

## Law in the metaverse

Code is one of few forces to have challenged the dominance of law in regulating human behaviour. The confrontation between code and law will transcend into an entirely new level in the metaverse.

The term 'metaverse' derives from the Greek 'meta' (μετα-), which can be translated as across, after, or even beyond, and '-verse', from 'universe'. The first use of the term is said to have been made in *Snow Crash*, Neal Stephenson's 1992 novel, in which humans interact with one another through avatars in virtual space. Variations of this concept were portrayed in motion pictures such as *Tron*, *The Matrix* and *Ready Player One*. However, the manifestation of the metaverse currently unfolding in real life is far more elaborate.

The metaverse envisioned by companies such as Meta, the rebranded parent of Facebook, Instagram, WhatsApp and Oculus, will not be confined to virtual reality. Mr Zuckerberg, the CEO of Meta, [conceptualises](#) the metaverse as '*an immersive, an embodied internet where you're in the experience*'. This version of the metaverse foresees a recalibration of economical and societal functions, aiming to blend the virtual into the physical world.

In the world evangelised by Mr Zuckerberg we would find our business and personal activities moving further towards virtuality, on the reality — virtuality continuum. Between the extrema of this continuum lies 'mixed reality', a term [used](#) in 1994 by Milgram and Kishino to describe the merging of the real world with virtual worlds.

Code is embroiled in an ongoing tension with law on the means through which our behaviour can be regulated in cyberspace. Ever since the emergence of cyberspace, code and law have been on a collision course that has defined our era.

The discussion on regulating virtual worlds is not novel. In 1996, Easterbrook [suggested](#) defining cyberlaw as a unique section of legal studies. In 1998, Reidenberg [argued](#) for *lex informatica*, a set of rules governing the treatment of digital information, to offer stability and predictability so that participants have enough confidence for their communities to thrive. In 1999, Lessig [maintained](#) that law may need to respond to the displacement of legal values by code. More recently, in considering the regulation of distributed ledgers, De Filippi and Wright [refer](#) to the 'private regulatory frameworks' that blockchains create as being able to create '*order without law*'.

The centralised architecture of cyberspace means that sovereigns can enforce the rules of their legal orders against online companies. Shifting our commercial and social activities into a mixed reality would pit the physical world, where our legal orders exist and normatively prevail, against the virtual world, which is the realm of code.

The shift of our economic and societal functions towards virtuality, on the reality — virtuality continuum, will require a robust response by our legal orders.

For example, if consumer law is to effectively protect users from unfair or abusive practices in the metaverse, it will have to be able to scrutinise the commercial arrangements on which users transact in the metaverse and the marketing campaigns happening entirely in the virtual world. The mixed reality interaction of users with businesses in the metaverse may make written terms redundant. Our legal orders could regulate metaverse-active businesses so as to ensure that consumer protection rules are transposed directly into code, affording an *ab initio* compliance. It should also be possible to project pre-contractual mandatory information in a mixed reality environment, not necessarily in written form at the first instance.

From an antitrust perspective, regulators may wish to be able to effectively tap into the metaverse to monitor market practices, identify anti-competitive conduct and ensure access to essential facilities for new entrants. This may involve regulating access to source code by competition authorities. Dawn raids is a major investigative tool in the arsenal of competition authorities, which they would want to have available in a mixed reality environment. Law should facilitate the enforcement of competition rules in the best interests of users and the protection of competition.

Transacting in digital assets will also mount a significant challenge to regulation in the metaverse. A non-fungible token (NFT), a digital asset that represents ownership in a unique item or content, may create novel business ecosystems in the metaverse. NFTs representing music or art may involve royalty payments that are automated on the token being transferred between users. Law should ensure that the ownership and transaction in NFTs can be enforceable in rem, as virtual users may be able to evade enforceability depending on their location or identity settings.

Over the past decade, activity on social media has had a profound impact on electoral and other democratic processes around the globe. Drawing on these experiences, the propagation of falsified and malicious content in the metaverse, including fake news and ‘deep fakes’, or even state-sponsored propaganda, in the metaverse will need to be vehemently addressed to protect the rule of law, social cohesion and our democracies. Legal evolution for the metaverse era would entail law injecting itself into code in a manner that balances fundamental rights, such as the freedom of expression, with the protection of public interest.

As virtual worlds pierce our physical reality, the code that these worlds run on may prevail over law. Law would need to rise to the challenge of ensuring that code adheres to the rules applicable in the physical world and conventional cyberspace. In the alternative, code may rise to become the prevalent normative order in the metaverse, devoid of any link back to our legal orders. Such a shift will see private actors potentially exerting control over our metaverse activity, depriving us of protections developed in our legal orders over centuries.

Metaverse activity will correspond to individuals and businesses existing in the physical world. Metaverse code will thus compete with the regulatory power of our legal orders. Existing laws will not always be suitable for circumstances arising in virtuality and new legislation will need to be developed. At the same time, regulation should not stifle the benefits that mixed reality environments could bring about in our lives.

The most effective way of regulating behaviour in the metaverse will be through ensuring that elements and components of mixed reality meet certain mandatory standards on which there is consensus across the board. Such an objective will require cooperation between sovereigns and technology companies.

Legal orders that do not adapt to the challenges posed by the metaverse risk being displaced by governance of code, paving the way for an effective algocracy. The question may no longer be whether code or law will regulate conduct in the metaverse. The question may rather be whether law can align with code or be replaced by code.

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