



The Drawbacks of Social Media

Investigating both Addiction and Data Privacy to Social Media of the Francophone Z Generation and their impact on Loyalty

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Abstract

In the 21st century, Social Media addiction has become a significant concern due to the evolution of communication and the younger generations' consequent use of these platforms. Many publications show an alarming rate of the daily amount of time spent using Social Media platforms and the resulting negative consequences. Users are forced to trade social utility for their privacy both in personal and business use of social media. Based on the attention economy, these Social Media use various technologies to drive users to consume their platforms; technologies such as facial recognition, artificial intelligence, data collection, platform design, and many other features permit them to benefit from the advertisement's products. This study focuses on both addiction and data privacy to Social Media of the Francophone Z Generation and their impact on Loyalty in the context of advertising purposes. According to the Andreessen Facebook Addiction scale used on this questionnaire survey, 110 out of 174 respondents can be qualified as "Social Media addicts". Out of the 110 "Social Media addicts," 81 responded that they do know about Social Media companies' practices (data analysis, AI, growth hacking team), yet still, 51% of them (Addicted + Aware of practices) continue to share their location; 69,01% their contact info and about 86% are "rarely" or "very rarely" restricting access to their Social Media account. Thus, this research work confirmed previous studies and revealed that, in particular, Francophone young adults aged 18-25 are the most likely to develop a Social Media addiction. The work also confirms users' passivity regarding their data and privacy protection behaviour. Future studies could focus on addressing possible technical solutions and use coping strategies to reduce the negative impact of social media. The author will attempt to focus on the relevance of the algorithms, examining the structural aspects of collective artificial learning and how these platforms exploit the weaknesses of their users and convert them into an engagement.

Keywords/tags (subjects)

Social media, Addiction, Generation-Z, Advertisement, Artificial intelligence, Data analysis

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Table of content

1	<i>Introduction</i>	4
1.1	Background, motivation, and purpose	5
1.2	Research objectives, questions, and approach	7
1.3	Thesis structure	8
2	<i>Literature review</i>	9
2.1	The evolution of Social Media over time	9
2.2	Social Media addiction	12
2.2.1	Defining Social Media addiction	12
2.2.2	Existing theories about addiction	13
2.2.3	Age, Gender, and Addiction	14
2.2.4	Culture and addiction	15
2.2.5	Social Media Design for the pathological engagement	17
2.2.6	Attention economy consequences.....	19
2.3	Data privacy	20
2.3.1	Social Media and data privacy concerns	20
2.3.2	Generational views of privacy	21
2.3.3	Facebook companies' terms of use	21
2.3.4	Curatorial algorithm	25
2.3.5	The monetisation of the attention economy	27
2.4	Research Framework	28
3	<i>Methodology</i>	30
3.1	Research context	30
3.2	Research design	31
3.2.1	Research philosophy	31
3.2.2	Research purpose	31
3.2.3	Research strategy	32
3.2.4	Methodological choice	32
3.2.5	Time horizon.....	32
3.3	Data collection	32
3.4	Data analysis	33
3.4.1	Quantitative data analysis.....	33

3.5	Ethical considerations.....	34
4	<i>Research Results</i>	35
4.1	Demographic part.....	35
4.2	Social Media Addiction	38
4.3	Privacy Habits.....	44
4.4	Interpretations	47
5	<i>Discussion</i>	48
5.1	Limitations, reliability, and validity	48
5.2	Answering the research questions	48
5.3	Dialogue between critical results and knowledge base	50
5.4	Compliance with research ethics guidelines.....	51
6	<i>Conclusions</i>	52
6.1	Key Findings	53
6.2	Managerial implications	54
6.3	Recommendations for future research	55
7	<i>References</i>	56
8	<i>Appendix</i>	68
	Appendix 1- Questionnaire Survey.....	68

1 Introduction

There are many public concerns regarding the overuse of Social Media (SM) platforms among young generations. SM addiction is not yet officially recognised but is still strongly perceived as a significant and growing problem at a young age. The public often confuses it with addiction to video games or phones (WHO, 2018). Video game addiction was recognised by the World Health Organization in 2018, so there is a chance that more SM cases will follow in the future.

Thus, in 2018, took place the implementation of the General Data Protection Regulation, known as GDPR policy. Indeed, following numerous scandals regarding SM platforms and the exploitation of personal data, the European Union enacted a law protecting individuals' fundamental rights and freedoms (Intouch Supplement, 2018), allowing the public to become aware of the harms of their online activities.

Multiple actors from the technology industry regarding the digital and SM areas, such as Facebook, Twitter, WhatsApp, Instagram and others, have stepped up lastly to denounce the dangers associated with social media, mainly due to their addictive and manipulative characteristics. Described as the "closest thing to conscience" by The Atlantic magazine, Tristan Harris is a researcher in ethics and human persuasion who worked for Google for three years (Bogaer et al., 2021). He is the first in this industry to consider SM methods, preventing the degradation of humans. Faced with this information, Tristan Harris does not hesitate to debate the need for ethical and human technology. Consequently, he co-founded and is currently the president of the Centre for Humane Technology, a company whose mission is to reverse the human downgrade and realign technology with humanity.

His reflection on the social media-based attention economy started in 2013. He created a PowerPoint called "A call to minimise distraction & Respect users' attention" regarding the dangers of the new technology and sent it to his colleagues in Silicon Valley. It went viral, warning about the arms race in the tech industry, putting all possible means to capture human attention. Tristan's work has been featured in TED, The Atlantic, The New York Times, Wall Street Journal, and many other newspapers. He has also created a film entitled "The social Dilemma", available on Netflix. At the same time, Tristan has briefed heads of state, CEOs of technology companies and members of the U.S. Congress on the attention economy and its additional harmful consequences. As a result, many executives from these tech giants have spoken out on the topic. Among them is Sean Parker, Facebook's founding president. Today, he acts on the other side of the scale and does not hesitate to compare Tristan Harris to the loudest voice in ethical technology. He explained the link between the dopamine granted (attributed through the rewards systems: likes, comments, shares or the "push-to-refresh" function) and social validation (Bogaer et al., 2021) showing the ability of SM to exploit the vulnerabilities of these users (Solon, 2017).

Another figure in the technology industry also arguing against these SM platforms is Sandy Parakilas. He oversaw privacy issues at Facebook, now works for Uber and does not hesitate to debate the inexistence of

regulations around data collection and analysis. Consequently, he invites these media to confer total transparency regarding targeted advertisements on these SM platforms (Drouglazet, 2018). Furthermore, the list is still long: there are also find Lynn Fox, former vice president of press relations of Apple and Twitter; Justin Rosenstein, the creator of the "Like" button of Facebook; and also, Chamath Palihapitiya, former vice president of Facebook (Drouglazet, 2018).

Nevertheless, the subject does not date back to yesterday. Indeed, in 2011, the researcher Marc Andreessen wrote an essay named "Why Software Is Eating the World", explaining the advent of these platforms and why they will work so well in the future (Andreessen, 2011). Therefore, many actors invite these platforms to minimise distraction and respect users' attention (Sidtis & Zäske, 2021); such as Tristan Harris, founder of the Centre for Humane Technology, in charge of educating populations, companies, children about their uses and thus, accompanying tech leaders to a more transparent, ethical, and neutral technology for its users.

1.1 Background, motivation, and purpose

Social Media has gained so much popularity since its introduction to the 21st century. These platforms have revolutionised our means of communication and allow the population to exchange and share instantly with our family, friends, or colleagues (Mayfield & III, 2011; Ozkan & Solmaz, 2015). They have become an inseparable tool in users' daily lives. However, the evolution of digital and its platforms has diversified over the years. Indeed, the mentalities and habits of users, consumers, and even companies have changed the trend: Social networks have moved from the personal to the professional sphere (Arnold, 2016).

These platforms, initially created to facilitate and maintain the social relationships of their users, have turned into a business plan in search of financial profits, including external companies to these platforms (Arnold, 2016). Indeed, these SM platforms monetise user attention by selling them to advertisers. From this perspective, it is easy to say that users are the product, not the customers (Slee et al., 2021).

The world of digitalisation carried by the flow of users' information benefits enormously these external companies but benefits mainly these SM platforms. Indeed, these pieces of information, called data, permit these SM Platforms to reach the consumer much faster and more effectively through advertising by studying and analysing their users' habits, behaviour, and tastes. Thus, in this new era of digitalisation, these platforms are ready to exploit the generation-z data (Matveeva & Krasnov, 2019). This generation differs from previous generations in their digitally formed worldview and consumer attitude towards the goods and services market (Matveeva & Krasnov, 2019). Consequently, Generation "Z" is the most targeted generation of all time by these platforms and companies present on these SM platforms (Matveeva & Krasnov,

2019). The author explains that the presence of the internet or SM platforms acts as a complex filter to find the content that users need or do not need as quickly as possible and much faster than any other generation before them. The researcher learned it from an Australian study of 800 people. Indeed, according to Matveeva and Krasnov (2019), this generation can less cope with uncertainty. The research work explains that this generation works like a computer program running in binary code: video games can be restarted in case of problems; Siri can answer almost all users' questions, even perform tasks, or have access to Google Map, allowing them to be well guided at any times. Thus, having access to all these resources reduce a generation's ability to cope with uncertainty.

