

Metaverse

Future Addiction Concerned for Human-Being.

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Abstract—Nowadays, internet has a huge importance in our habits. We are dependent on it because this is the main tool used by company in their management methods or communication, schools to organise online learning programs, the interactions between humans. In fact, nothing is more convenient and efficient than the internet. As all numerical devices that we owe, it is going to change and take another form which is called Metaverse. Metaverse is a virtual place in which all the real life interactions, actions, creations can take place in a virtual world. The concept has been first romanced by authors, movie directors, then experienced by gamers. This year, Facebook has introduced its new technology, called "Meta" which consist in transforming 2D social medias in 3D places in metaverse. Today, the companies's stakes would be to innovate their products, or services to sell it in virtual reality places. As we are beginning to be aware about the security of our personal datas online, mental issues's teenagers caused by the use of social media, the foot print or our devices in the world, are we really prepared to welcome the Metaverse ?

Keywords—*metaverse; human behavior ; mental health ; video games ; virtual reality ; data security*

I. INTRODUCTION

In 2021, Mark Zuckerberg, Facebook founder, has introduced the Meta company which will consist in enjoying social media, video games and other digital activities in an immersive virtual reality. All users around the world will live, feel, experience a virtual experience such as travelling in another country, discovering the Cheops pyramid's architecture, shopping in New-York from their home in Taiwan, via Meta.

Nowadays, it is hard to find someone who doesn't have any social media account. It is not only used for social interactions, but as management tools of communication, a space to create cities, houses on Minecraft, or even finding inspirations thanks to Pinterest as a graphic designer for example. Theses digital platforms bring a lot benefits in our life such as knowledge. In past centuries, it used to be a noblesse privilege to owe a library, and so, an an access to the

encyclopaedic knowledge. Thanks to the internet's evolution, all people can research any information whenever and wherever they are. The idea of Metaverse would be an immersive experience via social media, or network, rather than only watching in 2D.

As Mark Zuckerberg said :

"Meta builds technologies that help people connect, find communities, and grow businesses. When Facebook launched in 2004, it changed the way people connect. Apps like Messenger, Instagram and WhatsApp further empowered billions around the world. Now, Meta is moving beyond 2D screens toward immersive experiences like augmented and virtual reality to help build the next evolution in social technology."¹

As the Metaverse seems brand new in our real world, it has been romanced, imagined firstly by the author Stephenson who made The Virtual Samurai. This novel symbolises the metaverse as an underground world in which the limits of real-world knowledge and creation no longer exist. In other words, it has been around for a long time and is constantly developing, especially in the world of video games. In other words, virtual reality came into being Metaverse.

However, we have to be aware about damages caused by our current 2D social media platform. Some points have to be reviewed such as the psychological impact of social media on teenagers, or the environmental damages caused by the production of our current devices.

We will probably discover that the world is about to welcome the metaverse without even expecting the damages and the threats it involves.

Definition of terms :

The metaverse is a contraction of the words "meta" and "universe". It sounds like an enhanced version of virtual reality, but some people think the metaverse could be the future of the internet.

On the technical level, Arnaldi in (Fuchs et al., 2006) specifies that “virtual reality is a scientific and technical field exploiting data processing and behavioral interfaces in order to simulate in a virtual world the behavior of 3D entities, which interact in real time with each other and with one or more users in pseudo-natural immersion via sensorimotor channels”.

The objective for this report is to list the drawbacks of Metaverse and how can we interpret it as threat. In the first part, there will be a description of the video games and social media impacts on people. The report will focus on this two main points because they are major components of the Metaverse. Then the security of our personal datas on internet will be discussed, and the case of virtual groping to emphasise that our government polices are not yet prepared for welcoming the Metaverse. Finally, the ecological point will be reviewed as current events caused by our digital product. It is interesting to link what is happening today between our future : we already know about the global warming, non-recycled rubbishes which are eaten by sea animals, ice-burg disappearance : why do we keep going this way ?

II. RESEARCH AND METHODOLOGY

The metaverse can be approached by several topics and debates. At the start of each search, it is preferable to carry out a Minding map.

