The virtual experience:
A qualitative study among young adults on their perception of Facebook Metaverse

Author: Wasaja Israel

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Supervisor: Linda Paxling

Examiner: Jay Bolter

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Abstract

This thesis investigates reactions of young people in Malmö-Sweden about the proposed Facebook Metaverse. Gauging young people’s association/reactions about Facebook Metaverse before its practical existence is the study's main focus. The thesis assesses Web 2.0 as a pivotal mark that enabled development of social networks and virtual worlds like Facebook Metaverse. Through qualitative interviews and semiotic analysis in data collection, three main themes became noted as both theoretical perspectives and findings of the study that entails the young people's opinions on the soon to be launched Facebook Metaverse. The 3 themes are; Connectivity & interactivity, Anonymity and identity, and Datafication, privacy & commercialisation. The results highlight pros and cons with the Facebook metaverse that encompasses risks of intrusive data collection, possibilities for self-empowerment through avatars and new ways of communicating. The thesis concludes with a created artifact/altered video that presents a critical aspect of Mark Zuckerberg’s version of the Facebook Metaverse informed by the research.

Keywords

Facebook Metaverse, Web 2.0, Social networks, Virtual world, Datafication, Interactivity, Connectivity, Anonymity, Commercialisation, Semiotic analysis.
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1. Introduction

Within the high technological industry, there is continuous competition and fear of extinction; firms are in a continuous desire for innovation which encourages them to converge multiple technologies, invest in research and development, and engage in collaboration (Gnyawali & Park, 2011). This principle and practice of collaboration has been adopted among the major tech companies, Facebook, Messenger, Instagram and WhatsApp. They now have the same owner and operate under a new company name Meta (CNET, 2021). On 8th October 2021, Facebook co-founder Mark Zuckerberg announced that Meta is in the final phase of launching its latest technology advancement called the Facebook Metaverse: a virtual world presumed to function around digital societies and economies (Oremus, 2021). The Facebook Metaverse is described as a never-ending 3D digital world, a vast online realm where people can perform daily actions such as attending meetings, social gathering, playing games, and live conferences (Brown, 2021). The expectation and anticipation surrounding the Facebook Metaverse has been growing and transcending in society ever since the announcement (Hein, 2021). The Facebook Metaverse is expected to enable many opportunities such as social connection and entertainment (Brown, 2021). As a social network, it could enable surveillance and datafication (Mayer-Schönberger & Cukier, 2013). The Facebook Metaverse enables anonymity, which could function as a hub for many sorts of behaviours (Castaño-Pulgarin et al., 2021). It exemplifies modern tech companies’ ability to exploit users' data, but also the dilemma of sustainability as more resources are being deployed in the development of modern technologies (Bucher, 2012). There's concern of whether such technology will be accessible to many or just for the wealthy few (Brandtzaeg, 2012). In 2018, Facebook Inc. was sued for misuse of people's data without even pointing a camera in
people's homes (BBC, 2021). One wonders what could happen if a company like that has an opportunity of glancing in people’s lives through Facebook Metaverse. Gilbert (2022) described the Facebook Metaverse as a futuristic version of a world that is worse than the one we already have. Canales (2021) described the idea as a move for Facebook Inc to divert the conversation from current problems onto an exciting and futuristic Metaverse. The intensive publicity that Facebook Metaverse has attracted globally, has motivated this study to explore the way people have perceived it.

Metaverse is described as “a shared, realistic, and immersive computer simulation of the real world or other possible worlds, in which people participate as digital avatars” (Metaverse, n.d.). Metaverse as a term is believed to have acquired its significance in media through a 1992 science fiction novel called Snow Crash by Neal Stephenson (Narin, 2021). In the novel, the author envisioned a dystopian world in which Hiro - the main character in the novel - alternates between a dismal actual reality and a 3D virtual cityscape with a size of about forty thousand miles, known as the Metaverse (Brown, 2021). The ideas of Stephenson’s work inspired developments in other media forms such as the Steven Spielberg movie Ready Player One from 2018, and the Matrix series of writer Ernest Cline. Beyond books and movies, the idea of a fantasy world has also been traced in video and mobile games such as World of Warcraft and Farmville (Brown, 2021). In other words, the history of Metaverse has encompassed remediation of earlier forms of media, and has evolved with the idea of reducing geographical constraints to extend user connectivity and interaction using virtual reality. Bolter and Grusin (1999) describe virtual reality as a medium whose purpose is to enable viewers/users to disappear into virtual worlds and networked online space.
1.1. Aim of the study

The purpose of this study is to gauge reactions of young people in Malmö-Sweden to the corporate construction of the Facebook Metaverse. This study will be a success if it produces participants' reactions about the Facebook Metaverse, enables the selection of main themes out of the participants' reactions, and identifies how such reactions mirror insights/predictions of scholars. This will shed light on probable risks and opportunities that might occur with the development of Metaverse.

1.2. Research question

- What are the opinions of young adults concerning the proposed online social network the Facebook Metaverse?

1.3. Significance of the study

Based on the literature review, Most studies conducted about virtual worlds have been based on already established Web 2.0 technologies. Especially about the online platform Second Life, and less on the future Facebook Metaverse (Narin, 2021). In attempts to study other virtual worlds, scholars have concentrated on studying virtual worlds’ experience using quantitative methods for collecting data and assessing findings (Domingo & Bradley, 2017).

This study will generate qualitative knowledge about the Facebook Metaverse using semiotic analysis. The study will contribute to the existing literature of virtual worlds and Web 2.0 by shedding light on potential challenges and opportunities that are expected of new digital platforms like Facebook Metaverse in society.
2. Background

2.1. Web 2.0

This section traces some of the possibilities that enabled development of online social networks like Facebook Metaverse. The thesis examines Web 2.0 as the pivotal development that assisted transformation of business operations (i.e., from traditional business models to online, with the internet as the new platform) and also innovation to be centred on the online users' interactivity (O'Reilly, 2006).

Churchill (2020) describes Web 2.0 as a metaphor for a wide range of different emanating internet applications such as blogs, wikis, social media and podcasting. Tech companies have been identified as the major drivers of emerging models of internet application in which newer ways of consuming the internet are being introduced (Churchill, 2020). Web 2.0 can be understood as a pattern that is evolving and transitioning business i.e. from operating in a physical place to operating within the computer sphere of which the internet is the platform (O'Reilly, 2006). Web 2.0 indicated that success on the “new platform” the internet, meant understanding its rules. Such rules encompass; using software as a process of engaging with users, building applications that can function in between devices and using others’ open data and services (O'Reilly, 2006). The evolution of Web 2.0 enhanced collaborative content creation and allowed incumbent corporate players to take advantage of the emerging models of community. It enabled corporate actors to enhance content creation and commercial attention, thereby being able to develop concepts that encompass social apps as a way for audiences to become creators (Bruns, 2008). The expansion and evolution of Web based services and social apps like blogs, folksonomies
(user’s generated photos, videos, tags), social-networking sites, video-sharing sites, wikis etc., and especially the emphasis of user participation, has been the predominant association of Web 2.0 by some scholars (Harris & Rea, 2009). As development of social apps enhances the participatory culture, corporate players such as tech companies have acquired opportunities to exercise research and development strategies in order to pursue innovations and better profit margins. Hence, Web 2.0 concepts contributed to increased competition and cooperation among firms (Gnyawali & Park, 2011).

Two types of Web 2.0 technologies have been chosen to form the overarching context of this thesis; social networks and virtual worlds. The Facebook Metaverse can be seen as encompassing both social networks and virtual worlds. Both technologies can exemplify the aspect of Web 2.0 enabling evolution, expansion and extension of technologies and designs. Thus, virtual worlds and social networks’ innovation can be understood, in relation to a process that changes over time as the industry evolves (Harris & Rea, 2009).

1. Social network

Social networks are described as social structures that constitute either individuals or organisations that are linked by either a particular interdependency or multiple interdependencies (Harris & Rea, 2009). Facebook, Instagram, WhatsApp, Twitter, LinkedIn etc. are some of the examples of social networks (Harris & Rea, 2009).