In this research, SM addiction is seen as a compulsive addiction or an uncontrollable motivation to use SM (Hou et al., 2019; Nakaya, 2015). Each user has their reasons for using these platforms. However, the social utility of these platforms can be mesmerising to individuals and make use addictive. Unfortunately, individuals who become consumers of SM can become addicted to it (Andreessen et al., 2013). The interest, therefore, in these online platforms is linked with personal data users.

Indeed, as previously explained, SM platforms use a business plan that monetises users' attention by selling it to advertisers (Slee et al., 2021). While users use these platforms, they provide much personal information to these SM platforms. This sharing of information has benefits but also risks. These advantages are, as explained above, faster communication with family or friends, allowing one to share one's life through photos and videos, or maintain relationships despite the distance. However, there are still significant risks. Theft or loss of information, misinformation, manipulation, damage to reputation, or cyberbullying can, unfortunately, create many negative repercussions for young people immersed on these platforms. However, the real problem is linked to the ability of these SM platforms to guide users through their media. In this case, profit maximisation is proportional to the time users spend using the platform (Slee et al., 2021). Through our data analysis, these platforms can suggest products and content that will lead us to spend more time on these platforms, leading to profit optimisation.

The researcher thus wondered what would happen if the users of these platforms were absorbed by the social utility and lost their vigilance regarding personal data protection. As a student in his twenties, the author has significantly exposed himself to social media, just like his fellow Generation-z students. Faced with this use, he tried to eliminate it little by little, reducing his time in front of the screen to privilege real-life experiences. It turns out that it was, obviously, much more complex than expected: there was always a message from a loved one, an email to read, or a news article to read, for example, preventing him from

really living in the moment without an ounce of SM or technology. In addition, after searching for a particular product on the Internet, the author perceived many advertisements on SM platforms and started to wonder how that happened and did his research.

Therefore, it is known that the most financially viable SM practice is the attention economy (Slee et al., 2021). It must meet two requirements: It must be engaging enough to acquire and retain new users and effectively advertise companies' products to these users. So, it means that SM users are here, seen as the product of the external company that uses SM as a service to expand, improve their businesses, and reach the projections of its ideal customer. Therefore, the product here is the attention of users supposed to watch advertising published by external companies on SM platforms. The more time the user navigates through these platforms, the more confronted with advertisers. Thus, it permits understanding that SM platforms use numerous design thinking processes and technology implementation to encourage users to engage more with these platforms.

Therefore, this empirical study aims to learn whether SM platforms can influence individuals' behaviours and attitudes to commit more to these platforms. This investigation explores thus, how individuals can achieve healthier interactions or limit them. The author firmly believes that SM platforms cut users off from reality and make them miss out on important moments of their lives for the great pleasure of external companies and marketing.

Unfortunately, generation-z is the one that has succumbed most to these innovations, missing out on a good part of their childhood, moments with their family at the expense of Facebook ads and feeds that only send back contents that users want to see. Thus, this study aims to understand the phenomenon of SM addiction regarding the use of personal data as part of the attention economy. The author had in heart to denounce the unethical practices of these SM platforms. Therefore, this work is a way to prevent and educate these new generations by giving them the necessary knowledge to take a step back regarding their excessive use and data collection and analysis of their personal information.

1.2 Research objectives, questions, and approach

This study investigates the phenomenon of Social Media Addiction in foreseeing the link with data privacy. The main research objectives consist of collecting knowledge from previous work on SM Addiction and creating new knowledge based on attitudes and behaviours of Francophone Z generation students who are SM users. This research work is also intended to shed light on the primary risks these SM platforms entail to-

ward the younger generation, whether it is the risk of addiction or the lack of privacy. Therefore, this empirical study should fulfil the above-mentioned main research objectives while answering the following research questions:

RQ 1 - What are the attitudes and behaviour of Francophone Z generation students using Social Media?

RQ 1.1 - What are the factors characterising Social Media Addiction?

RQ 2 - What are the concerns of Francophone Z generation students regarding the abusive use of their data by Social Media companies?

RQ 2.1 - What are the factors characterising a lack of Data Privacy?

RQ 3 - What are the reasons behind Francophone Z generation Social Media Loyalty?

RQ 3.1 - What are the factors characterising Social Media Loyalty?

Thus, this investigation addresses the SM mentioned above phenomena based on additional empirical evidence. Indeed, this is carried out by identifying factors gathered in publications selected during the literature review and the primary data collected through a survey.

1.3 Thesis structure

This thesis is composed of six chapters. The first chapter introduces the background, business and personal motivations, and the purpose of this investigation. The second chapter discusses the main concepts, such as SM addiction and SM data privacy, related to the main research topic through identified relevant publications while identifying the gaps in the current body of knowledge and assembling the necessary elements in the research framework for carrying out this empirical study. The third chapter presents the research methodology through the research context, research design, data collection and the selected data analysis method. Then, in the fourth chapter, the researcher analyses the quantitative data collected through the survey questionnaire. The fifth chapter discusses the limitations of this empirical study and reliability and validity while explaining how much this investigation has answered the research questions established previously. Comparing the results with previous work is also presented as an ethical consideration. The author then concludes by highlighting the essential findings and the implications of the results and pointing out the recommendations for future research.

2 Literature review

2.1 The evolution of Social Media over time

In this part, the author will discuss SM platforms from their historical beginning in the 2000s to their current perspective. The research will demonstrate how these different companies have established themselves and have maintained and developed through time.

The history of SM platforms began twenty-four years ago with the birth of SixDegrees.com in 1997, a SM site that allowed users to create a profile page, create contact lists and send messages. However, the platform could not sustain its financial expenses (Boyd & Ellison, 2007) and launched paid services between these platforms and external companies wishing to reach their audience more quickly. SixDegrees emerged at the beginning of the implementation of digital advertising and has not been able to support its charges completely, provoking thus its crash.

SixDegrees.com was followed by the famous 2000s site Hot or Not. This SM allowed users to post pictures of themselves to be evaluated by other users based on their physical characteristics. It is said that this site influenced the creators of Facebook and YouTube and fueled the lack of confidence of millions of people. However, unlike SixDegrees, the founders of Hot or Not set up a partnership with Rack Space to take over hosting in exchange for ads.

There was also MySpace. MySpace offered customisable and public profiles containing music, videos, and selfies, allowing users to be seen by everyone. Moreover, it is a complete contrast to Friendster and its private profiles, reserved for registered users (Kozlowski, 2012). 2005 marks the site's peak; the website reached 25 million users. Subsequently, music became a massive success for the site, which launched the careers of Sean Kingston, Lily Allen, and others. Then the social network was sold to News Corporation in 2005 for 580 Million (Boyd & Ellison, 2007; Kozlowski, 2012)

At the same time, many other SM came on the net. Of course, the well-known Facebook was born in 2003 by Mark Zuckerberg under the name of Facemash (Mark Hall Coauthor of Sunburst: The Ascent of Sun Microsystems, n.d.). At first, only Harvard students had access to it. By June 2004, over 250,000 students from 34 different schools had joined the platform (Croft, 2007). That same year, the credit card company MasterCard began paying for advertising on the platform.

Then, much more advertising partnerships followed. In 2007, anyone over 13 years old could sign up for Facebook (Boyd & Ellison, 2007). The site reached one million users within a year and became "Facebook." Only eight years after its launch, Facebook announced that its user base had reached one billion users.

Then appeared LinkedIn in 2003, targeting the business community. Users create a profile, highlighting their skills, education, and professional background (Rani et al., 2021). Clearly distinguishing itself from other social networks, LinkedIn was the first social network to offer its users a paid Premium Business package that allowed them to generate revenue in the first few years (Gregersen, 2021). In 2006, just four years after its launch, LinkedIn began generating profits for the first time using its paid service (Rani et al., 2021). By 2020, the platform had over 675 million users worldwide.

Then came YouTube in February 2005. After its triumphant beginnings, the network had nearly eight million daily views in December 2005. Then things accelerated: In 2006, the company claimed to collect 65,000 new videos uploaded per day and 100,000,000 videos viewed per day (Edosomwan et al., 2011). In May 2007, YouTube launched its partner program, which marked a turning point for the platform. YouTube provides the platform, and creators offer the content, thus sharing the benefits of YouTube content (Hosch, 2020).

Then came "Twtr", known as Twitter, in 2006. Twitter was initially seen as an SMS communication tool for sending status updates between friends. Then, it evolved into a platform for writing posts, called "tweets", with a limit of 140 characters. The platform grew thanks to the advent of the hashtag, a symbol allowing extremely efficient access to information (Hosch & Lotha, 2021). It was only in 2009 that Twitter introduced "Sponsored Tweets", allowing it to set up an advertising system, thus becoming its primary source of revenue (Hosch & Lotha, 2021)

In 2010, the famous social network Instagram was created by Kevin Systrom. This SM allows users to post live photo stories with photo filters and captions. In one day, the platform registered 25,000 users. (Boyd & Ellison, 2007). By March 2012, the number of users was 27. In April 2012, Facebook offered to buy Instagram for \$1 billion in cash and stock while leaving the independent management of the company (Boyd & Ellison, 2007). Shortly after, Facebook introduced the same monetisation system there.