2.1. Minding map

It is a practical and intuitive tool that helps organize ideas, concepts, tasks and other elements without the limitations imposed by linear structures. Usually built around a subject or a main objective located in the center of the diagram, it is made up of branches that connect the initial concept of associated themes, then more specific elements. The mind map is an original and flexible alternative to other more structured forms of organizing ideas, as shown in Figure 1.



Figure 1. Minding Map

2.2. Literature search

Literature & research

Datase : Google Scholar, Netflix, Youtube.

Journals & articles: certified, well-acknowledge scholars journals.

Documentary and conferences : worldwide known, and certified. Documentary honoured by the critics.

Keywords : impact of metaverse”, “virtual place”, “security of datas and internet”, “video games and teenagers”, “social media and people.

Language : French and English

Year : 2016-2021

Title and abstract-based literature selection

Selection of relevant articles and journals which contains keywords.

Full paper-based literature selection

Read the summary, abstract. If it corresponds to the main topic, read the full article.

Remove : the articles which only focused on the advantages or the technical information which concerns the notice of does it work.

Figure 2. Research Methodology

In developing this review, data was collected through intensive research via the Google Scholar platform. Keywords were able to find articles from 2012 to 2021, but it is recommended that you select the most recent articles instead. Indeed, certain certified journals, and

recommended but too old can distort the events which are happening at present. It depends on the subject.

The keywords used for this search were for example: "impact of metaverse", "virtual place", "security of datas and internet", "video games and teenagers", "social media and people". Indeed, this review is focused on the impacts and influence that the virtual world has on humans.

Moreover, we chose articles with the highest level of relevance to the research scope, namely, sociology, digital media, science of management.

This review is also inspired by documentaries available on Netflix "Social Dilemma", or TedEX conferences published on Youtube. Even though these platforms are known only for delivering entertainment, they can be hidden from certified sources, and insightful for research.

2.3. Title and abstract-based literature selection

This stage consists in scrolling all the articles engined in Google scholar's until finding the right one. It is about selecting journals and articles which contains relevant the keywords related to the topic. Publications that did not include keywords regarding the influences and impacts of Metaverse were screened out. The total number of documents remaining after this was around 109.

2.4. Full-Paper-Based Literature Selection

In this section, we discuss how to find not only information, but the sources of information in the discipline or topic area. The information needed for your literature review will be located in multiple places. How and where research and publication occurs drives how and where the information is located, which in turn determines how you will discover and retrieve it. When we are looking for information sources for a literature review in economy, education or psychology, we generally use these five areas: the internet, reference material and other books, or evidence-based articles in scholarly, peer-reviewed journals, conference proceedings and papers, dissertations and theses, and grey literature. In addition, gaining time is also meant reading the abstract and the summary.

2.5. Results

According to the final paper selection, a total of 34 papers in journals shown in Figure 4 were manually screened by reading and exploring the titles and abstracts to identify and were identified for further analysis. Figure 4 shows the number of publications by year, extract relevant articles.

Figure 3. General results by percentage of publication by journals.

Figure 4. Publication by the years

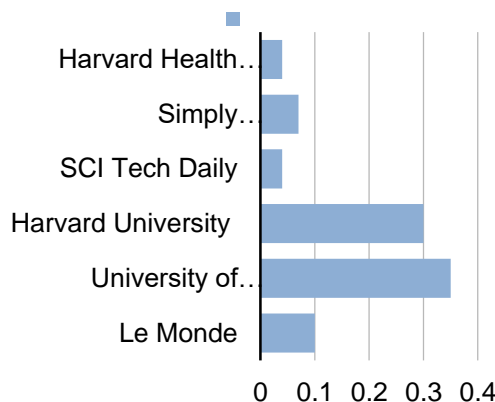


Figure 3. General results by percentage of publication by journals.