Elstad (2016) studied social networks as means for expanding education boundaries and findings indicated that social media’s presence within society provides an opportunity for schools to link out-of-school learning cultures with educational culture. This is based on the assumption that new beginners of social media are no longer mere content consumers. They can create and distribute content in digital formats as well (Chittenden, 2010). With the
presence of social media like Facebook and Twitter, content sharing exceeds constraints of the classroom and reaches the outside world. By sharing content with others, the new learners also become part of the many intertwined and networked communities, small and large, local and global. This comes with both expected and unexpected, positive and negative feedback via features such as “like buttons”, “comments” and “emojis” within social networks (Elstad, 2016).

Social networking features enable organising of socially-shared social views, norms, and also provide convenience to stand up to social issues (Biesta, 2011). Social networks’ tools enable ways to affect peoples’ attitudes, beliefs, feelings and simplify social bonding (Ellison et al., 2007). Social networks can also enable contact between different society groups such as minority and majority, immigrants and hosts, members of adversary groups and also contribute to reduction of social prejudice and stereotypes (Elstad, 2016). Youth use social media to seek confidence in others and to form alliance networks (Boyd, 2015).

Social networks can however also be a temptation that can cause addiction problems (Chou & Hsiao, 2000). In the study of social networks’ users and implication, Brandtzaeg (2012) notes that there are higher positivity of well being among social-networking-site users than nonusers, but also a higher level of loneliness among male users compared to nonusers. Social media affects personality development especially among youths who may find it difficult to develop self-esteem, become concerned about physical appearance, become attentive to narcissism and extraversion behaviours (Van Dijk, 2013). Additionally, the presentation of oneself in internet-based media can lead to the need of seeking affirmation of one’s self from what others think (Ong et al., 2011).
2. Virtual worlds

Virtual worlds have been understood as computer simulated surroundings which allow users to socialise among themselves regardless of geographical confines (Harris & Rea, 2009). In virtual worlds, users portray themselves as avatars and these may either be pre-programmed and randomly assigned to users, or users may customise their own representations. Such representations can be based on the user’s gender, facial appearance and other choice of preferences (Brown, 2021). Virtual worlds involve application of virtual reality and augmented reality (Bolter et al., 2021). Virtual reality enables immersion and visual illusion, while augmented reality focuses on enabling users’ multiple senses to interplay and emerge the physical and the virtual to create a polyaesthetic experience to the user/viewer (Bolter et al., 2021).

Web 2.0 enabled transformation and creation of virtual worlds and social networks; however, it also enabled tech companies to collaborate and leverage on user generated content, remediate earlier forms of media and extend innovation (Gnyawali & Park, 2011). Linden Lab is one of the companies that leveraged on possibilities of Web 2.0. On 23rd June 2003, the company launched an online platform known as Second Life that became popular especially in the early six months of existence when over one million regular users were recorded (Strickland & Pollette, 2021). Tidy (2021) reflects on the experience of Second Life and notes that it is the internet’s first ever attempt and earliest experience of the Metaverse. A virtual world accessed via Linden Lab’s software where users known as residents are able to create essential, practical and near enough representations of themselves known as avatars. The avatars could be anything and whoever the user wants to be and could interact not only with other avatars and objects, but also travel to places. According to Brown (2021), users in
Second Life are not a game as there are no challenges set or competition that they have to do. Playing games is one of the aspects that one can do in the Second Life virtual world. Brown reflects further on Second life and states that users:

“could listen to Kurt Vonnegut give a live talk, dance at popular nightclubs like Hot Licks and Angry Ant, shop for both virtual clothes and real ones at the Armani store, visit reconstructions of famous landmarks like Rockefeller Center, have virtual sex—and, most famously, speculate on digital real estate” (Brown, 2021, Introduction section, para. 1).

In an attempt to understand virtual worlds and more so the meaning of Metaverse, Narin (2021) conducted research in which focus was mainly directed towards examining the academic studies on the Metaverse in the past twenty years. In the study, Narin (2021) used a content analysis method and searched in the Web of Science for journal articles that contained: the keyword Metaverse, Metaverse applications and methods being used by the articles in studying Metaverse. The findings indicated that most articles were within the field of education in which the researchers aimed at designing a learning process that can assist students to be engaged within topics. The findings also indicated that Metaverse was studied using prototypes, and also as a concept used synonymously with virtual worlds or Second Life in many articles (Narin, 2021). Furthermore, Narin (2021) notes that many other scholars have studied virtual worlds as virtual reality.

Within the recent studies about virtual worlds, the emphasis has been on finding out the participants perception on the use and value of 3D- virtual environments. For example, Domingo and Bradley (2017) studied students' perception of virtual reality as a learning tool in which a grounded theory approach was used in collecting and examining data. 21 students
were acquired as a sample audience, 5 of which were men and 16 women. Students were then provided with Firestorm, a tool which they could use to access virtual worlds like Second Life. This was followed by a discussion on the students’ experience in groups before submitting a summarised 2 to 3 pages group reflection on working with virtual worlds. The findings of this study indicated technical difficulties such as internet disruption, losing user accounts and often having to create new ones, inadequate Wi-Fi and inadequate computer technology, amongst others. Some students preferred using alternative social platforms such as Google hangouts and Skype so that they could see each other in real time and not as avatars. The findings also indicated positive experiences of operating in the virtual worlds such as improving social interactions and reducing social anxiety (Domingo & Bradley, 2017).

Domingo and Bradley’s (2017) research presented evidence of social interaction within virtual worlds and also knowledge regarding positive and negative aspects of online social networks, however the literature put much emphasis on technical capabilities associated with virtual reality; how virtual reality can be used in teaching as well as quantifying the comparison between negative and positive aspects of virtual reality. Due to having a sample group of only students from the same school and level of education, the study does not examine how such virtual worlds can be understood in a society context. Additionally the study confines participants’ knowledge within educational institutions especially to support teaching and learning using virtual reality in a controlled environment.
2.2. The Metaverse

The Metaverse concept can be defined as a layer between a person and reality which functions on the assistance of augmented reality and virtual reality (Damar, 2021). In 2021, Facebook stressed that it will be in collaboration with policymakers, experts and other industry partners in exploring developments within the Metaverse concept (Bosworth, 2021). Facebook also expressed interest in investing 10 billion U.S. dollars by the end of 2021 in its Reality Lab segments where augmented reality and virtual reality content, hardware and software components are developed (Statista Research Department, 2021). In August 2021, the company introduced the virtual service Horizon Workrooms; a virtual room that enables people with virtual reality headsets to interact as holograms in a way similar to in-person gathering (Johnson, 2022). In September 2021, the company unveiled Ray-Ban eyewear that enables video recording and announced that it had invested 50 million U.S. Dollars in research and development of the Metaverse concept (Bosworth, 2021). During the Facebook Connect AR/VR conference in 2021, Facebook announced the change of its name to Meta, a change that many have viewed to be a strategic decision for the company to distance itself from the negative press associated with social media networks and also take a step into creating virtual worlds (Hein, 2021). At this event, the company expressed itself to the public for the first time as Meta, and unveiled further developments of the Metaverse such as: 

*Project Cambria*, which stands for proposed developments in Augmented and virtual reality headset, and *Project Nazare* which stands for Meta’s fully developed augmented reality 5 millimetres thick spectacles (Johnson, 2022). By the end of 2021, Meta’s sister apps, (Instagram and Whatsapp) revenue had increased to a total of 115.66 billion U.S dollars, while its virtual reality lab had generated 2.27 billion U.S dollars revenue (Statista Research
Department, 2021). Despite the above developments and revenue generated by Meta, one third of 876 Americans surveyed by YouGov showed that they were unaware of the Facebook Metaverse. The survey also showed that 31% had claimed to know what the Metaverse is expected to be and 36% of them expressed interest in taking part in the Metaverse. Respondents of age 18-29 expressed 51% interest in participating in the Metaverse, 30-44 counted for 43%, 45-64 counted for 32% while 65+ counted for 19% interest in joining the Metaverse (Hein, 2021). The popularity of such online concepts has elevated, more so with uncertainty brought about by COVID-19 pandemic restrictions (Damar, 2021).