It also had the appearance of Snapchat. Snapchat was founded in 2011 under the name "Picaboo" by Evan Spiegel, Reggie Brown and Bobby Murphy, all students at Stanford University. If the application was an immediate success, users could publish exclusive and spontaneous content called "snaps", disappearing after 24 hours. This content can be accompanied by photo filters that are considered fun, allowing users to

"throw up rainbows" (O'Connell, 2020). It permits teenagers to find their friends and escape their parents' Facebook presence (O'Connell, 2020).

TikTok is the latest SM to emerge and has become a hub for viral content. Created in 2016 under the name of Douyin, the SM platform has registered about 100 million users and more than a billion videos viewed per day in less than a year. (Silver et al., 2021). The company wanted to expand internationally and changed to "TikTok" in September 2017, combining user-published content and corporate advertising. TikTok reached 1 billion downloads worldwide in February 2019 (Silver et al., 2021).

As explained earlier, the evolution of SM platforms has been fuelled by the human desire to progress, communicate, and move toward the digital world of advertising (Mayfield & III, 2011). In 2005, the year after the advent of Facebook, the percentage of U.S. adults using social networks was 5%. In 2019, that number jumped to 72% (Michael, 2018). The author notes that for most of these media, the first purpose is to share content, photos and videos and maintain contact with a close circle. Then, with the advent of technological improvements such as smartphones, high-speed connections or applications, the SM consumer moved from a computer-based experience to a mobile experience, allowing users to join or be joined by their community. However, the author finds it necessary to remember the true nature of these platforms. They are businesses looking for profit. So, to not collapse like SixDegrees or Friendster under excessive hosting fees, these companies need to generate a product. Thus, as these SM platforms saw their user base grow exponentially, the opportunity to reach millions of users through commercial applications became obvious (Ames, 2020; Mayfield & III, 2011). Facebook seized this opportunity and began serving ads on its platform in 2006. Twitter followed in 2010. LinkedIn, Instagram, Snapchat, and TikTok would all follow the same business plan based on the attention economy with various forms of targeted advertising (Mayfield & III, 2011). Recent research has shown that 88% of marketers use social media, spending nearly \$60 billion a year on these different platforms. Thus, they do not hesitate to leverage existing audiences to gain SM popularity (Mayfield & III, 2011). Okazaki et al. (2007) predicted that it would be very profitable for marketers to reach consumers via SM platforms a long time ago.

2.2 Social Media addiction

2.2.1 Defining Social Media addiction

Social Media addiction has been defined as an action that is not chemical but behavioural, with significant human-machine interaction (D Griffiths, 2013). The author calls users out on a potential mental health problem emerging with the proliferation of SM and its addiction. Several press articles report on the potentially addictive consequences of these SM platforms (Finance, 2010; Hafner, 2009).

The excessive consumption of SM populations could become a problem if we consider the particularly long-time users spend isolated on these platforms (Finance, 2010). On these platforms, users engage in various activities that lead to addiction. In fact, according to previous studies, there are five different forms of Internet addiction (Young, 1999). There is computer addiction, information overload (i.e., addiction to surfing the Internet), Internet compulsions (i.e., addiction to gambling or online shopping), cybersex addiction (i.e., addiction to pornography) and cyber relationship addiction (Young, 1999), (i.e., addiction to virtual relationships). For this study, SM addiction will be considered as a cyber relationship addiction since the primary goal of users of these platforms is to establish and maintain online and offline relationships without geographical or temporal constraints (Cheng et al., 2021).

In one study, D Griffiths (2013) associates egocentrism with addiction to the Internet and SM platforms. Indeed, the egocentric aspect of these platforms leads users to consume them excessively. By positively presenting themselves on these media, the user perceives principally positive experiences. Thus, the user searching for positive experiences consumes these platforms to the fullest, leading to addiction. Consequently, SM addiction can be viewed from a biopsychosocial perspective (D Griffiths, 2013). Like any addiction, SM addiction leads to addictive symptoms. The Bergen Facebook Addiction Scale (BFAS) identifies six core elements of addiction: mood modification, tolerance, learning experience, conflict, or salience (Andreassen et al., 2012). In addition, several researchers have suggested that a combination of biological, psychological, and social factors contribute to the aetiology of addiction (Shaffer et al., 2004). It is also possible to argue that SM addiction shares a common etiological framework with other established or behavioural addictions. However, the scientific literature dealing with SM addiction is relatively weak. Thus, through this first part of the literature review, the author will attempt to provide an empirical overview of the proven trend of the 21st century: Social Media and excessive use.

2.2.2 Existing theories about addiction

Consumers of Social Media use these platforms for different reasons. Indeed, it is crucial to identify the specific reasons users consume these platforms because this problematic use can affect their psychosocial functioning and well-being (Ponnusamy et al., 2020). Therefore, this section demonstrates the importance of the uses and gratifications theory for SM developed in 1974 by Katz and Blumer (Hossain, 2019). By applying the uses and gratifications theory regarding social media, the author highlights the user experience, which is perceived as positive.

SM is, as previously discussed, a considerable communication mechanism for connecting with millions of people around the world (Williams et al., 2012). Studies have shown that rewards received are good indicators of media use and influence recurrent use by users (Kaye & Johnson, 2002). Thus, the use and gratification theory seek to explain the relationship between the users and the benefits of those SM platforms. The main question posed by these researchers is: "Why do people use SM platforms, and what gratifications do they get from it?"

The uses and rewards theory is based on the idea that media audiences are active rather than passive, meaning users attempt to make sense of their services (Williams et al., 2012). Blumler identified four reasons people use media: detour or escape; companionship and personal relationship building; value reinforcement and personal identity exploration; and tracking or obtaining information about the world. Katz listed a slightly different set of reasons for use: cognitive needs, emotional needs, and social integration needs. Over the years, researchers have added value to Blumler and Katz's research, such as Ko et al. (2005). The latter added reasons for this use of SM and reformulated it better than the one already arranged. Thus, it allows us to look in more detail at these recognition factors:

(1) social interaction: This use is defined as the consumption of media to communicate and interact with others (Ko et al., 2005). Other uses and rewards have also been classified by researchers in a similar category to interaction: social motivation (Korgaonkar & Wolin, 1999).

(2) Information seeking: This use is defined as SM consumption to seek information on various topics. The title of this theme is taken from Papacharissi and Rubin's (2000) research on information seeking and Internet use. The categorisation of this theme includes both information seeking and self-education (Papacharissi & Rubin, 2000).

(3) Passing the time: This use is defined as SM consumption to occupy time and relieve boredom (Palmgreen & Rayburn, 1985).

(4) Entertainment: This use of SM is defined as consuming these platforms for entertainment and fun. Palmgreen and Rayburn (1985) and Papacharissi and Rubin (2000) have also included this dimension with a playful effect in their research.

(5) relaxation: This category of SM use is defined as use that relieves pressure incumbent by stress. Relaxation provides stress relief with fun-oriented entertainment (Ko et al., 2005).

(6) Communicative utility: This category of use defines SM as a means of facilitating communication, the ability to provide information and share with others. Palmgreen and Rayburn (1985) studied this form of use with, among others, television viewing.

(7) Convenience use: This category of SM use is defined as providing convenience or utility to individuals, including introducing sales and goods on these platforms (Ko et al., 2005).

Therefore, all these reasons permit us to understand the psychology of SM users. In addition, these platforms bear witness to social utility carried by our community, dictated by the prism of commitment from users' posts.

2.2.3 Age, Gender, and Addiction

AGE

Many sources indicate that adolescents and young adults are often associated with Social Media addiction (Esteban Ortiz-Ospina, 2019). Smartphones have become a staple in our society for both children and adults. Due to their convenient features, such as mobile connections and apps, consumers consume these platforms whenever they want. It is easy to argue that the higher prevalence of SM addiction among new generations is due to higher digital knowledge and skills (Spante et al., 2018). Relying upon an article published by the Pew Research Centre, 95% of teens in the United States own a phone or have regular access to a phone or computer. However, in 2014, according to the same study conducted a few years ago, only 73% regularly had access to the Internet.

Thus, it is easy to say that the daily life of the new generations is punctuated by social media, smartphones and, therefore, technology, making them more likely to use it frequently (Branagan & Breen, 2020). Unfortunately, frequent use can directly lead to addiction issues (Hinduja & Patchin, 2012).

In a study conducted at Pace University, approximately 90% of students were present on SM sites daily (Molluzzo & Lawler, 2013). Compared to previous generations, Generation-z has access to SM at a much younger age and is more vulnerable to SM addiction (Monacis et al., 2016). According to a study on Turkish students, high school students' addiction to these platforms is significantly higher than middle school students (Simsek & Elciyar, 2019). So, Simsek and Elciyar state that educational status or age can fully influence addiction to social media.