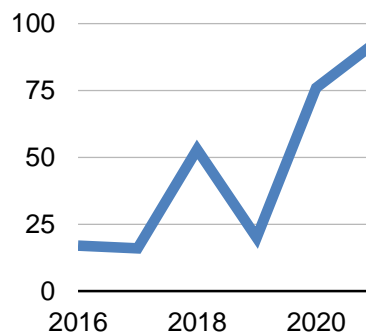


Figure 4. Publication by the years

III. Impacts on our mental health

3.1. Video Games

"According to one study from the American Journal of Psychiatry, between 0.3% and 1.0% of Americans might have an internet gaming disorder. Treatments for this problem are a work in progress, as the disorder is not fully understood or agreed upon, but can include public health approaches such as education and harm reduction, stricter labelling on the packaging, as well as cognitive behavioral therapy. There are even support groups, such as Computer Gaming Addicts Anonymous, which leverage the power of group support — also helpful in the treatment of other addictions — to the realm of gaming addiction."²

3.1.1 Why are teenagers vulnerable ?

The adolescence is a period in which teenagers have to deal with emotions and the search of life's sens question. Auto-regulation abilities of young people's emotions, as their brain maturity has not reach the

² W

term, are not yet totally acquired. Their emotion expression is physically multiplied without any filter because one part of their brain inhibition charged, is not yet completely developed. In the same time, teenagers are naturally looking for some strong and powerful sensations, such as tourist attractions. Thanks to video games, the interactions between screen and players, make people emotionally stimulated without moving from their room. This activity is a big attraction, so teenagers do not need to look for real interactions. Unfortunately, an extreme use of video game will make teenagers withdraw from school learning, an abandonment from extra scholar, familial or friendship activities.

In the same time, the adolescence is a precious period of time in which people learn and experiment the life events for a complete their adulthood, and maturity. Hiding themselves behind a screen put their autonomy back, yet which is essential.

3.1.2 Does exist any troubles generated from video games ? What are the consequences of a problematic use of video games ?

In its disease rank made up in 2018, the World Health Organisation (WHO) lists the trouble created by the extreme use of video games, as a pathology. Debates have been organized around the gaming impacts. We have to distinguish of its official agreement and the researches made for called this disease.

Various researches have recognised several bad impacts. There are the reasons why the WHO has integrated the video game's addiction³ in the its list of mental troubles linked to addiction behaviours. The particular point of this platform is that users's attention are easily appealed to the interactions between them and the screen. It involves an attention disorder, low physical condition, weaken muscles. As a result, teenagers who have this trouble are struggling in finding energy, and time to do others activities.

The risk associated with the extreme use of video games are :

- The loss of time notion :

The extreme use of video games (4 to 6 hours a day) has a major impact in the teenagers's notion of time. A stable day is divided into various physical activities, familial and friends moment, school schedule. For any addiction, the problem is not the addiction per se, but its consequences. "Take the example of tobacco. When we smoke, we absorb nicotine, responsible for the addiction, but also combustion products, which are highly carcinogenic. The smoker is thus sentenced to a double penalty: addiction and the risk of cancer. Because of their power of attraction due to the possibility of interaction between man and machine, games are "time consuming"."

Nowadays, video games commercialised goodies, digital bonuses, which make parents, teachers struggling in finding to offset the commercial pressure.

▪ the digital shelter :

The familial conflict are often the main cause of an extreme use of video games. In the situation of a helpless teenager face to the insatisfaction, the pain in the real world, digital reality becomes his new shelter. This reflex allows him to avoid debates, and arguments. However, this behaviour has impacts on homework, scholar examinations, and familial atmosphere. We are into a vicious cercle. The teenagers only avoids the conflict but don't resolve it.

▪ Attention troubles worsening :

The pre teenagers who are already suffering from attention disorder, drops other activities which require an important focus such as reading time, in aid of others which demand less attention, the video games for example, as it appealed the players's attention. They certainly develop some abilities such as visio-spatial functions, but they are useless for school. The reading activity allows people to grow their attention abilities, imagination, comprehension, which are useful for the fundamental competences (vocabulary, grammar, orthography).

▪ Agressiveness

The links between video games and violence has been studied and discussed for a very long time.