3. Research method

3.1 Scientific approach

Researchers’ approaches, theories, models, hypotheses and framework of research may differ depending on the aim of the research (Bryman & Bell, 2007). In this study, the researcher’s interest lies in understanding the individuals’ social world and relating their experiences to how they have perceived the proposed online social network Facebook Metaverse. For this aim, the thesis adopts an interpretivist approach. The interpretivist approach deals with understanding individuals' behaviours and social settings. It also perceives individuals' knowledge to be acquired through social constructions like shared meanings, language and artefacts that individuals associate with (Bryman & Bell, 2007). Through interpretivist approach, researchers are able to acquire participants’ rich, in-depth and relevant lived experiences that are related to the studied phenomenon (Bryman & Bell, 2007). Researchers are advised to interpret the social world from individual participants' views and also
recognise that their own life experiences can influence the interpretation of the studied phenomenon (Miles & Huberman, 1994).

Bryman and Bell (2007) define theories as an explanation of the observed regularities. However, determining the nature of the relationship between theory and research is never an obvious matter as there are usually many factors to consider. Researchers are advised to consider the form of theory being used and whether data are collected in order to test theories or to build theories (Bryman and Bell, 2007). Ghauri et al. (1995) categorize these aspects into deductive approach and inductive approach. In deductive approach, theories are used in order to prove hypotheses, and tested through collecting data and thereby leading the researcher to either prove or disprove the hypotheses (Ghauri et al., 1995). In an Inductive approach, explanations and conclusions arise from empirical observations and thus leading the researcher to draw theories and hypotheses (Ghauri et al., 1995). Bryman and Bell (2007, p. 13) illustrates the two approaches as:

“Deductive: theory → observations/findings, Inductive: observations/findings → theory”. In this thesis an inductive approach was adopted.

3.2 Qualitative interview research method

The study has adopted a qualitative interview research method in order to understand the contextual circumstances in which the participants' knowledge can be contextualised, reflected upon and also be examined in a way that both the participants and the researcher can understand each other and be able to generate scientific knowledge (Qu & Dumay, 2011). Using interviews is widely considered to be one of the most used qualitative data collection
methods, deemed most effective and a suitable way for carrying out field studies that require a guided question and answer conversation (Qu & Dumay, 2011).

Interview research methods have been commonly practised in dating, during employee recruitment, therapy, police investigation, marketing, philosophical dialogues, focus groups and in many other situations (Tracy, 2019). Alvesson (2010) identifies neopositivism, romanticism and localism as three major positions taken in conducting an interview. Alvesson (2010) acknowledges use of mixed positions in interviewing and mentions that it is the duty of the researcher to be explicit in mentioning the shift between the positions. In this research, during the participant interaction, the researcher adopted a mixed position approach to interviewing and it was inspired by Qu and Dumay (2011, p. 241) summary of the 3 major interview positions. The shift in positions are presented below;

1. The researcher adopted a Neopositivism perspective that views the interview as “a tool for collecting data” and himself as a researcher with capability to “trigger an honest response” from the participants.

2. The researcher also adopted a Romanticism position that views interviews as “an empirical situation that can be studied” and also viewed himself as a person who is flexible to adapt to the complexity of the “interpersonal interaction”.

3. The researcher adopted a Localism position in which he viewed himself as “an empathetic listener to explore the inner world of the interviewee” and also viewed participants as people who can “reveal real life experiences and complex social reality” (Qu & Dumay, 2011, p. 241).

Apart from the named 3 positions, the researcher also used a semi-structured level of structuring the interview. This enabled a flexible and organic conversation with the
participants. The researcher adopted Tracy’s (2019) principle of semi structured interview in which the researcher can enter an interview “with flexible questions, probes, or with just bullet points” (Tracy, 2019, p.158).

3.3 A published video in data collection

Mark Zuckerberg, while at the Facebook Connect AR/VR conference on 8th October 2021, announced to the public that Facebook was changing its name to Meta. A theme under which the Facebook Metaverse will be developed. At the time when this study was being carried out, the Facebook Metaverse as a social network had not been launched yet. Therefore, in order to gather peoples’ reaction towards the Facebook Metaverse, CNET’s (2021) published video of Zuckerberg’s announcement of the Facebook Metaverse was used in a qualitative interview study. As several of the participants were fairly new to the metaverse concept, the video was used to introduce and refresh participants' thoughts about the Facebook Metaverse, to generate empirical data and to provide participants with the only first hand public experience of the soon to be launched Facebook Metaverse. During the process of data collection, participants could stop the video and take screenshots to illustrate their thoughts about the Facebook Metaverse.

3.4 Data collection procedure

Choosing who to interview in most cases is not self-evident. Therefore, Alvesson (2010) recommends dealing with the selection of participants as a design issue, in which the researcher considers factors such as access difficulty, willingness of the participants, time

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constraints and geographical distances. The thesis adopted this advice in selecting the sample
group. Participants were approached in their comfortable times/places. The study was carried
out in February 2022. Being that the study was conducted during the Corona pandemic,
Covid-19 protocols were followed. Due to Covid-19 pandemic restrictions, difficulty in
accessing a wider audience, unwillingness of many people to be part of the study and
amongst other factors, the thesis adopted Alvesson (2010)'s advice and selected participants
who lived in Malmö at the time of the study. The researcher himself is also from Malmö. In
that way, it became convenient to choose this group of participants and to minimize
geographical distances (Alvesson, 2010).

Researchers are advised to have real scientific aims, and gather data on different
aspects of life. This requires being equipped with tools that can enable collection of concrete
evidence. The evidence can be documented through marking lists, recording speech, habits,
customs and taking field notes on actions as they occur (O'Reilly, 2012). During the
interaction with the participants, the researcher equipped himself with interview materials
that included; an iPhone SE 2nd-generation which was used for voice recording, a Macbook
pro model- 2015 which was used to play a video to the participants, a hand notebook and a
ball pen which were used to record quick observations and also for eye contact resting in case
the interview situation required flexibility of eye contact from the researcher. The interaction
with the participants was booked to last 1 hour.

3.5 Participants

Based on the purpose of study, five participants were interacted with regarding their
perception of existing social networks and forecasted virtual platforms like the Facebook
Metaverse. The selection of the participants was inspired by purposive sampling. Purposive sampling is when the researcher thoroughly examines how he or she can attain a sample group (Tongco, 2007). In purposive sampling, the researcher relies on his or her own judgement in selecting participants, and all those that are chosen are selected because they fit a certain profile (Tongco, 2007). Alvesson (2010) mentions that it is important to consider breadth and variation among participants to cover the context that one aims for. The thesis adopted this advice in selecting participants. The thesis aimed for people of different age categories between 19 and 30 with knowledge and experience about social media and social networks. The participants identified themselves as either male or female. Two of them were male and three of them were female. In that way the thesis aimed at attaining the principle of representativeness when choosing interview participants as recommended by Alvesson (2010). Alvesson (2010) also recommends attaining the principle of quality in doing interviews. In order to attain this principle the thesis considered participants who were social network registered users, with a registered Facebook account, Instagram account and WhatsApp account. Some of them also had other social media and social network registered accounts. The participants were also people that the researcher had met on at least more than five occasions before the interview.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Age</th>
<th>Gender</th>
<th>How long he/she has been using social networks</th>
<th>Social Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannah</td>
<td>19</td>
<td>Female</td>
<td>More than 5 years</td>
<td>Instagram, Facebook, WhatsApp</td>
</tr>
<tr>
<td>Veronika</td>
<td>25</td>
<td>Female</td>
<td>More than 7 years</td>
<td>Instagram, Facebook, WhatsApp</td>
</tr>
<tr>
<td>Maryam</td>
<td>20</td>
<td>Female</td>
<td>More than 5 years</td>
<td>Instagram, Facebook, WhatsApp</td>
</tr>
<tr>
<td>Wahelie</td>
<td>29</td>
<td>Male</td>
<td>More than 10 years</td>
<td>Instagram, Facebook, WhatsApp</td>
</tr>
<tr>
<td>Jonatan</td>
<td>25</td>
<td>Male</td>
<td>More than 10 years</td>
<td>Instagram, Facebook, WhatsApp</td>
</tr>
</tbody>
</table>
3.6 Semiotic analysis

The history of semiotic analysis can be traced further back to the medieval philosophers like John Lucke who showed interest in signs and the way they communicate (Berger, 1998). The modern semiotic analysis is believed to have started with Ferdinand de Saussure born in 1857 and Charles Sanders Peirce born in 1839 (Berger, 1998). The term semiotic was first used to define three aspects of a sign where; the Icon (which is signified by resemblance), the Index (which is signified by the casual connection), and the Symbol (which is signified by the convention) (Peirce, 1975). Saussure’s (1996) semiology focuses also on signs and defines signs as a combination of “a concept” and “sound-image”. I.e, an arbitrary combination of the signifier and the signified (Saussure, 1966). From Saussure (1996) and Peirce (1975) points of departure, semiotic analysis evolved and extended to different doctrines and today the term semiotics has been used to describe the science of signs (Berger, 1998). If all things in the universe are seen as signs, then they can all be analyzed semiotically, and therefore semiotic analysis is very important (Berger, 1998).