GENDER

Gender is also a significant factor in SM addiction, according to Choudhury and Ali (2020). Women are more vulnerable to Internet addiction than men (Simsek & Elciyar, 2019). However, men and women may differ in specific patterns, Internet, and SM use types. Indeed, men are more likely to become addicted to online games, cyberpornography and online gambling. In contrast, women are more likely to become addicted to social media, texting, and online shopping (Andreessen et al., 2013, 2016; Davenport et al., 2012).

However, there is no relationship between gender and SM addiction, according to Hou et al. (2019) in the Chinese population or Cheng et al. (2016) in the Malaysian population. This leads to a cross-cultural interpretation that gender impacts SM use in certain countries. Consequently, according to the author, it is interesting to look at culture as a factor in SM addiction.

2.2.4 Culture and addiction

Our habits are automatically embedded in our culture. It influences our behaviours, especially those that seem most natural, allowing them to share perceptions of their social environment (Hofstede & Bond, 1984). Cultural codes are integrated and incorporated throughout a socialisation process (Cannizzaro & Anderson, 2016) that shapes the way individuals behave, interact, and relate to society (Gudykunst et al., 1996; Hofstede & Bond, 1984).

Excessive use of SM leads to addiction problems observed worldwide. According to the author, examining studies conducted in different countries on addiction to SM platforms is interesting. Several studies have

indicated that students have natural use or mild levels of addiction in the United States and Western European countries. While in Eastern countries, students are observed to have moderate to severe addiction. Thus, the author states that Internet addiction differs between countries, especially Eastern and Western cultures (Hofstede & Bond, 1984).

A comparative study between Americans and Koreans focusing on cultural differences in motivations (Lee et al., 2014) provides insight into the differences between the two cultures represented. Asian countries such as Korea, where family integrity or solidarity is strong, have higher levels of collectivism, while individualism, where competition or autonomy is valued, is more commonly observed in Western cultures and countries such as the United States (Hofstede & Bond, 1984; Lee et al., 2014). Thus, in Korea, users of these platforms tend to use them for social interactions. At the same time, Americans, coming from an individualistic culture, were more likely to use these platforms as a tool to search and obtain information (Lee et al., 2014). The search for information via these platforms does not have a specific purpose and leads to the more persistent use of Americans regarding the infinite aspect of these SM feeds (Juhász, 2020). Koreans connect to SM platforms with a specific purpose, avoiding wasting more time than expected on the platform.

In another study, Cheng et al. (2021) synthesised SM addiction prevalence rates in 32 nations covering seven world regions. It shows that prevalence estimates vary from study to study and country to country, ranging from 0% to 82%. In addition, the prevalence rate also varies by cultural region (Dalvi-Esfahani et al., 2019). The prevalence of SM addiction was twice as high in countries that seemed collectivist than those in individualistic countries. These cultural differences can be attributed to conformity to group norms in different cultures. According to cultural tightness and looseness theory (Gelfand et al., 2017), collectivist societies are described as a "tight" culture with strong group norms. Their members conform and act according to group values. However, individualistic societies are characterised as a "loose" culture allowing for the coexistence of different group-specific norms (Gelfand et al., 2017).

Therefore, it is appropriate to say that SM use is driven by group pressure (Harris, 2019). Consequently, it is possible to argue that cultural contexts shape SM use motives (Papacharissi & Rubin, 2000) and reinforce SM addictions.

2.2.5 Social Media Design for the pathological engagement

Users of these platforms are not the only ones to blame for this excessive use. These companies use several methods to attract and retain users for as long as possible on these platforms. Indeed, these companies aim to develop the attention economy (Griffiths, 2018; Harris, 2019; Williams et al., 2018). The users of these platforms are not directly the source of income. Nevertheless, the head of income still depends on them. The user's attention is the product of these companies because this attention is sold to companies or other buyers in advertising (Williams et al., 2018). Thus, social media platforms are recognised as successful models of the attention economy and data leverage patterns. Indeed, these platforms all use "design thinking", a solution-oriented design process based on creative and innovative design methodologies (Pieniazek, 2016) and used in that case to retain and engage users more on these SM platforms.

Thanks to Tristan Harris, a famous brain of the Silicon Valley who worked for three years as a design ethicist at Google, the author understood "how technology hijacks people's psychological vulnerabilities". Tristan Harris shows first that social networks do not hesitate to set up several features to exploit our weaknesses. Let us look at the example of slot machines aspect. The user can see that the "leverage effect" leads to a reward in casinos when the user wins. It can be similar in SM platforms when users refresh their Facebook or Instagram feed to see new posts in their feed. In that case, the reward corresponds to the recent posts that appeal to the consumer based on users' tastes. In that case, addictiveness is maximised with the most variable reward rate and frequency (Harris, 2019).

If the users open Twitter, they can see a loading time before they fully arrive on the platform. One might think that this is due to slow hardware or the internet, but it is only a way to generate variable rewards (Murugesan, 2018). Platforms give users intermittent variable tips to keep users hooked when they pull the lever.

Unknowingly, millions of users play a slot machine that is in their pockets:

- to see what messages users have received by refreshing the feed.
- When scrolling through the Instagram feed to see the next photo
- When users search for their soulmate on Tinder by sweeping up and down the different profiles

Thus, this function called "pull-to-refresh" found on many platforms follows the same principle as a slot machine in Vegas (Harris, 2019; Williams et al., 2018).

In addition, SM platforms have introduced reward systems designed to tap into our desire for social validation (Bhargava & Velasquez, 2021). An example is the "snap streaks", allowing daily content sharing between two users (Griffiths, 2018). So with that in mind, Facebook with the "like" button. A like corresponds to validation from our community (Alter & Adam, 2021). The like became even personalisable. Tristan Harris (2019) also permits us to understand in this article that social approval is crucial for these tech giants. Indeed, when users want to tag a friend in a photo, they can see suggestions from Facebook regarding the person's identity accompanying them, thanks to facial recognition technology. While users think their friends have tagged them, they realise whether they only responded to Facebook's suggestion (Harris, 2019). So, through this feeling of social approval, these platforms will give them a dose of dopamine because a user has liked, commented or tagged them on a photo. Facing this feeling, the user will put more content to receive likes and thus dopamine, pushing him into a vicious circle dictated by social validation (Harris, 2019). Through design choices like this, Facebook controls the frequency with which millions of people experience their social approval online (Harris, 2019). The button-like has become customisable; it can be changed into a heart, applause, or a sad emoji.

Another way to hijack people is to let them consume things, "even when they are no longer hungry" (Harris, 2019). In a study, the researcher can see that it is possible to trick people and let them eat soup continuously by giving them a bottomless bowl that fills up automatically as they eat (Wansink et al., 2005). It is how SM companies operate: Information flows are designed to automatically reload themselves by giving them reasons to keep scrolling through their feeds, i.e., with content that will appeal to the user and thus eliminate any reason to pause or even leave the platform (Harris, 2019; ; Juhász, 2020). It is also why sites such as Netflix, YouTube, or Facebook automatically play the next video after a countdown instead of waiting for users to choose. Finally, Tristan Harris states that "the ultimate freedom is a free mind, and we need technology on our team to help us live, feel, think and act freely". Because people's time is precious, we should protect it with the same rigour as privacy and other digital rights (Harris, 2019).

2.2.6 Attention economy consequences

In this section of the literature, the researcher will examine the detrimental effects of Social Media addiction. Indeed, the author argues that SM addiction imposes serious users harm. Davies et al. (2008) found that SM users were concerned that online SM replaced other social activities and interactions.

For example, many studies link excessive use of these platforms to academic failure. Jacobsen and Forste (2011) found a negative relationship between the use of various SM and GPA Results exams among first-year university students in the United States. Similarly, Hong et al. (2012) reported that daily use of mobile phones is correlated with a measure of academic difficulty among a sample of Taiwanese university students. And then, Sánchez-Martínez and Otero (2009) found a correlation between "intensive" mobile phone use and school failure in high school Spanish students. No matter the culture, heavy use of SM will negatively affect students' education. It can cause anxiety or fear and affect personal development with depression or anxiety (Colwell & Kato, 2003). In addition, some studies have proven that depression and anxiety already established can lead users to become addicted to SM platforms.

A large three-year study was conducted on 5,208 Americans. It was found that Facebook users became addicted for three years, and then their physical and mental health declined. It was followed by an increase in body mass index (Shakya & Christakis, 2017). It was stated that the more time youth spent on social media, especially Facebook, the more unhappy they were after the experience (Bhargava & Velasquez, 2021). A similar experimental study conducted by following 143 subjects for four months found that individuals who stopped using SM showed a reduction in their level of depression (Hunt et al., 2018). However, the control group continuing to use SM showed no change.

Another study found that the more time younger generations spent on social media, the more depression they experienced (Raudsepp & Kais, 2019). Kross et al. (2013) found that the longer people stayed on Facebook, the more negative moods they faced afterwards. Furthermore, even when the addicted person is not present on social media, the addiction consumes their attention (Kross et al., 2013). Whenever the person returns to their other activities, they can only devote limited attention to them (Ward et al., 2017). Thus, it is essential to consider these findings and act. The growing interest of users in protecting their mental health, privacy, and social relationships (outside of those established on these platforms) is evidence of a significant problem that needs to be worked on. Users, politicians, creators, and investors of these platforms must work together to return to more private, more protected circles.