Contrary to popular belief, it is not the violent nature of games and the images of wars, fights and bloodshed that directly lead to adolescent violence in real life. The vast majority of players can make the difference between virtual and real. Many studies have focused on this point without showing any direct association between violent games and criminal conduct. Young delinquents play video games, like all adolescents their age, but there are many other major determinants, such as education or family background, that may explain their behaviour. On the other hand, researchers have studied an increase of aggressiveness in children and young people within an hour of stopping gambling. It is not the brutality that is

staged that makes you aggressive, but the frustration of having lost. During multiplayer games, the loser is often insulted and called a “noob”. Some video game publishers play on this frustration because they know it encourages the player to start a new game. This frustration explains why some adolescents have great difficulty in stopping play when their parents call them for the dinner : they are forced to stop their game, and as a result, they lose it. These excessive gamers also have sleeping disorder. It usually takes an hour of calm after a video game ends to be sufficiently calm and fall asleep.

– The isolation

In some cases, games is communication canal between people, but it can lead to the isolation when it is extremely used. Gamers chat between each other on digital platforms, and various multi-players games exist in order to enjoy playing in crew. Even some of them organise an appointment in real life. In the other hand, some people only decide to keep playing on their own, without showing any interest in making friends, or other activities. One of the Human needs is group belongingness : people will always look for playing a role in a crew, or creating interactions and friendship links. It is even harder to satisfy this need in virtual world because of the lack of real interaction.

3.2 Social media : a dangerous habit ?

Nowadays, few people are aware about their vulnerability on social media. These platforms have been created by wealthy companies which offer free app to their users. They have started this business thanks to the technology evolution such as smartphone, internet, and they will keep taking a huge importance because of the investment in Metaverse. Meta which has been created by Facebook, represents several promises for its current Facebook users. They will be able to experience the Metaverse, whenever, wherever and whoever you are. Facebook is not the only social network company which is investing in Metaverse, for example Google, Amazon, and the video games world as well. We can be very enthusiastic about this project, but we have to be aware about the current dangerous impacts that these companies's app have on us, as users. Maybe, we are about to discover that all these technology evolutions are changing too fast.

3.2.1 “Social media is a drug”

Dr Anna Lembke
Stanford University / School of Medicine
Medical Director of Addiction Medicine

« Social is a drug : we have basic biological imperative to connect with other people that directly affects the release of dopamine in the reward pathway. Millions of years of evolution, are behind that

system to get us to come together and live in communities, to find mates and to propagate our species. So there is no doubt that a vehicle like social media, which optimizes this connection between people, is going to have the potential for addiction ».

As the Dr Lembke has summarized, social media provided by Facebook, Instagram, Pinterest, Twitter for example, are mixing billion of people together on one platform. This action means in another way, playing with people's psychology. In other words, each person needs to find a group in which they will satisfied their human needs such as : self-esteem, feeling of group belongingness, self-satisfaction⁴. It is obvious that teenagers would be lost in satisfying them in a million people community. Several beauty standards are even more showed by pictures, numbers of likes and comments on social media, which makes easily people insecure with their appearance.

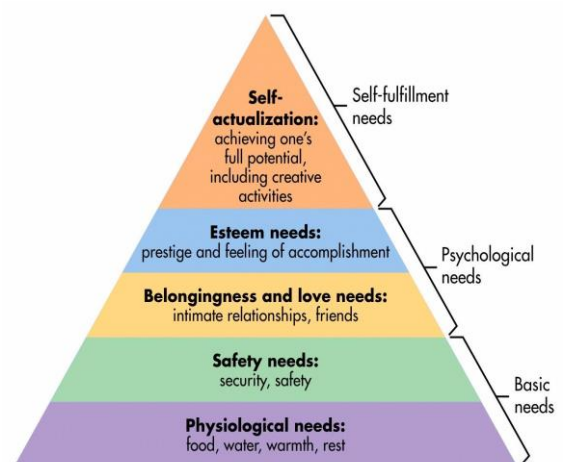


Figure 5. Pyramid of Needs studied by Abraham Maslow in 1940

- Pleasure-pain balance : “different classes of neurons control positive and negative motivation, sending opposing signals along a shared motivation-processing brain circuit. Ultimately, the balance of activity between these two groups of cells may determine whether a person acts to seek out pleasurable experiences or avoid negative ones”⁵. The social media throw the scales out of balance.