Semiotics as a sign of science has been selected as the analytical method in this thesis. This is because the empirical data in this thesis is in the form of a narrative and semiotic analysis deals with analysing narratives. The participants’ knowledge in this thesis is perceived as encompassing several signs that work together to convey comparative knowledge, specific meaning and message to the audience (Noth, 1995).

Wantoro (2018) used semiotic analysis to study narrative in the film called Time Machine-2002 produced by DreamWorks and Warner Bros Pictures. In the study, Wantoro specified that the focus was on examining how the theme “Space” and “Time” were
experienced by the main character Alexander Hartdegen. The first step in semiotic analysis is to gather data about the studied phenomena. In Wantoro’s case it was done through watching, observing, recording, and capturing important aspects from the film Time Machine. The next step is to study literature related to the topic of the study. What comes next is to select and categorise data according to scenes that depict the themes Space and Time in the film. The analysis is then conducted by identifying visual and verbal indicators that depict the chosen themes in the selected scenes (Wantoro, 2018).

3.6.1 Semiotic analysis in collecting and assessing data.

The study has adopted Wantoro (2018)’s way of conducting a semiotic analysis on narratives. The participants were asked about their knowledge regarding social media and the Facebook Metaverse. Then participants were shown a video of Mark Zuckerberg’s announcement of Facebook metaverse. When the participants became ready to start to watch the video, they were reminded to reflect and to point out specific aspects in the video that they relate to (see Appendix 1). In expressing their perception of Facebook Metaverse, the participants could analyse/reflect on both verbal and visual signs that they noticed while watching the video. In that way, semiotic methods of analysis become applied directly in capturing and in assessment of data. This enabled capturing of participants' views which formed the empirical data. The interviews were transcribed, then selected, categorised and analysed according to common themes. The themes are presented as theoretical concepts in the chapter “Theoretical framework”, and in chapter “Findings and discussion” they are presented as findings of the study.

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3.7 Ethical considerations

In all stages of this thesis, there has been emphasis to follow Resnick (2018) principles of honesty, carefulness and transparency. This has been the aim in data collection procedure, method of analysis, to minimise errors and possibility of bias in order to generate trustworthy knowledge. Alvesson (2010) advises researchers to acquire consent from their participants. During the participants' interactions with the researcher, all participants gave consent to the researcher to use the collected data in line with the purpose of this thesis. Participants also gave consent to be voice recorded during their interaction with the researcher, and informed that voice recordings were to be destroyed after the researcher had transcribed the interviews as recommended by Kvale (1996).

3.8 Limitations of the study

In every chapter of this thesis, the author/the researcher has been aware that his presence can influence the results of the study especially when the qualitative research has been deployed as a method of understanding peoples’ views. In this thesis, all participants willingly accepted to be presented by their first name. This can contribute to the validity and honesty of their views about Facebook Metaverse. But it can also lead to scepticism of participants in giving their honest responses with hesitation that they might be noticed (Anderson, 2010).

For participants' confidentiality, the thesis does not specify which qualities correspond to which participant and how they have affected the findings of the study (Kvale, 1996). However, the thesis notes that participants’ individual qualities such as: degree in Media and communication studies, Computer programing, degree in psychology, Feminist-activist, interest in technology, possibility of some participants being potential earlier adopters of the
Facebook Metaverse, participants presence on social media etc. could have contributed to some potential bias in their response. This might also have affected the validity of the study and had some implication in results (Kvale, 1996). In order to minimise the problem, the researcher used semi structured interviews which assisted in understanding participants' responses (Qu & Dumay, 2011). The semi-structured interviews enabled shaping of the interaction to suit individual situations, context, and also made the participants feel relaxed and unassessed as advised by Hannabuss (1996). The use of semiotic analysis enabled the researcher to uncover possible contradictions and inconsistencies of participants' opinions and therefore enabled many interpretations of participants' responses in the discussion (Liamputtong, 2009). The disadvantage of this method is that there is a possibility of observer bias if the interviewer does not maintain a strong sense of objectivity to the interviewee’s response (Liamputtong, 2009).

The interpretivist approach is considered to be value-laden, relativist and presupposing (Bryman & Bell, 2007). Since the researcher adopted an interpretivist scientific approach in the methodology, and also based on the size of the sample group, the thesis acknowledges Bryman & Bell (2007)'s advice to not generalise the results of the study beyond the settings and context in which the study was carried out. The thesis also notes that there could be a possibility that different researchers could interpret the findings of the study based on their own orientations and position to the studied social context and therefore lead them to a different saturation point in data collection (Urquhart, 2013) and also surprising findings (Bryman & Bell, 2007).
4. Theoretical framework

With consideration of the aim of the study and the number of participants, the identification of the themes attained was decided by saturation. Saturation occurs at some point in data collection when “additional data do not lead to any new emergent themes”, but rather mounting instances of the same themes (Given, 2016, p. 135). The main themes that emerged from the participants' view on the Facebook metaverse are: *Connectivity and interactivity*, *Anonymity and identity*, and *Datafication, privacy and commercialisation*. This chapter presents relevant literature on these themes.

4.1 Connectivity and interactivity

The aspect of connectivity and interactivity is one of the themes identified as being prevalent amongst the participants’ perception of online social networks like Facebook Metaverse. The connectivity in society has been enhanced by continuous circulation of mobile communication, internet, digital media and other tools of social software (Castells, 2019). Such means have enabled development of interactive networks of communication that connect local and global. This has led to formation of a networked society characterised by a multimodal communication system, in which interactive messages flow synchronously and asynchronously (Castells, 2019). The gradual extension of the internet in many realms of social life, has enabled people to create systems of mass communication and extended connectivity (Castells, 2019). However, the existence of socio-economic inequality factors, such as social capital, geography (urban/rural location), level of education and many more has contributed to unevenly distributed connectivity (Mossberger et al., 2006).
Connectivity and interactivity within virtual worlds can be interpreted through representation (Jensen, 2001). Jensen views virtual worlds and aspects within them such as the appearance of Avatars, objects, and other elements as representations that signify signs that stand for something to somebody. Signs within virtual worlds enable interaction among users and also enhance connectivity as they signify common understanding of existing signifiers. Through understanding the signifier (signs) and the signified (their meanings) within virtual worlds, virtual representatives form a virtual interaction since they are located in the same virtual proximity/space at the same time and within a limited virtual system.

Ditchfiled (2019) defines interaction within social networks as interconnected rules and rituals that form “appropriate” and “moral” behaviours during both expected and casual meetings. In online social networks, the quality of an interaction depends on the individuals’ ability to perform “the self”; individuals can feel comfortable to perform appropriate and moral presentations of themselves, but in relation to how order is maintained in a given meeting (Ditchfiled, 2019). Human actors (participating users) can experience symbolic interaction when their avatars/representatives can mutually adapt their behaviours and actions and mutually exchange meaning with other representatives (Jensen, 2001). In the virtual world, human representatives experience face to face communication, while human actors experience face to interface communication as they strive for interactivity and connectivity (Jensen, 2001).