Then, after decades of steady decline, suicides and depressive symptoms among youth ages 13-18 have been on the rise again in the United States since 2010. In the early 2010s, reports began to surface that more adolescents and young adults were seeking help for mental health issues (Twenge, 2020). Jean M. Twenge and Thomas E. do not establish a direct causal link but point to probable culprits: the use of screens in general and SM platforms. Thus, according to their calculations, teenagers who are connected to their smartphones for more than five hours a day have a 66% higher risk of suffering from suicidal symptoms than teenagers who spend only one hour a day on their smartphones. These mental health indicators had shown similar patterns, with increases beginning in the early 2010s, when Generation Z entered adolescence (Twenge, 2020).

These data are consistent with the interpersonal theory of suicide, according to which suicidal urges and acts of suicide result from two combined risk factors. A lack of belonging (feeling of being excluded, isolated, cut off from the world) added to the perception of heaviness (the impression of being a burden to those around you) is encouraged by excessive SM consumption.

2.3 Data privacy

2.3.1 Social Media and data privacy concerns

According to several pieces of research, young adults and adolescents are known for not paying much attention to their privacy when posting personal information or content on SM platforms (Hoofnagle et al., 2012).

These platforms allow their users to build a public or semi-public profile to share connections or content with a personalised list of friends (Boyd & Ellison, 2007). Users share personal information such as name, date of birth, and hobbies. Consequently, all this information provides data to social media. In addition to the collected information, SM data collection includes images, videos, and sounds, providing additional interactional data on user habits (Toivonen et al., 2019). Indeed, digital data sources are increasingly collected and analysed (Ladle et al., 2016; Toivonen et al., 2019). They provide a wealth of information about who users are, what they like, and how they interact and consume these SM platforms.

Indeed, the problem is that many users agree to the terms and conditions of platforms without knowing that their data are extracted. Given that the collection and analysis of content data released on these platforms are automated (Di Minin et al., 2021; Toivonen et al., 2019), it is necessary to carefully consider the privacy issues associated with the collection and analysis of this data. Indeed, as with any research involving

a population, data collected and analysed from SM must comply with privacy and data protection standards (Correia et al., 2021).

Thus, many emerging regulations regarding private data on these platforms (Di Minin et al., 2021) show the recent concerns regarding data privacy. There is Brazil's Lei Geral de Proteção de Dados Pessoais (2018), the State of California's Consumer Privacy Protection Act (2020), Japan's Personal Information Protection Act (2003), and Europe's General Data Protection Regulation (2018).

2.3.2 Generational views of privacy

It is essential to consider that recent generations have grown up differently than previous generations. Indeed, Generation-z grew up with SM platforms and cell phones, while Generation X and earlier were introduced to technologies much later. Thus, it is found that older generations, born between 1910 and 1980, are much slower to adopt these platforms and are much more cautious than younger generations when it comes to their private data (Regan et al., 2013).

The authors note that concerns about private data began to fade in 2006 when online services became increasingly common (Regan et al., 2013). In one study, two demographic groups, one containing a population under the age of 21 and the other having a population over 21, were compared (Bietz et al., 2019). Both groups view privacy as a significant concern when sharing GPS location and internet search history (Bietz et al., 2019). However, young adults feel freer to share private information based on the relationship established with the recipient and the content of the message (Bietz et al., 2019). In contrast, adults were reluctant to share information.

The problem here is that few studies address the topic, as in the case of SM addiction. The categories are too broad and thus present a limitation to drawing a clear conclusion across generations.

2.3.3 Facebook companies' terms of use

In this part, the author will study the privacy policy on data concerning Facebook and Instagram. Therefore, it will be the same for WhatsApp and Messenger, belonging to the parent company. It is essential to know that Instagram belongs to Facebook and therefore falls into "Facebook product", including a standard data policy. Consequently, it will permit us to learn more about Facebook, Messenger, Instagram, and WhatsApp data use through this study.

Considering that reading the privacy policy of each of its platforms would take an average of more than 200 hours per year (Aleecia et al., 2001), it is not surprising that many do not take the time to read the terms and conditions (Aleecia et al., 2001). Indeed, online privacy terms and conditions are perceived as an accessibility issue (Jensen & Potts, 2004).

The data use policy is visible on the different sites and is divided into nine other areas :

- I. What kind of information do we collect?
- II. How do we use this information?
- III. How is this information shared?
- IV. How do Facebook entities work together?
- V. What is our legal basis for processing data?
- VI. How can you exercise your rights under the General Data Protection Regulation?
- VII. Data retention, deactivation, and account deletion.
- VIII. How do we meet legal requirements and prevent harm?
- IX. How do we manage and transfer data in connection with our international services?

I. What kind of information do we collect?

This part allows users to understand that the types of information collected depend on how the consumer uses it. For example, these platforms collect content, communications, personal information, and external information. By external details, the author means any information collected outside of the post, for example, the location of the photo or the preference for a photo filter on Facebook.

Thus, this data is collected automatically to analyse the context around the information itself. Consequently, all the pages, accounts, hashtags, and the frequency users visit them are translated and extracted as data. The site extracts all the data related to product usage. For example, all types of products viewed, features used, videos liked, and people interacting with users are extracted.

Any information related to a purchase is also collected: credit card, authentication information, shipping address. Other people's activities also allow these platforms to collect information through photos or messages. Partners also collect much information through online actions and purchases. Partners are legally permitted to collect, use, and share user data through their services.

II. How do we use this information?

These platforms use the information collected to improve the use of these products. The primary purpose is to customise features and the News Feed to suggest content to users like groups or events, advertisements, and stories. From the data collected, such as preferences, interests, and activities, it is possible to create a large sales force based on reliable data. The information is collected from different Facebook Products and devices to be more accurate in recommendations.

This is how our personal information is used in advertising and sponsored content; referring to the analysed data to bring the suitable ads to the right populations to consume those sponsored posts.

III. How is this information shared?

Choosing the post's audience is possible to determine what is shared. So, it is essential to think about whom users share the content with, as they may share it again with people outside of the audience they are sharing the content with. Similarly, when users join or communicate with people or businesses, they see the content they generate. Members of the platform may also see signals showing users are active.

Some third-party services also present on these platforms may receive information about users' activity. So, the same example with Airbnb is when users want to log in using these platforms. If users logged in with Facebook on Airbnb, the platform would receive all users' information about their friends, name, and birthday.

There are several types of third parties accessing users' data:

- Partners who use the analytics service. SM platforms provide statistics and data that allow users, including businesses, to understand how users interact with their content.
- To advertisers. SM provide advertisers with accurate reports on who views their ads and engagement rate. However, this is the only demographic information (nationality, age) and does not identify engaged customers.
- To measurement partners. Some data is aggregated by partner companies that provide goods and services and will therefore analyse the established data in depth.

- To researchers and academics. These platforms share data with academic researchers accredited to advance general social welfare, technological advancement, public interest, and health.

IV. How do Facebook entities work together?

As explained above, Instagram, WhatsApp and Messenger are owned by Facebook. As such, they share infrastructure, technology and the data collected. Data is processed across all Facebook Entities to the extent permitted by law.

V. How do I manage or delete my information?

Users' data are stored until the user's account is deleted. However, the deleted account does not consider information posted by other statements about the user. If this is a temporary decision, it is also possible to deactivate the account.

VI. How do we respond to legal requests or avoid potential harm?

These platforms access, store and share user information with regulatory agencies. In the event of fraud, violation of the terms and conditions or regulations, the media provide information to third party partners and get feedback on the reliability of the user and the joint account. User information (especially when there are transactions) may be accessed and retained for an extended period if requested or required by law. Data from deleted accounts are also included for one year to prevent violations of the Terms of Use.

VII. How do we manage and transfer data for our international services?

Data is shared internationally among Facebook entities, different types of partners, and exchanges worldwide. Information may be stored at their headquarters or in a random country. These data transfers are necessary to provide these platforms worldwide. Thus, it is sufficient to comply with the European Commission's adequacy determinations (RGPD) regarding certain countries or otherwise obtain consent for a data transfer to the United States or other countries containing the company's storage centres.

VIII. How will we notify you of changes to this policy?

The Platforms agree to notify users of any changes to this policy. If the new facts do not correspond after consultation, it will be possible to stop the use and remove these platforms.

IX. How do you address your questions to Facebook?

Questions can be directed to Facebook entities via an online form or by mail to the following address:

Facebook, Inc.
Attention: Privacy Operations
1601 Willow Road
Menlo Park, CA 94025

2.3.4 Curatorial algorithm

Here, when the author addresses artificial intelligence, he is referring to huge underground rooms, protected, composed of a multitude of computers connected in depth. This multitude of connected machines works via programs, allowing the devices to work together by sending back and forth a group of information collected from the different engines.

In this section, the author will focus on collecting and analysing user data. The most crucial point is to emphasise that these platforms do not sell users' data because it is far too important (Harris, 2019). So far, SM has focused on the attention economy. SM is a business model that creates value by providing access to a platform that permits the sale of advertisements by holding users' attention and allowing operating algorithms to work with large amounts of data (Arrigo., 2018). Thus, these platforms have adopted a working system based on artificial intelligence, algorithms, and big data to be financially viable (Fiesler et al., 2016).

