through blockchain-based prediction markets?

## **2. Participatory Governance - Lessons from DAOs**

DAOs are blockchain-based entities which are designed to community led with no centralised leadership. They work via a set of 'smart contracts' - pieces of computer code which automatically execute certain functions once a certain prerequisites are satisfied i.e. IF the stock price hits \$1, pay Mary \$20. They are governed by members of the DAO, who vote on all decisions made.

This could have wide reaching implications on the policymaking process, by enabling collective decision making where members are actually involved and see follow-through on decisions being made. This type engagement is remnant of Tocqueville's observations on the role of civil society (i.e. communities of action where people work towards a common goal) in supporting the 'Great Experiment' of democracy. What would it look for all metaverses to be governed by DAOs?

## **Concluding Thoughts**

When asked to imagine the future of the metaverse, you can't help but feel a bit of child-like hope. Renderings of what it could be are so indistinguishable for blockbuster sci-fi movies, it's impossible to not inspire vivid conceptions for the future. However this hope for technology seems to have faded out of Washington and Brussels, where we either seem to be more concerned about what could go wrong or look at this 'trend' with incredulous disbelief (a senior regulator has said 'they can't be serious right? who would even use this?').

When Baidu, the Chinese search engine giant, released their version of a metaverse at the end of last year, they named it XiRang or Land of Hope. This is in conjunction with several government initiatives from the provincial to the national aiming to integrate the metaverse into the digital economy.

So if I have any hope for policymakers working on the metaverse - don't be a luddite and try to be inspired!