4.2 Anonymity and identity

“On the internet, nobody knows that you are a dog” was a phrase published in the New Yorker in 1993 (Turkle, 1995). At that time, the Web was perceived as a new way to open up
multiple identity interactions among the users. It signified the possibility for users to be pseudonymous and anonymous regarding their identity in the online space (Turkle, 1995). With the newer technological advances within modes of interaction brought about by Web 2.0 and technological solutions, identification was made necessary for users in order to consume web services and this was mainly due to the contingency of offline and online identities (Kennedy, 2006). Turkle (1995) defines anonymity within online virtual worlds as an aspect through which people can disguise identity to hide marginal identities, act in multiple identity positions, and mostly to be part of the mainstream. Castaño-Pulgarín et al. (2021) reflects on online anonymity as being a facilitator of participation in discussions concerning sensitive matters. Virtual networks are considered to be valuable places where users can acknowledge their inner diversity, however in such simulated environments, there is also fear that authenticity may not apply (Kennedy, 2006). There is potential empowerment through anonymity within virtual worlds, this is because no one can be seen and judged (Roberts & Parks, 1999). Therefore, users can explore multiple identity positions that might not be easily attainable in society. In that way, virtual anonymity can act as a leveller of the interactivity space (Roberts & Parks, 1999). Schmitz (1997) notes that virtual worlds are not as democratic as they might seem; absence of physical clues to appearance does not eliminate detection, judgement and discrimination. Instead, it can increase attentiveness on educational competencies and linguistic skills (Schmitz, 1997). Furthermore, Schmitz (1997) notes that computer communication media are not discrete regarding social-economic class, and education. Thus virtual anonymity does not make people more equal in virtual worlds than they are in physical proximity, but enables different criteria of rating one another (Schmitz, 1997).
4.3 Datafication, privacy and commercialisation

Van Dijck (2014) describes the concept of datafication as a process in which social actions are modified into online measurable data. With the creation of Web 2.0 and its potential of enabling further developments within online social networks, social life aspects such as friendship, conversation, searches, feelings, emotions, taste, preferences and many others have been coded by tech companies (Van Dijck, 2014). As tech companies innovate social networks, they also convince many people to extend their offline social interaction to an online Web environment (Bucher, 2012). Our social selves are delicate and can be affected by online networked environments (Van Dijck, 2013). Privacy is defined as having control of the confines between an individual and the public domain: it involves being able to manage our identities during in-person encounters, and also being able to control what personal information is accessible to others (Matthews, 2010). A person’s “social self” can become a fragile thing if exposed to ridicule, embarrassment and invasive intrusions which lead to loss of privacy (Matthews, 2010). Social networks can provide opportunities for people to create identities, however not all aspects of peoples’ created identities and other attributes created for public consumption stay under their own control (Van Dijck, 2013). Platforms like Facebook, Twitter, and Instagram have turned social practices such as “friending” and “liking” into algorithmic correlations (Gerlitz & Helmond, 2013). People’s online profiles have been disseminated into personas correlating to “followers” and “retweet” functions. Employers’ and job seekers’ profiles have been quantified into digital interfaces (Van Dijck, 2013). Such information is converted into metadata made available to users, and repackaged for third party companies, institutions and other platforms (Van Dijck, 2014). This can enable
systematic practices such as real-time tracking and predictive analysis (Mayer-Schönberger & Cukier, 2013). It could also enhance institutions’ practice of *dataveillance* in which citizens are observed through their online social network practices and communication technologies (Raley, 2013).

5. Findings and discussion

In this chapter, all participants' views are presented in the form of quotations and some with additional semiotic images. The images were identified from the video watched during the interview and signify the individual-participant’s knowledge and feelings regarding the Facebook Metaverse and virtual worlds. Not all participants pointed out a specific image, but their association with what has been said about Facebook Metaverse in the video has been identified and presented as findings. The findings are categorised as common themes within the collected data. The three themes are Connectivity and interactivity, Anonymity and identity, Datafication, privacy and commercialisation. This chapter introduces both findings and discussion within each theme.

5.1 Connectivity and interactivity

Findings

Connectivity and interactivity of people has been anticipated by some participants to become more attainable through a platform like Facebook Metaverse. Hannah is one of the participants who had not heard about the Facebook Metaverse before the interview. Hannah expressed that she had noticed that her WhatsApp’s name had changed to Meta - a word that she also associates with both Mark Zuckerberg and the infinity sign. Hannah explained that
connectivity and interactivity could become practical with Facebook Metaverse and stressed this aspect through figure 1.

![Figure 1: a screenshot image pointed out by Hannah signifying that communication in Facebook Metaverse might be practical](image)

While watching the video, Hannah said “It's like in the universe, lovely”. The video was paused and figure 1 was taken. Hannah explained:

I knew the sign was this infinity sign, right. Because when I open WhatsApp, now, it says meta. But apart from that I have no idea. it's like, okay, it's the things that we use. I have a feeling that it would help me alot to keep in touch with people because right now like all my family is abroad, and still when I was in Austria, like half of my family on my mothers side, they are Americans. So they all live in America so yeah. This would be practical.. ...that would just unlock like many new opportunities and of course, I mean, it's different, but if you can connect with people in a way that really mimics reality, even though it's obviously not like real reality. It would open a lot tons of new opportunities for people around the world.

Hannah points out that Facebook Metaverse would be practical for her especially in keeping in contact with her family, and with people in general that she is not in close physical proximity with. Hannah explained that the Facebook Metaverse will open up opportunities to connect with people around the world and reduce geographical constraints, especially with its features that seem to mimic the real world. Veronika expressed that the Facebook Metaverse reminds her about geographical constraints that she had experienced during Covid-19 restrictions. She explained that she watched movies and series with her friend via a Romanian
site and shared screen. Veronika explains that she enjoyed the experience of interacting with friends and playing at the same time. Veronika said:

I can just say like, during the pandemic. I watched some series with my friend from Russia. And yeah, we just came in to one Roman site and shared screen it was like this playing at the same time. And it was like it was really nice. So I think this is going to be a nice experience when you just can just meet your friends that you leave in another country or another city to spend time together feels pretty good. And you can discuss at the same time, you know, that's exactly like what's good about it is that you don't have to wait and then write, you know, big message. Also the distance between people it's gonna be minimised. So it can be a good thing if people you know use it meaningfully I think.

Veronika explained that she expected that the Facebook Metaverse experience will be good. It will enable meeting up with friends and spending time together even when they are in different countries and cities. Veronica expressed that Facebook Metaverse will reduce geographical constraints and also time spent on writing longer digital text messages trying to communicate with friends. Jonatan also reflected on the idea of being connected via Facebook Metaverse and pressed that it could be practical for education. Jonatan said:

I think it can be useful for education as well, like teaching and saving time on transportation. But it can also lead to being lazy if we are just gonna be sitting and have less movement. So i dont think it's healthy if it's made to be that standard way of working. We still need the social aspect and also a better compliment to not just sitting.

Jonatan hypothesized that Facebook Metaverse could enable remote tutoring and learning, and also contribute to reduction of transportation cost, as people would be able to do similar tasks from where they are. Jonatan also expressed that the remote working experience in metaverse could lead to unhealthy life experiences resulting from people becoming lazy and limited movements/exercise.
Discussion

In this theme of the findings, the study notes that Facebook Metaverse will open up opportunities for people to connect and interact with others virtually and globally. Hannah and Veronika associated Facebook Metaverse with a tool that can enable practical communication, interaction, and entertainment possibilities. Hannah and Veronika understood Facebook Metaverse in the form of a social network that will enable people to carry out multiple activities that can encourage friending and social bonding via online platforms that reduce geographical constraints in communication. The connecting of people through reducing geographical hindrances via internet and other technological devices as explained by both Hannah and Veronika can exemplify the idea of online social networks enabling a multimodal communication system that supports the flow of messages in both synchronous and asynchronous way (Castells, 2019). Hannah and Veronika’s perception of Facebook Metaverse can also be understood in relation to digital means and software tools that allow creation of interactive networks of communication that link local to global societies (Castells, 2019). Jonatan understood the Facebook Metaverse as a tool that could assist learners and teachers in acquiring both earlier attainable and unattainable real world teaching artefacts and representations such as places, objects, which can be useful for simulated lessons. Jonatan’s perception of Facebook Metaverse can be understood as a confirmation of Jensen (2001)’s reasoning about connectivity and interactivity within virtual worlds. Jensen (2001) considers virtual worlds like Facebook Metaverse to be a platform that depicts aspects of the real world in the form of representational signs that can signify meanings to different audiences in a given context of interaction. The appearance and elements within the Facebook Metaverse such as avatars and objects can be seen as tools that can enable creation of common
knowledge among users. Such elements can be seen as guidelines that can assist in correlating messages, spurring interaction, and creating understanding (Ditchfiled, 2019).