Consequently, each analytics project focuses on two distinct phases (Kalampokis et al., 2011). Typically, these data are structured or unstructured. Consequently, the first focuses on the data conditioning phase in which raw data is taken and transformed into data that statistical programs can analyse. The second phase involves building a predictive model, i.e., attracting users to consume posts, and then evaluating the model through users via tests (Fiesler et al., 2016). Thus, the first phase involving databases and the second phase involving statistical knowledge require a precise mix of skills to interpret the unprecedented level of data, equivalent to the platform's users' history (Kalampokis et al., 2011).

These algorithms operate autonomously, thanks to the goals set up and the ever-increasing amount of data accumulated; this allows them to constantly improve and reach users efficiently (Albanie et al., 2017).

Therefore, these algorithms consider content to know users better and guide them appropriately through their platforms (Harris, 2019). This algorithmic design attempted to match users' likes based on their profile, groups and liked pages, localisation, age, and the number of times they address different posts. If a user shares an interest via a hashtag, place, or company, he will be directed to the content of the same order (Expedition et al., 2021). The same is true when users share similar interests; users can be required to the same content based on common demographic characteristics. Indeed, it is easy to identify group users into distinct groups based on their location, age, interests, and gender and have them look at the same content. As these algorithms collect more and more data, they become more and more accurate about users, becoming as intelligent and autonomous as artificial intelligence (Albanie et al., 2017). More commonly called machine learning, this artificial intelligence constantly improves and builds more accurate user models (Lanier, 2020) based on the increasing number of data users. Moreover, the SM with the most accurate, precise model wins the competition (Lanier, 2020) and will attract more marketers. Thus, the interest in predictive SM analysis automatically deduces confidential information from content collected and analysed in large quantities (Volkova et al., 2018).

Consequently, we can understand that these platforms sell the certainty that advertisers will reach their customers efficiently with their platform (Zuboff, 2019). Having an accurate model of its users allows knowing which videos users will watch, which emotions will make them react and which products they will consume (Harris, 2019). Therefore, these platforms have generally three goals (Harris, 2019). The first goal is the engagement goal: To make users consume their content and scroll through the news feed. The second goal is the growth goal: to make users come back to their SM platforms and invite their friends. And then, the advertising goal is to make the most money from all these interactions. The algorithms then record all these goals and apply them according to the multitude of user data collected and analysed. Thus, by collecting and analysing the data of billions of users, it is easy to direct the behaviour of users to influence their emotional state by driving their flow according to what the platform wants them to see or do (Volkova et al., 2018); and engage them and their friends on the platform and monetise as much as possible on all these interactions.

Thus, users of these platforms are faced with a shrinking set of choices due to the platforms' accumulated knowledge of preferences (Webster, 2010). That is how users get lost for hours by watching videos for hours on end, for example. Through a gradual, slight, and imperceptible change in users' behaviour and perspective, these platforms monetise their users' attention (Lanier, 2020).

2.3.5 The monetisation of the attention economy

Social Media has evolved to become an essential driver in business (Beier & Wagner, 2016). SM has focused on a business plan that coordinates the sale of advertisements and services to its users; the attention-based economy. Thus, these platforms must be attractive enough to acquire and retain new users and remain effective in advertising to ensure business visibility (Bogaert et al., 2021). Then, as explained above, the algorithm's effectiveness is related to the amount of data it has access to. The more data is collected, the greater the data analytics tools will provide the strategies for optimisation, engagement and advertising purposes.

Therefore, using the algorithm's actions, it is possible to determine which content should be shown to the user at a given time to keep them engaged. As explained earlier, these platforms sell the certainty that users will watch their ads and be reached effectively via SM platforms (Zuboff, 2019). This accurate model of their users allows them to know what videos users will watch, what emotions will make them react, and what products they will consume (Harris, 2019). It is easy to see that digital content is free and available to all at any time, without physical limitations, the only constraint being constant human attention. The user's constant attention here is on the product to generate views for advertisers (Brynjolfsson et al., 2017; Laniar, 2020). The attention economy is an information management concept that considers human attention as an essential resource (Karppi & Crawford, 2016).

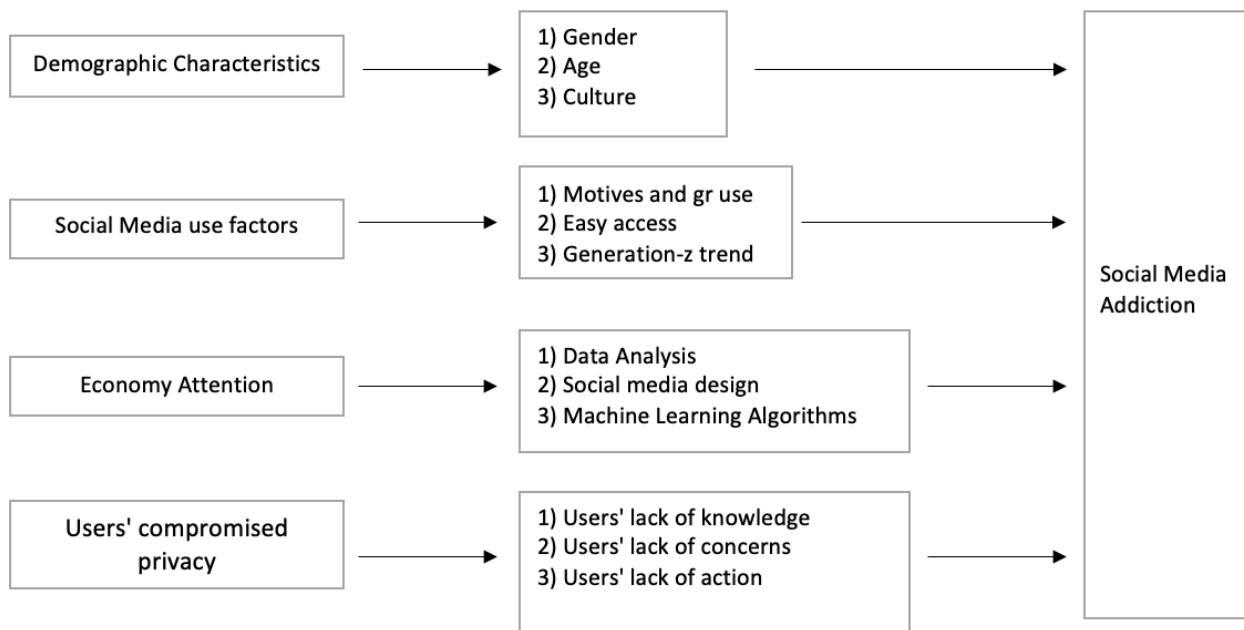
Consequently, attention is considered the most valuable resource (Webster, 2010). Thus, using the retained information of users, these platforms distribute advertisers' messages to a specific group of individuals. Therefore, advertising is used to finance the platform offered to users. Consequently, it is essential for these platforms to have engaged users, as the more users can view the content, the greater the remuneration in exchange (Spante et al., 2018). Consequently, Tristan Harris (2019) does not hesitate to address the subject as a "race to the bottom of the brain stem" to get users to spend as much time as possible on these platforms because they need to assure professional marketers soliciting them that their ads will be converted into views or purchases.

Moreover, these platforms must categorise each user according to their interests and characteristics and associate them with targeted ads. As a result, collecting and analysing their data is crucial to ensure maximum conversions for these advertisers. The more information contained there is, the more accurate these SM platforms will be in their predictions about their users.

2.4 Research Framework

In terms of a theoretical framework, this study attempts to understand SM addiction among the Franco-phone Generation-z by investigating their characteristics, cyber behaviour, and the overall actions of platforms geared towards the attention economy. As for the personal characteristics of the respondents, the critical dimensions used are gender, age and culture. For online behaviours, the essential dimensions are entertainment, communication or information seeking. And then, the crucial dimensions of actions of SM platforms are data analysis, platform design and machine learning algorithms.

Figure 1: Social Media Tendency based on the conceptual frameworks for internet addiction tendency of Murugesan (2018).



A questionnaire survey was used to collect data from Generation Z Francophones. This research questionnaire contains four different parts. The first part focuses on demographic research with five questions identifying gender, age, student status, nationality, and most SM platforms.

The second part of the research questionnaire focuses on SM addiction. It follows the Andreessen Bergen addiction scale of Andreessen et al. (2012). It consists of six pieces of two questions, each addressing the six elements of the addiction model identified: salience, mood modification, tolerance, conflict, withdrawal and relapse.

