Chapter 4
The Fourth Illusion:
How a New Economy of Consumption Is Being Created in the Metaverse

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ABSTRACT

This chapter aims to analyze the business models' opportunity represented by the Metaverse (Foundation, n.d.), proposing a framework composed of four interdependent blocks; the "illusions" (Slater, 2003). The word Metaverse has been used to describe a sort of thing, mainly related to virtual reality (VR) (Lanier, 1992) and the non-fungible tokens (NFTs). The immersive experience of virtual reality is characterized by three illusions: the illusion of place, the illusion of embodiment, and the illusion of plausibility (Slater et al., 2009). This chapter describes the use of blockchain technology, namely the NFTs, as the origin of a fourth illusion.

INTRODUCTION

This chapter aims to analyze the business model opportunities offered by the Metaverse (Everything You Need to Know about the Metaverse. | Foundation, n.d.) and proposes a framework composed of four interdependent blocks; the "illusions" (Slater, 2003). The word *metaverse* has been used to describe a type of thing mainly related to virtual reality (VR) (Lanier, 1992) and non-fungible tokens (NFTs). The immersive experience of virtual reality is characterized by three illusions: the illusion of place, the illusion of embodiment, and the illusion of plausibility (Slater, 2009) (Slater et al., 2009). In this chapter, the use of blockchain technology, namely NFTs, is described as the origin of a fourth illusion. Together, the four illusions make the metaverse a highly potentially profitable business.

The place illusion (Pi) (Slater, 2009). is the feeling of being in a virtual place even though you know you are not there. The plausibility illusion (Psi) is the belief that the events you see on VR are actually happening. The embodiment illusion (Ei) is the perception that the virtual body, the avatar, is the user's

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actual body. Once immersed in this digital experience, the user can interact with an unreal environment as if it were real.

An immersive experience where pi and psi occur is sufficient for users to react realistically to the VR (Slater, 2009). The more realistic the user's reactions, the stronger Pi and Psi can be. Strong Pi depends on a number of factors, including the ability of VR to respond interactively to users' actions. It is a sensory rather than an intellectual phenomenon. Stronger Psi, on the other hand, depends on a cognitive factor, probability. Once interrupted, Pi can be resumed. An interruption of psi caused by an unexpected fact that lacks probability usually interrupts the experience.

Immersive experiences have been offered by the entertainment industry for decades with great profit. Books, cinema, theme parks, games and others are among the biggest industries in the world. VR offers this kind of experience in a deeper, much more immersive way. Competition within the entertainment industry has been the main avenue for VR startups and businesses - at least until the advent of blockchain.

The first generation of the blockchain, represented by Bitcoin, is a combination of different technologies and mathematical concepts (Nakamoto, 2009). Cryptography, distributed computing and game theory work together to create a way to shop, exchange and create value in a secure, independent, persistent and decentralized way. This value is represented by cryptographic codes called tokens. Bitcoin was created by a man, woman or group under the pseudonym Satoshi Nakamoto and solved two main problems of digital assets.

The first is what is called the double spending problem. How can I know that a digital currency sent to me as payment for a service is not copied and sent to someone else? Or how can I know that the platform VR, which is selling me this house, is not selling the same house to someone else?

In the Bitcoin White Paper (2009), Nakamoto proposes a solution to the double-spending problem: a peer-to-peer network with blocks of timestamps of each transaction cryptographically hashed into subsequent blocks. Each transaction record consumes a lot of computing power, and every change to a transaction in a past block means a change in all subsequent hashes. The computing power required to maliciously alter the ledger makes fraud mathematically impossible.

As soon as a consumer in the metaverse buys a new and unique car, dress, or glasses for his avatar and this transaction is recorded in the permanent ledger of a blockchain, he can feel like the real and only owner of that good - even knowing that the good is virtual.

The second problem of digital assets that the blockchain has solved is the problem of persistence. As a decentralised network, Bitcoin cannot be shut down by a server error, moved to another URL, destroyed by hackers, discontinued due to a management decision, or blocked by a government act.

The same cannot be said about websites, traditional databases and digital goods hosted on a server or even in the computer cloud. The Bitcoin network provides value to the participants who register the blocks - they are called miners. Once you buy a fraction of a bitcoin (a "satoshi"), that satoshi is always yours because you can never sell it or transfer it to another wallet. The house, car and sunglasses of a customer's avatar on a Metaverse platform are always registered as belonging to their wallet.

The most important principle in economics is scarcity (Robbins, 1932). It was not present in the digital world before the blockchain. An image of a dollar bill could be infinitely reproduced. The value of an infinite good is always the same: zero. Bitcoin, the first blockchain, solved this problem by creating an immutable and transparent digital ledger through which every fraction of Bitcoin belongs to one person - one wallet - and no one else. Bitcoin brought scarcity to the digital world.

The second generation of the blockchain (What is Ethereum? n.d.) also offers the possibility to shop and process not only cryptocurrencies, but any kind of data. This immutable, permanent and secure data