Jonatan, Hannah and Veronika’s perception about the Facebook Metaverse in this part can exemplify the growth of virtual reality and augmented reality in social interactions (Bolter and Grusin, 1999). Augmented reality allows digital information like texts, images and virtual objects to be laid on to real world surroundings using digital tools. This adds a different aspect of connectivity and interactivity that enhance user experience (Bolter et al., 2021). Technologies like virtual headsets enable blocking of users’ from experiencing the real world surroundings making users immerse themselves in the computer generated reality (Bolter et al., 2021). The participants' reactions about the Facebook Metaverse in this part can exemplify connectivity and interactivity among users of virtual worlds. However, the virtual worlds are online social networks that are only attainable via the internet. It is thus of significance to not overlook the existence of inequality within society. Therefore, factors such as social capital (internet reach, level of education, geographical locations etc) are likely to affect the gradual extension and consumption of the connectivity and interactivity of Facebook Metaverse in the society (Mossberger et al., 2006).

5.2 Anonymity and identity

Findings

Another common theme associated with social networks like Facebook Metaverse is anonymity. Veronika associated anonymity within Facebook Metaverse as an aspect that empowers aggressive behaviours. Veronika stressed this aspect through figure 2.
When figure 2 was taken, Mark Zuckerberg (the avatar in black outfit from the figure 2) had just asked the robot dressed in red that “Baz is that you?”. Veronika paused the video and reflected on what she had heard and observed. Veronika said:

> It can also create certain danger because there have already been cases about these open world games, where people have been mistreated, and it feels like real harm to them. Like you know someone just disguise as an Avatar came to them in the game and like you know maybe say something or do something in the game setting and it influence like people's personalities..it's like empowering you know, people can come with bad intentions, or like people who may be not happy in life, and they feel a lot of aggression that they don't know how to play out anywhere. It cannot just go and beat the boxing ring. And then let's say they can come out there people with bad intentions maybe who can do like real psychological harm to someone.

Veronika reflected on anonymity that could arise from a platform like Facebook Metaverse and noted that it gives another dimension of interaction in which people with all sorts of intentions can be encouraged to engage in communication. Veronika also expressed that anonymity in the Facebook Metaverse could enable the possibility of users causing psychological harm to others because detection of users appearance is diminished and hidden by use of Avatars. Jonatan expressed that it is vital to be able to know who the users are. Jonatan said:
It's good that one can be whoever they are but it's important to have some features that can tell who people they are otherwise there can be manipulations if people just join as avatars.

Jonatan meant when people present themselves as avatars with limited features of who they are it could enable manipulation of people. Wahelie, another participant, reflected on anonymity in Metaverse and expressed that it will be beneficial for people to appear in the form of avatars. Wahelie explained that, through using avatars, social issues like discrimination against race might become reduced. Wahelie said:

I think metaverse would help with that. people would not be able to know how you appear, I have seen that one guy is dressed as a robot. You can choose how you wanna appear. I think it can help with discrimination like race and how people appear in general. But it will still be a social class question. In which people would instead be like you don't have that house in Metaverse. And people are gonna compare themselves.

Wahelie meant that through people expressing themselves as avatars, it could help people to hide their appearance and it could also reduce bias. However, Wahelie also feels that there will still be a question of social class by which people will still look at others’ surroundings and compare what they see with what they have. Wahelie expressed that the use of avatars in the Facebook Metaverse reminds him about anonymity on social networks like Twitter where people often make discriminating phrases to others because they have hidden appearance.

Hannah expressed that the use of avatars to hide people's appearances will not eliminate discrimination but it could change its form and maybe cover up the usual forms of discrimination. Hannah said:

It would change forms of discrimination, I guess. But it wouldn't, eliminate discrimination. It would just, you know, it would hide differences between people, and then sell that as Oh, okay now that you don't know who I am, you can't discriminate against me according to a specific pattern that's prevalent in society. So that wouldn't solve the problem at all. But it would kind of cover up negative parts of society in a way it would just yeah, it wouldn't. You
know it wouldn't solve the problem. It would still be there. It would probably find you know, online mobbing could also take place. It's not like we just become angels through that. It's just it would cover it up. It's like makeup or so.

Hannah meant that the usual forms of discrimination that encompasses peoples’ physical appearances will be reduced in Facebook Metaverse, however discrimination as an issue maynot be eliminated through using avatars for facial appearance. The use of avatars might instead enable other forms of discrimination such as online mobbing.

Discussion

In this aspect of the study, the findings indicated that the presence of interactive features such as avatars that enable users to present themselves with different identities could contribute to multiple ways of interacting within the Facebook Metaverse.

Wahelie pointed out that the usage of avatars to express one's appearance during a virtual online interaction with others could enable users to express themselves freely without fear of embarrassment and social issues like racial discrimination. Wahelie’s perception of anonymity can also be understood as a confirmation that anonymity in virtual networks can facilitate users with a way to acknowledge their inner diversity and debate about sensitive issues in a democratic way (Castaño-Pulgarín et al., 2021). Anonymity in virtual worlds can act as a leveller for the communication space, i.e people could feel empowered to act in multiple ways and take up different roles that are unattainable in the real world (Roberts & Parks, 1999). In that way, anonymity could improve interaction and debate about sensitive issues according to Wehelie.

Unlike Wahelie, Hannah expressed that people’s appearance as avatars in the Facebook Metaverse might not eliminate discrimination but rather it could change the usual
discrimination forms and enable other ways such as online mobbing. People could feel empowered to act in multiple ways that can create senseless behaviours due to awareness that their appearance is anonymous. Hannah’s argument can also be understood as a confirmation of Schmitz’s (1997) reasoning that anonymity in virtual worlds is not as democratic as it might seem. According to Schmitz (1997), anonymity in virtual worlds does not eradicate detection, judgement and discrimination, it rather enables attentiveness to other abilities such as linguistic and educational competencies and thus enabling other assessment norms.

Veronika expressed that the usage of avatars for representation of users’ appearance in the Facebook Metaverse could enable intruders to cause psychological harm to others, due to their identity being hidden. Like Veronika, Jonatan expressed that anonymity could enable manipulation of people into acting contrary to social norms and laws. Both Jonatan and Veronika’s perception can exemplify Kennedy (2006)’s argument about the existence of inauthenticity in online virtual worlds due to inconsistency between offline and online identities. Kennedy (2006) meant that people tend to portray themselves with a wide range of personas both offline and online. Individuals can disguise their identities in order to acquire a sense of belonging to the mainstream and amongst other reasons (Turkle, 1995).

5.3 Datafication, privacy and commercialisation

Findings
This is another common theme among the participants’ perception of social networks like Facebook Metaverse. According to the participants, many people have been persuaded to extend their offline social interaction to an online Web environment to facilitate datafication
and its associated business goals. This aspect was noted by Maryam when she expressed that she is very sceptical and critical of the Facebook Metaverse and pointed to figure 3.

When figure 3 was taken, one of the characters in the video had said “that’s awesome wow i love the movement wait..”. Maryam stopped the video and explained;

They are really good sellers, you see how they are trying to be like, Oh my god, this is our plan and we're gonna do all this what's gonna happen and it's gonna have all of these amazing features and you can do this and that and you can use it for connecting with the people and blah, blah, like that's the importance and then oh, that's kind of how Instagram, Facebook I mean all social media also was perceived in the beginning, I mean even I said that I would use it to connect with people but I don't know I'm very much sceptical and critical of it.

Maryam feels unconvinced about Facebook Metaverse and feels that it has been profiled as having many interactive features that could spur entertainment among users. Maryam explained that such a perspective can persuade users into joining the virtual worlds hoping for better interaction and connectivity but end up with experiences similar to those of Instagram and Facebook, in which there's interaction, but also commercialising, hacking and exploiting people’s privacy. This aspect also became evident when Hannah was explaining her view about the challenges that could arise from a platform like Facebook Metaverse. She stressed
that platform rules, terms and conditions promote datafication. This aspect was illustrated through figure 4:

![Figure 4; a screenshot image pointed out by Hannah to signify datafication and surveillance in Facebook Metaverse.]