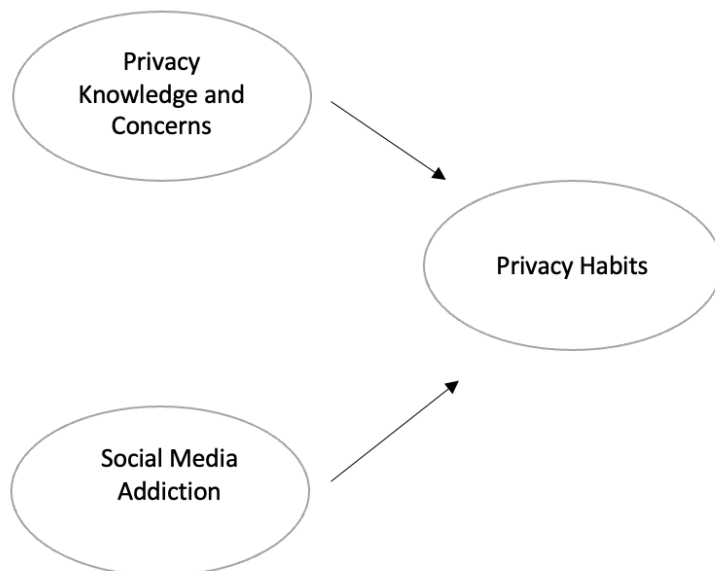
Andreessen et al. (2012) proposed a simplified scoring scheme. If a respondent's answer equals or exceeds three on four of the six items, averaging the five-point scale for each part, they are considered as having a high level of addiction.

The third part of the questionnaire survey deals with privacy habits on social media. The researcher addresses four questions about the practices of individuals regarding their privacy settings.

Finally, the last part of the questionnaire survey deals with privacy knowledge and concerns. It answers the first two questions by quantifying respondents' knowledge about the monetisation of the attention economy and data collection. Then, the author will attempt to quantify the respondents' concerns about these SM platforms.

Thus, for the part concerning the user's privacy, the researcher uses a scoring system like the one used in the Facebook addiction scale. If the user gets a mean score equal to or higher than three for the 3rd part concerning privacy habits, he will be considered careless about his privacy. In the 4th part, the average score must be equal to or higher than three to be considered a user with knowledge about the economic attention and monetisation of users' privacy. The same applies to the third party if the average score is equal to or higher than three; this will show users' awareness of unethical practices on their platforms and privacy.

Figure 2: The consequences of Social Media drawbacks



The study results are based on descriptive statistics, and inferential statistics are beyond this research's scope.

3 Methodology

The title chapter methodology will focus on how the research will be conducted to answer the research questions, including the theoretical and philosophical assumptions.

This study aims to analyse the addiction of the Francophone Generation-z and the impact of this addiction on their social and individual lives. For this purpose, the study was conducted using a questionnaire addressed to 174 respondents.

3.1 Research context

Seeing the significant expansion of social networks since the early 2000s and the excessive use of them by the younger generation and young adults, concerns for the well-being of these users have only grown. Indeed, having grown up in this generation and with the rise of SM platforms, the author has felt the degradation of human relationships. However, what upset him the most was that he felt sucked into the need to associate himself with these virtual relationships.

At first, users start using these platforms to be like everyone else because most of their friends have an account there. Then they go there from time to time to pass the time. And that is how they lose control. Because users let these platforms keep them busy. Unfortunately, these SM platforms have all the information necessary to entertain users and hold their attention for hours. Therefore, relationships between the younger generations have moved principally to the virtual sphere. The idea that SM platforms were created to share one's life with loved ones has become an illusion; today, SM only reflect the good side of appearances, which users allow themselves to show. Users no longer live the moments fully because they are unfortunately too busy filming them. It has become preferable to film the celebration of the goalscorer at a soccer match than to celebrate with him as a real fan would do. Even at the restaurant, taking pictures of the plate or place instead of enjoying the person they are sharing the moment with has become a daily routine. This is true even for the youngest children. Card and board games have disappeared in favour of video games and phones. Afternoons spent learning to ride a bike or playing sports at the neighbourhood complex have slowly faded and turned into "YouTube video tutorials," "Facebook, Instagram live", or "video games."

Faced with this observation, the author wanted to collect data on users' perceptions of these platforms and try to remedy this problem.

Thus, in the context of this research, the researcher collected a cross-sectional data sample through a quantitative questionnaire to learn more about Francophone Generation-z and their concerns, habits towards SM use and data privacy. The data resulting from these presentations is retrieved and processed by a mono-method allowing quantitative data analysis, providing a comprehensive study that answers the research questions.

3.2 Research design

The researcher used the onion design model proposed by Saunders et al. (2015) for this research work.

3.2.1 Research philosophy

In the context of this research work, the author has chosen to take an approach based on realism as a philosophical stance. The researcher's view of the nature of reality is objective and exists independently of human beliefs or knowledge (Saunders et al., 2015). This research is based on the assumption of a scientific approach to developing an understanding of SM users regarding collecting and using their data. To be more precise, the author relies on critical realism. Indeed, contrary to the so-called naive realism, critical realism allows understanding that humans experience the sensations and images of the actual world. However, in this case, the trends and pictures of the natural world seem different from reality and are interpreted through social conditioning and focused on the Francophone Z Generation population (Saunders et al., 2015). The research is valued laden as it aims to raise knowledge (Dudovskiy, 2021) and awarenesses about the risks associated with SM addiction where data security and privacy of the users are compromised.

3.2.2 Research purpose

In this research, the primary type of design used is descriptive. The literature review is associated with the descriptive part portraying an accurate profile of persons and regarding the drawback of social media. Then, the questionnaire survey will focus on the insight discovered in the questionnaire survey that assesses the phenomena studied (Saunders et al., 2015). This research aims to increase understanding of users' usage patterns, focusing on relationships between disruptive technologies, data collection and SM addiction. The study also addresses the attention economy on SM platforms and the strategy and implementation of technologies to engage users. As the new generations fully consume these platforms, this research work is a way to make information available and increase awareness among younger and fu-

ture generations to take a step back and reflect on the disadvantages of the use of social media. The research combines secondary data published in previous studies with primary data collected on Francophone generation-Z SM users with a questionnaire survey.

3.2.3 Research strategy

A survey questionnaire is chosen as a research instrument to collect quantitative data as primary data in this research.

The survey questionnaire was conducted throughout 2021 to collect primary data regarding SM addiction and data privacy perception among the Francophone Z-Generation. The questionnaire was designed in three parts, not including the part about having demographic information, and based on a 5-point scale, with one being "very rarely" and five being "very often", thus allowing for quantitative data collection.

3.2.4 Methodological choice

Thus, the author applied a mono-method by collecting exclusively quantitative data in this research work.

3.2.5 Time horizon

Most articles on study methodology focus on discrete methods and their implementation (Amara, 1991). The cross-sectional time horizon is selected because the data collection is done in one wave (only once). The author collected data through a quantitative questionnaire posted on LinkedIn and other high visibility platforms from January to September 2021.

Unfortunately, regarding that short-term study, the researcher felt that the time allotted to complete this research work did not allow for repeated data collection over a long period to have data comparable over time.

3.3 Data collection

The two main sources of data are primary data and secondary data. In this empirical study, Primary data is collected through a survey questionnaire. The primary data is collected to answer the main research questions (RQ1, RQ2 and RQ3). In contrast, sub-research questions (RQ1.1, RQ1.2 and RQ1.3) are fed through the literature review by identifying the relevant factors linked with the questionnaire survey respondents'

patterns. The survey questionnaire built from previous work (Andreessen et al., 2012) is intended for more reliable and objective data.

Sample

The respondents to this survey questionnaire are all Francophone. Most respondents are based in France, while a minority live in Francophone Africa (Algeria, Senegal, Ivory Coast). The sample thus gathers a group belonging to generation Z, born between 1998 and 2012.

Survey Questionnaire

The survey questionnaire allows us to answer the main research questions (RQ1, RQ2 and RQ3).

The RQ1 focuses on part 2 of the questionnaire (SQ6 to SQ17), thus attempting to identify respondents with behaviour and attitudes representative of addiction to SM regarding Andreessen et al., (2012) previous work. However, we focus on the Privacy Habit Part (SQ18 to SQ21) to see if users pay attention to their personal information.

RQ2 focuses on the privacy habit part (SQ18 to SQ21) and the privacy knowledge and concerns aspect (SQ22 to SQ26)

RQ3 focuses on the privacy habit part (SQ18 to SQ21) to highlight the link between addiction, data privacy and user loyalty.

3.4 Data analysis

Data analysis refers to the techniques and procedures used to describe, categorise, and illustrate the data collected. The goal is to generate conclusions and meanings based on the established research questions (Shamoo & Resnik, 2003). Analysis methods vary depending on the quantitative data collected (Saunders et al., 2015). Data analysis is crucial because it allows for the linkage of the data collection work to the various research questions (Patton, 1987).

3.4.1 Quantitative data analysis

Quantitative research aims to quantify the data collected through the questionnaire survey sent to many respondents, acting as descriptive and causal research (Hair et al., 2010). In general, quantitative research

aims to provide the readers, including potential decision-makers, with the results and analysis to make accurate anticipation about customers or consumers' behaviour, user experience or any other business relevant phenomena.

First, the researcher has prepared the data for using it in the analysis phase. Secondly, the researcher primarily uses descriptive statistics to highlight the potential relationship between variables and finds basic information about the studied dataset.