Dopamine deficit states : “Dopamine is a chemical produced by our brains that plays a starring role in motivating behavior. It gets released when we take a bite of delicious food, after we exercise, and, importantly, when we have successful social interactions. In an evolutionary context, it rewards us for beneficial behaviours and motivates us to repeat them.

3.2.2 The social media's impacts on Self-esteem

We curate our lives around this perceived sense of perfection because we get rewarded in these short-term signals (hearts, likes, thumbs up..), then we conflate with truth.

Jonathan Haidt, PhD

NYU Stern School of Business / Social Psychologist

Author *The Righteous Mind : Why Good People are divided by politics and Religion.*

« There has been a gigantic increase in depression and anxiety for American teenagers which began around 2011 and 2013. The number of teenage girls out of 100 000 in America, who were admitted to a hospital every year because they cut themselves or otherwise harmed themselves, were stable around 2010, and it began going way up : up 62% for older teen girls for example. This movement points to social Media in 2009.

The whole generation of 2000 year are more fragile, stressed, depressed

IV. Security

The reality felt while living into VR is made out of bits of data. As a result, it is stocked in datacenter owned by companies. “ Those private companies will invariably impose terms of use that purport to bind users of the hardware and software. Those terms may disclaim liability for harm. They may assert ownership over the things we create in VR. And they may require us to consent to having information about our conduct in the virtual world recorded and shared.”⁶

Brick by brick, our actions, steps, localisation are observed, recorded and tracked but in real world, there are still some time in which we are not used as a data product. Unfortunately, virtual reality doesn't give this privilege. We have to think about the reasons why companies invest billions of dollars in Metaverse, Virtual reality projects : Internet is already a huge platform in which people find their satisfaction (shopping, address, contact, social media etc.), what is behind these investments ?

We have to back again in the Social Dilemma documentary which summarises our current problem about our security on internet. In fact, the main

message that is provided is as human, we are used as « rat on lab ». In other words, Facebook, Instagram, Pinterest, Google and many other big groups use our personal data (purchasing, localisation, private messages), to create a digital model of us in order to control and manipulate ourselves. This is all about data : these companies know about our taste, preference, even the relations that we have. All these information allow companies to send you at the right moment, at the right time, advertising.

Have you ever wonder why is Google free ?

We are the google's product. Indeed, our personal data are precious and represent big value for companies. As a result, Google sells our personal information to companies.

It is that way how Google and Facebook for example, are the wealthiest groups in the world.

4.1 Virtual groping

Physical, sexual aggression, harassment can happen in virtual reality as well. Only few months after the commercialisation of VR in the world, a woman named Jordan Belamire (pseudonym) was “virtual groped”.

She was playing a multiplayer zombie shooter game when another player—who recognized Belamire as female by her voice—began to make gestures that seemed like virtual groping:

She reported his behavior in virtual reality seemed so realistic as to be disturbing.

Belamire had earlier in her article described how realistic a VR cliff seemed to be, triggering her fear of heights.

“The virtual groping,” she said, “feels just as real. Of course, you're not physically being touched, just like you're not actually one hundred feet off the ground, but it's still scary as hell.”

Her story suggests that people react physiologically to touches in VR much as if they had happened in the physical world. Under current law, virtual groping probably wouldn't be a crime. It isn't sexual battery, because there's no touching.⁷

Our law tends to consider “ assault” as including an actor's intentionally putting someone in “imminent apprehension” of “offensive contact,”⁸ but criminal law tends not to outlaw such behavior unless it actually causes injury

Virtual protection are only define as crimes that are avoidable with technical measures and maybe other won't be outlawed. For example, there is no special feature that we can use to avoid someone trying to steal money from us in virtual reality or augmented reality by threatening you with attack in the real world : “I know where you live in the real world, and I'll burn

down your house if you don't pay me \$10,000 worth of VR goods".