From figure 4, Mark Zuckerberg says that “no one wants to have their media profile linked to all these other experiences”. Hannah reflected on her earlier experience about online social networks and noted that she accepts cookies and reads about the terms and conditions but not on a regular basis. She also pointed out that it is important to safeguard user’s data. Hannah explained:

I have the feeling, they know everything about me, if that’s what they want to spend time on. Of course, user safety is very important. And I mean, data is, many people say that data is like the goal of the future. ... I mean big companies need your data, they need user data, and they'll pay for it too. if you just think about how much computers know already and can find out about the users and how much as we were talking about social media, how much the content that you fed is based on that, I do think that's a really dangerous development, for example, what they said about Donald Trump and Twitter, you know, that worries, it just keeps you in your little bubble with the stuff you want to hear without exposing you to anything else and anything new. I think that could lead to us just completely becoming very estranged from each other and very alienated believing in our own little world of knots without moving out of that.

Hannah meant that she usually accepts cookies but sometimes without reading through the terms and conditions. She also points out that with online social networks, there is an aspect
of corporate and enterprises being interested in users’ data to run their daily operations, and also social networks forming personas out of people's data for computational references and generating customised information. Hannah perceives such social networks tendencies as becoming more present in virtual worlds like the Facebook Metaverse. Thus, she envisions danger of users being customised to specific online virtual content that may lead to users and non-platform users becoming estranged from each other and very alienated. Veronika also feels that online social networks like Facebook Metaverse are built to promote commercialisation and to sustain businesses. She expressed her thoughts through the figure 5;

In figure 5 Mark Zuckerberg narrated about Meta as still being a company that designs technology around people. Veronika reflected on what had been said and expressed that she is sceptical of what Mark Zuckerberg is saying. She feels that Meta/Facebook builds networks to sustain business. Veronika explained:

You can probably see now that I'm not very like trusting what he says. And when he says that they build the network around people I think now it looks to me like they build a network around businesses. Because what I told you before about how easily you get this advertisement whenever like you mentioned something or wherever you go and Facebook just, you know, gets exploded by all this. And they think Meta is well, maybe, you know, not in the whole but partly big part of it is exactly to make businesses advertise to make transactions even more built into daily life.
Veronika associates Facebook Metaverse with Facebook’s functionality in which customised advertisement has been prominent. Veronika expressed that she had experienced advertisements in her social networks that reflect her earlier offline casual dialogues. Veronika feels that commercialisation and advertisement are likely to be the dominant experience of Facebook Metaverse in comparison to entertainment. Wahelie another participant that reflected on privacy and safety in Facebook Metaverse. Wahelie associates Metaverse with Facebook and he explained that Facebook is known for having issues with keeping users' privacy. Wahelie expressed his thoughts on privacy when Mark Zuckerberg narrated that “privacy and safety need to be built into Metaverse from day one (figure 6).

Wahelie paused the video and explained:

Facebook is not known for privacy, they have received a lot of criticism concerning privacy, they have had conflicts with Apple. .. Apple has made it like when you open your Facebook app via iphone you get asked if you would like Facebook to follow you. I think they want to follow people everywhere. I think this could happen with Metaverse..I think they earn revenue via consumer data. They collect what you have watched and then they sell it to other companies. I think with this it means they are gonna get even more data from people. They are gonna save everything that a person does. I think companies are there to develop things that people need. I think corporate companies like Facebook, their job is to earn revenue and
make their investors satisfied. I think he just says that he wants to develop this for the people just to sound good. Every company says that.

Wahelie explained that Facebook and other corporate companies earn their revenue through collecting users' data. Wahelie explained that he has experienced incidence while opening the Facebook app on his iPhones and he has been asked whether to allow Facebook to get access to the content he had opened. Wahelie explained that Mark Zuckerberg just mentions building privacy and safety from day one just to sound convincing. Tech companies like Facebook gather users data and sell it to third parties and therefore he expects Metaverse to also operate in a similar way to Facebook regarding privacy and protection of users' data. Wahelie explained further that:

> Facebook adapts their products to users only if many complain about their products but if no one complains they just continue developing them in their own way. They always try to get away with it as much as they can. They always wanna do as little as possible to earn as much as possible. The only thing that makes it more even is we complain. But also us people you know when these companies have done something for a long time we get used to it and just accept. when a complaint comes up, we may be like oh many companies do it as well, maybe it's okay. I don't care if they use my data.

Wahelie explained that companies like Facebook or Meta adapt their exploitation of users’ data only when the public raises concerns about it or else they continue to drive their intention until they incur challenges from authoritants. Wahelie expressed that many users are reluctant to complain about companies’ misuse of their data. Users usually perceive data collection as being a common practice among many companies and therefore some users might not pay attention to what it may lead to. Jonatan expressed his understanding of Facebook Metaverse as being a reflection of the real world in virtual worlds. Jonatan explained that he has concerns about privacy and security of Metaverse. Jonatan said:
Another problem can be that if you recreate your home in Metaverse then people are gonna be able to see how your home looks and you can be hacked or surveilled in reality. So people will be able to know what is in your house. Because Metaverse is a reflection of your reality. So people can spy on you and see where you keep your values for example. And also private companies will be able to collect important information as well.

Jonatan expressed that people are able to recreate some aspects of their reality homes in virtual worlds/Metaverse. Therefore people’s valuables (passwords, Pin codes, and other essential properties) are at risk of being exposed to intrusion through Facebook Metaverse.

Discussion

In this aspect of the study, the findings indicated that corporate companies like Facebook Inc/Meta are continuously persuading people to transform their offline practices to online web environments. Bucher (2012) noted that corporate companies facilitate businesses and institutional goals through encouraging people to participate in online web-based networks. This is because online networks offer opportunities for datafication and understanding of the targeted audiences (Bucher, 2012). Bucher (2012)’s reasoning became evident in some of participants' understanding of the Facebook Metaverse. For instance, Maryam expressed that she feels sceptical about the Facebook Metaverse being portrayed as an entertaining social network during its presentation to the public.

Maryam explained that the use of space themes, expressions such as “that's awesome, wow i love the movement” and sound effects in general could prompt people into registering to Facebook Metaverse with hope for similar experiences. However, people might instead encounter experiences that encompass interaction but also commercialisation and exploitation of people’s privacy, similar to experiences from Facebook and Instagram. Maryam’s argument resonates with Gerlitz & Helmond (2013) reasoning that online social networks
have turned social practices into algorithm correlations. Van Dijck (2014) interprets the aspect of algorithm correlation in relation to datafication practices that tech companies, like Amazon, Facebook/Meta, and Twitter, have deployed to enable coding and converting of users’ online activities into digital interfaces and metadata (Van Dijck, 2014).

Like Maryam, Veronika expressed that she is sceptical about Facebook Metaverse especially when Mark Zuckenburg referred to Meta as a “company that still designs technology around people”. Veronika expressed that she feels Facebook Metaverse is developed to promote business objectives in a similar and more advanced way than Instagram and Facebook. In the Facebook Metaverse, commercialisation and customised content recommendations could become more prominent compared to entertainment experience. Veronika’s perception of Facebook Metaverse resonates with Van Dijck (2014) reasoning that through building social networks, companies gather data about people, customise content and sustain business goals (Van Dijck, 2014). With similar views to Maryam and Veronika, Wahelie clarified that he is sceptical about privacy in the Facebook Metaverse and felt that Mark Zuckerberg wanted to sound convincing when he said that “privacy and safety need to be built into Metaverse from day one”. Wahelie reasons that Facebook Metaverse is being illustrated as a very interactive and engaging development. However, its purpose and aim creates concerns especially when Facebook Inc. has been sued for misuse of people’s data prior to changing its name to Meta (BBC, 2021). Thus, the limitation on how Meta uses people’s data could depend on how early users raise their concerns to the authorities. Wahelie’s perception of Facebook Metaverse partly relates to BBC (2021) report that Facebook Inc. has faced multiple scandals for loss of control over users’ data.
Like Maryam, Veronika, and Wahelie, Jonatan also pointed out that he is sceptical about privacy and security in Facebook Metaverse. He perceived Facebook Metaverse to be a representation of the real world. Therefore, if people are to reconstruct some of their private aspects in the virtual worlds, there could be risk of cybercrimes. People’s valuables like passwords, and other essential properties could be at risk of being exposed to intrusion. Jonatan’s argument about privacy and security exemplifies social networks as enablers of data surveillance, in which citizens are observed through their online social practices (Raley, 2013). The concerns about privacy and security raised by Maryam, Veronika, Wahelie and Jonatan can also be understood as a confirmation of Van Dijck (2013) reasoning that through social networks, companies are able to quantify users' information into digital interfaces and metadata. According to Mayer-Schönberger & Cukier (2013) such actions could lead to real-time tracking and predictive analysis from third party companies and institutions.

6. Conclusion and future work

This study has gauged opinions/reactions of young adults in Malmö-Sweden to the corporate construction of the Metaverse. The study has successfully produced people’s opinions and categorised them into main themes that shows how these reactions correspond/differ to theoretical perspectives. In that way, the study is able to provide the following conclusion as a summary that highlights the potential challenges and opportunities that could arise from the corporate construction of Metaverse.

New ways of communicating

Facebook Metaverse has been anticipated to create new ways for users to communicate with one another in the society. Being that this aspect of interaction exists via the internet, it could
enable transformation of latent-ties into new-weak tie networks amongst users. Such networks could be based on users’ interests rather than geography, prior acquaintance, and social position. While the connectivity and interactivity in Facebook Metaverse could open new ways of communication, it could also limit who talks to whom as such ways of communication are expected to be limited to the wealthy few. In relation to this, the respondents identified a risk of Facebook Metaverse being similar to other online infrastructures where people without the means to access the platform are excluded.

Possibilities for self-empowerment through avatars

This research presumes that the possibility of users being able to express their appearances through use of different avatars could contribute to self-empowerment. It is imagined that the use of avatars will create room for users to express their inner self and improve individual self-esteem. It is assumed that users will be able to explore different identities that are associated with different avatars in specific conditions, an opportunity that may not have been attainable in the real world. This possibility is presumed to encourage users to attain a sense of belonging, be able to interact and debate about social issues with less fear of online discrimination and embarrassment.

The use of avatars will not create an even democratic interactive space that has no discrimination. But rather, different users with different purposes could be empowered to perform their intentions/behaviours with less fear of being detected. Such users could be government/institutional agents, private investigators, etc. It could emphasise assessment of norms in attempts for users to correlate identification features of one another. This could also open up new forms in which users are judged upon besides their physical appearances.
Risks of intrusive data collection

The Facebook Metaverse could be seen as a justification of what Mark Zuckerberg claimed to be the future of virtual reality emerging as the dominant design, and a platform where labour is performed (Carter & Eglisten, 2021). Virtual reality in Facebook Metaverse could allow different levels of data extraction, predictive analysis and surveillance. Similarly, augmented reality devices such as “mixed reality headsets” that enable users to experience the Facebook Metaverse, could also be another way in which users and non-users’ data could be extracted via. In order for such devices to be relatively immersive, they require an enormous amount of data that encompasses the user's environment (Bolter et al., 2021). As such technologies extend to educational and work place contexts, users are likely to minimise time spent on commuting and still be able to explore and experience places/objects in a close and reduced geographical context. From a health perspective however, the reduction of distances to places could reduce physical activity which is an important aspect to health.

6.1 Future work

The recommended future work derives its objective from the study’s findings related to connectivity, anonymity, identity and privacy. In these findings, Some participants seemed to be aware of the benefits of augmented reality and virtual reality when expressing their opinions of what the corporate metaverse could be. However, not all of the participants were aware of the challenges that could arise from such technologies. The devices that are being developed to enable users to experience the Facebook Metaverse in its intended way encompasses augmented reality and virtual reality technology. For example the 5 millimetres thick spectacles that have been already developed to allow video recording and immersion
when users wear them. The thesis presumes that such devices could be a challenge to people's privacy. If Meta’s competitor Netflix could drive people’s consumption through algorithms (Gomez-Uribe & Hunt, 2016) that don't look directly into peoples’ homes, one wonders what Meta would do when people expose their homes as they attempt to recreate them in the Facebook Metaverse using the 5 millimetres thick spectacles. Therefore, further research should be conducted regarding such technology and the issue of privacy and anonymity in the Metaverse platform. This could be explored through a special case study with private individual users of Metaverse. It could also be explored through a specific angle that examines whether users can acknowledge any differences between augmented reality and virtual reality in the metaverse. Last but not least, the thesis suggests using a similar framework as used in this study but with incorporation of other analytical methods to supplement semiotic analysis and to allow for more generalization of the results.

7. Prototype; Young adults’ perception of Facebook Metaverse in less than 11 minutes

In order for the thesis to acquire the reactions of the participants to corporate construction of the metaverse, CNET’s (2021) published video was used in the data collection process. Therefore, an altered version of CNET’s (2021) video has been created as the final prototype of the end result of this research. It is a video designed around an earlier CNET video describing Zuckerberg’s vision of the metaverse. It contains some of the same material but offers a critique informed by the research conducted in this thesis. The created video is:

Young adults perception of Facebook Metaverse in less than 11 minutes³ and is published on

youtube (The virtual experience, 2022). Its target audience are: students in media education, youths who are interested in being part of such social networks and small businesses that might be interested in buying a place in the Metaverse. The created video elaborates on Mark Zuckerberg’s perspective of Facebook Metaverse, narrates the conclusions of this thesis. I.e, risks of intrusive data collection (see Appendix 2, Picture 2), possibilities for self-empowerment through avatars and new ways of communicating (see appendix 2, Picture 3). The thesis presumes that this video will create awareness about Facebook Metaverse and contribute to some resilience towards probable uncertainties that might come from Facebook Metaverse.

The overall way of presenting visualizations, material and information in this video has been inspired by the semiotic analysis/association of things. I.e, understanding of signs as a signifier that mean something to someone depending on earlier association of it (Liamputtong, 2009). The created video draws its observations from the findings of the study. In the findings, some participants took screenshots/images to illustrate their opinions about the Metaverse. Some aspects from the screenshots have been incorporated in making of the video. Aspects such as Mark Zuckerberg’s postures (standing/sitting style) are enacted, dressing style has been noticed and depicted in a comparison way by the narrator. I.e, Mark Zuckerberg wearing black long-sleeve while the narrator is wearing white long-sleeve (see Appendix 2, Picture 1). This is intended to illustrate corporate persuasion and commercialisation. The narrator’s dressing style is intended to provide a critical perspective about what can be expected of Metaverse.

Även though the created video provides an extended view of the findings of the study, given time and resources it would have been beneficial to create perhaps other prototypes that
involve for example various avatars to illustrate a critical intervention into the Metaverse and query the nature of identity in such spaces.
8. References


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Appendix 1

Greetings
Good afternoon.
How are you doing today?
As I explained to you last time, I am a masters’ student at Malmö university. I'm doing my Masters in Media technology. As of this period, I am writing my thesis in which I am doing research on perception about online social networks.

Purpose of the interview
So the purpose of this meeting is to generate knowledge about existing social networks and expectations of the future/soon to be launched social networks.

Ask for consent
So i would like to record this meeting so that i can transcribe it later and use it in my thesis as part of the data to be analysed. You can be annonym during the conversation. You can use whichever name you prefer and I would prefer that you feel as comfortable and honest as you possibly can. I promise you that I will delete the recording after I finish transcribing the meeting. You can say no to voice recording and then I will use just my pen and paper. So how do you feel about recording the interview, May I voice record our interview interaction?

Standard Questions
Thank you, I am gonna ask you questions about name, age and gender. Would like to answer any of those questions?

- Have you ever used or heard of social media?
- ask about challenges and possibilities
Speaking of social media and networks, if someone mentions Meta, what comes to your mind?
- have you heard of Metaverse? If not, how about Facebook Metaverse?
- If yes, as what the participant knows about it
- you clarity questions like, do mean that? Or what does that imply? You mean like…?
Prepare the participant to watch the video and inform the participant to pause it whenever the participant feels he/she wants to comment or reflect on something. Tell the participants how long the video is.
Take the screenshots as participants pause the video.

At the end of the video
Ask for participants' reflections about the interview and how they felt it went.

Final words
As they say, all good things come to an end, it has been wonderful talking to you and I appreciate your time so much, it has been a pleasure hearing your insightful knowledge. Thank you for sharing with me.
Appendix 2

Picture 1: semiotics incorporated in production of the prototype

Picture 2: risks of intrusive data collection
Picture 3: possibilities for self-empowerment through avatars and new ways of communicating