It is hard to imagine that Police officers can take the "virtual groping" seriously because there is no real physical touch, but as we know "one in two children play every day, compared to one in three adults. SELL reports that 96% of 10-17 year olds are gamers (4.41 million young people of this age), compared to 69% of 18 and over (32.75 million)."9, we can imagine how this kind of unwholesome behaviour, influence the children's minds.

V. Metaverse : non ecological friendly

5.1 Pollution caused by our digital products

In the numerical era, the more we dematerialize, the more we consume material and energy. If we take the example of a simple computer : its production required a lot of metals extracted from all over the world : "Congolese tantalum, Bolivian lithium, Australian gold, Chinese rare earths." 10 These extractions have a large impact on the environment : it involves a lot of energies, water, resources and it is often an invisible pollution.

For example, to product a TV, we have to extract 2,5 tons of raw material, which consume 350 kilograms of CO₂. In other words, the environmental impact of this machine is important, even before being used by customers. "And the more complex the equipment, the heavier its impact on the environment. Making a 60-inch 4K display will weigh much more heavily on ecosystems than a 30-inch TV. Yet guess which model the manufacturers encourage you to buy?"11

In addition to this excessiveness consumption, the mineral industry keeps creating damages on the ecosystem.

"In the east of the Democratic Republic of Congo, we speak of "blood minerals" (tungsten, tin, tantalum, gold) because their illegal trade finances the civil war."12

- "In the Brazilian Amazon, the Waimiri-Atroari rivers are permanently contaminated by the tin and tantalum mining industry."13
- "In the Baotou region of China, rare earth mineral results in significant toxic releases to air, water and soil."14

As for the end-of-life products, the United Nation Organisation has evaluated "75% of electronic rubbishes escape from the legal recycling associations. They are illegally exported to China, India, or Africa, to be thrown in a free garbage dump such as Agbogbloshia, Ghana. Moreover, the waste

that reaches the recycling channels, their design prevents the recovery of raw materials. Many metals from digital technologies (gallium, germanium, indium, tantalum, rare earths) are hardly recycled."15

5.2 Pollution caused by networks

5.2.1 Network is not completely "intangible"

It is composed by various IT equipments (computers, ropes, aerial) which allows storing and transferring datas to our home terminals (videos, pictures, emails..). All these digital technologies are products and has to be supplied, which involves a lot of energy.

5.2.2 Streaming videos

"Video streaming alone represents 60% of data flows on the Internet, due to the weight of video files. A film like Pulp Fiction, offered by Netflix in very high definition (4K), weighs around 10 gigabytes, or 300,000 times more than an email without attachments (30 kb). According to the think tank The Shift Project, the consumption of video streaming (VoD, pornography, Youtube, social networks, etc.) emits nearly 1% of global CO₂ emissions. This is less than the carbon footprint associated with the manufacture of the terminals. It is nevertheless of great concern due to the galloping growth of video traffic."16

Its carbon footprint is increasing because the consumption of fossil energy (gas, carbon) to supply the data centres. It seems Amazon, Netflix, Pinterest, Twitter have a lot of work to do to reach 100% recycling energy engagement.

5.2.3 The impact of video games on the climate crisis

More and more people are playing video games, no matter the age, gender, job in the world. Virtual reality in video games is really popular, some avatars have huge notoriety, and some festival are organised in this underground world such as Travis Scott festival in Minecraft.

In the other side, it doesn't seem that we are completely aware about the video games's footprint :

"Video games might not appear inextricably tied to the climate crisis, but they are. There's the electricity use of gaming devices themselves, estimated to sit at 34 terawatt-hours of energy each year, or the equivalent of 5 million cars."17

As we have seen, the product of our IT devices involves a lot of energy, and it is really hard to recycle

this raw material already used. Video games are an accumulation to this problem.

“Space Ape Games, a London-based studio with approximately 120 employees, has already begun to assess and reduce its own carbon footprint, spearheaded by a self-appointed “green team” involving head of content Deborah Mensah-Bonsu, CEO John Earner, and head of technical operations. A page on the organisation’s website details its emissions; 177.6 tons for flights, 47.8 tons on commutes, 51.9 tons on office device purchases, and a mammoth 376.8 tons on the company’s cloud data usage which powers its iOS and Android titles. The studio footprint doesn’t include the energy use of the devices its 150 employees use during the workday, but these are powered by the renewable energy provided by building management.”

VI. Conclusion

To start with the drawbacks, we have seen the impact of video games on mental health. In fact, the teenage period aims young people to discover better themselves, how to deal with other people, find a group in which they will be recognised and love for who they are. Video games can be taken as an easy alternative to avoid human interactions, which can be sometimes difficult to create and to handle. In fact, it is often hard to find persons in which we can create and share precious and friendship moments. In playing in an immersive game, in another place far from the real world, teenagers has found a shelter, more than a simple game. In addition, digital activities sometimes develop attention disorders and as a result, teenagers are more struggling with school homework and examinations.

As the Maslow’s pyramid of needs well demonstrate, everyone are constantly looking for a way to satisfy their primary and psychological needs. Social media can be considered as a short-term satisfaction. In other words, the thumbs up, comments, the number of subscribers can give people an idea of their similarities between them and the beauty standards. Because of this superficial platform, people, especially teenagers are constantly compare their lifestyle, appearance, body type to others. At the very beginning, social media was a great idea to connect people from all over the world, share their opinions and lifestyle but the result over the years is more about dividing people, and developing a superficial competition between each other's . As a result, some people can feel a lot of pressure and a gap between what they look like, and what it is “accepted and loved” by social media communities. Since the digital platforms are popular around 2010, the suicidal attempts have increased by 62% for older teen girls for example. As we know what is currently happening because of 2D social medias, are we really prepared for welcoming Metaverse in our habits ?

The second part described how can big, wealthy groups as Google, Facebook, Instagram, Pinterest can control our behaviours via a simple smartphone. Their main purpose is to keep our attention focused on screen, to be updated with all new Information and products. An intelligent algorithm has to obey the orders such as the more our attention is appealed, the more we are susceptible to consume. And how can algorithms work ? They need a lot of datas. In fact, our personal information such as our localisation, consumption habits, friends on social media, job, occupation, activities are precious and represent a lot value. How do Google or Facebook have becoming the wealthiest groups in the world in providing free App ? Well, at the first sight, it doesn’t really make sense. However, we have to be aware what is happening behind the curtain : millions of companies look for our attention to buy their products, Google is the most platform in which people are connected. The more they invest in Google, the more their ads, website are shown on the search engine. Who are the customers ? The companies. Who are the product ? Us.

Without Metaverse, there is still some moment in which we can set free from the digital platform, without being controlled. So, what will be the impacts of Metaverse on our behaviours ?

Virtual groping is an example what happens in virtual reality game. Even without physical touches, teenagers can develop traumas. How do the governments outlaw this kind of crime ? Is it consider by our courts of justice ?

Finally, the carbon footprint of networks, virtual platforms consume a lot of energy to provide decent speed connectivity for all worldwide users. The consumption can be compared as aviation fuel consumptions, or cars journeys for example. Even if it is not tangible, we have to be aware about the CO2 emission rejected to supply energy to our devices. We can imagine Metaverse would get our ecosystem worsen as it currently is nowadays.

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 10. See, e.g., CAL.PENALCODE§243.4(e)(1)(West2018) (“Any person who touches an intimate part of another person, if the touching is against the will of the person touched, and is for the specific purpose of sexual arousal, sexual gratification, or sexual abuse, is guilty of misdemeanor sexual battery . . .”).
 11. RESTATEMENT (SECOND) OF TORTS § 21 (AM. LAW INST. 1965). Likewise, one could imagine this scenario being actionable as intentional infliction of emotional distress—but in this Part we are specifically considering how criminal law (not just tort law) should apply to VR and AR. 116 MODEL PENAL CODE § 211.1(2)(a) (AM. LAW INST. 1980).
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