To do it, it is imperative to design a good, guided, and logical questionnaire and to be able to interpret numerical data through statistics into a clear and concise narrative that would be legitimate if only the reliability of the data remains proven (Hair et al., 2010).

3.5 Ethical considerations

Ethical considerations in research guide research designs and practices, for example, following a specific code of conduct when collecting data from respondents. Thus, ethical considerations are intended to address the rights of research participants by not revealing their identity and protecting their privacy. These principles ensure that participation in the questionnaire survey was voluntary and well explained so that participants are not inadvertently or unintentionally harmed. The publication of the results assures their anonymity. Compliance with research ethics, therefore, reinforce the credibility of the research.

As a result, the researcher implemented a data collection system based on voluntary responses. It means that all voluntary respondents are free to respond without any pressure. Therefore, all participants can withdraw or drop out of the study without feeling pressured. The author sought their assent (agreement) to participate and study their data with minors. The second and final point implemented in this research is the anonymity of the respondents. The readers and general public cannot link any individual participant to their data, such as last name, first name, number, and email address.

Thus, through this data collection process and study of its data, the author considers all possible sources of harm to the respondents and himself, such as psychological, social or legal harm associated with a breach of privacy.

4 Research Results

4.1 Demographic part

This study consists of 97 male respondents (55.74 per cent) and 77 female respondents (44.25 per cent) (see Table 1), all from the generation-z with 26 respondents aged between 12 and 18 years old and 148 aged between 18 and 24 aged; the generation born between 1997 and 2012. Finally, 65 per cent are students (university + high school), and 35 per cent are employees.

TABLE 1: Respondents' characteristics

Female	Male	Age		Statuts	
		12 - 18	18 - 24	Student	Employed
44,25%	55,75%				
77	87	14,94%	85,06%	65%	35%
		26	148	113	61

The population studied is Francophone. 94.83 per cent of the respondents here are French. The remaining five per cent are of different African nationalities. There is 1.72 per cent of Senegalese (3 respondents), 2,30 per cent of Congolese (4 respondents) and 1,15 per cent (2 respondents) of Algerian origin.

TABLE 2: Nationality

French	Senegalese	Congolese	Algerian
94,83%	1,72%	2,30%	1,15%
165	3	4	2

It can be seen from that question that Instagram is the most liked network with 74.71 per cent of the votes, followed by Snapchat at 14.37 per cent, Youtube at 6.90 per cent and Facebook at 4.02 per cent. The trend is verified in a relatively balanced way among women and men present in this research. However, the author can see that women put Facebook in third place with 2.87 per cent of responses and Youtube in fourth place with 1.15 per cent.

TABLE 3: Social Media Platform Use

Social Media Platform Use		
	Female	Male
Facebook	2,87% 5	1,15% 2
Instagram	34,48% 60	40,23% 70
Snapchat	5,75% 10	8,62% 15
Youtube	1,15% 2	5,75% 10

4.2 Social Media Addiction

The questions in Part 2 are divided into several parts. The goal is to quantify SM addiction through the Andreessen Addiction Scale. Each piece will represent the six elements of the addiction model: salience, mood modification, tolerance, conflict, withdrawal, and relapse.

The first part represents the level of salience. The author will study how users think or notice social media through these questions. In the first question, 48.88 per cent of respondents experiment that they frequently (often + very often) think or plan to use social media. However, 37.98 per cent say they do not think about social networks or how they will use them.

Then, in the second question, 54.03 per cent affirmed they sometimes think about what they have seen on these platforms compared to 33.34 per cent who said the opposite.

TABLE 4: Salience

	Very Rarely	Rarely	Sometimes	Often	Very Often
Have you spent any time thinking about or planning to use Facebook or Instagram?	13,79%	25,86%	12,64%	39,08%	8,62%
	24	45	22	68	15
Have you ever thought persistently about the content you see on social networks after use?	8,05%	25,29%	12,64%	29,89%	24,14%
	14	44	22	52	42

The second part represents the mood change. In this part, the author will try to perceive if the consumption of these SM is following the wishes of their users. Through the first question results, the researcher can see that 63.21 per cent of the respondents declared that they spend more time on these platforms than initially planned. In addition to this, 71.27 per cent stated that they are led to use these platforms when they are busy and have things to do, while only a minority of 22.41 per cent say the opposite.

TABLE 5: Mood modification

	Very Rarely	Rarely	Sometimes	Often	Very Often
Are you spending more time on social networks than expected?	14,37%	8,05%	14,37%	18,39%	44,83%
	25	14	25	32	78
Are you driven to go on these platforms while you have something to do?	5,75%	16,67%	6,32%	25,29%	45,98%
	10	29	11	44	80

In this part, the author represents tolerance. Thus, the researcher seeks to measure the relationship between SM use and users' bad moods through this part. 60.92 per cent of the respondents indicate that they do not use its platforms to avoid their problems. In the following question, 59.77 per cent responded proportionally not to use these platforms in the context of reducing anxiety, guilt or depression.

TABLE 6: Toleranc

	Very Rarely	Rarely	Some-times	Often	Very Of-ten
Are you driven to use these platforms to forget your personal problems?	33,33% 58	27,59% 48	17,24% 30	16,09% 28	5,74% 10
Are you led to use these platforms to reduce feelings of guilt, anxiety or depression?	34,48% 60	25,29% 44	13,79% 24	19,54% 34	6,90% 12

This part is about withdrawal. Through this part, the author tries to see if the respondents have a minimum of hindsight regarding these platforms and can leave. These questions are about self-awareness; whether respondents can distance themselves when needed. The first question shows that 51.15 per cent of respondents have tried to stop using these platforms completely versus 35,64 per cent who did not.

Proportionally, the second question shows that 51.15 per cent have tried to decrease their access time to these platforms versus 16,67 per cent who did not try to reduce their use.

TABLE 7: Withdrawal

	Very Rarely	Rarely	Sometimes	Often	Very Often
Have you ever taken to cut all links with social networks?	8,05% 14	27,59% 48	13,22% 23	32,18% 56	18,97% 33
Have you tried reducing your use of these platforms?	5,75% 10	10,92% 19	32,18% 56	44,83% 78	6,32% 11

This section addresses the penultimate part of the Andreessen Addiction Scale; the conflict. So in this part, the author tries to see if the use of SM can lead to a conflict situation with the users. The first questions have relatively varied responses, suggesting that respondents have different views on the consequences of conflict on this platform.

In this section, 35.06% of the respondents felt irritable without ordinary use time; 32.76 did not have this problem. In the following question, 32.75% of respondents said they felt uncomfortable after being prevented from using these platforms, compared to 31.61% who were not bothered by the prevention of these platforms.

TABLE 8: Conflict

	Very Rarely	Rarely	Sometimes	Often	Very Often
Have you ever been irritable after being prevented from using social networks?	16,09% 28	16,67% 29	32,18% 56	27,59% 48	7,47% 13
Have you ever felt a sense of unease after being prevented from using these platforms?	19,54% 34	14,94% 26	18,39% 32	22,99% 40	24,13% 42

And then the final step of this SM addiction questionnaire survey focuses on relapse. Thus, in this part, the author tries to see a link between these platforms and the negative consequences on users' professional and personal relationships. This part tells us that 59.36% of the respondents think their uses negatively influence their work or studies, while 25,86% claim the opposite.

The second question indicates that 48.94% of the respondents give less time to hobbies or families. However, 38.5% indicate the opposite.

TABLE 9: Relaps

RELAPSE	Very Rarely	Rarely	Some- times	Often	Very Of- ten
Do you think these platforms can rub off negatively on your work/studies?	4,60%	21,84%	13,22%	28,16%	32,18%
	8	38	23	49	56
Have you ever had to give less priority to your hobbies or family because of these platforms?	21,26%	17,24%	12,64%	26,44%	22,41%
	37	30	22	46	39

From the initial 174 respondents, 110 responses were equal to three or higher on at least four items regarding the averaging five-point scaling scale. The author concludes that 110 present a high level of addiction in that sample regarding the Andreessen Addiction Scale.

4.3 Privacy Habits

In this section, the author will look at the usage habits of users concerning their privacy settings (see Table 10). Few users only are careful about protecting their data and, therefore, their privacy. The first three questions receive most "often" and "very often". The researcher can conclude that many respondents are not very careful about sharing their private information. Indeed, 40.23 per cent share their locations, 46.55 per cent share their contact information, and 56.89 per cent share their data without not restricting access to their account.

Table 10: Privacy Habits

	Very Rarely	Rarely	Some-times	Often	Very Of-ten
Do you share your location?	37 21,26%	21 12,07%	46 26,44%	49 28,16%	21 12,07%
Do you share your contact information (email, phone number)?	42 24,14%	32 18,39%	19 10,92%	52 29,89%	29 16,67%
Do you share personal information without taking into account who can access it?	19 10,92%	27 15,52%	29 16,67%	43 24,71%	56 32,18%
Do you restrict access to your Social Media accounts?	39 22,41%	31 17,82%	44 25,29%	41 23,56%	19 10,92%

This section focus on the respondents' knowledge and concerns about data privacy. 47.7 per cent admit to knowing that their information is collected by SM platforms, against 45,98 per cent saying the opposite. The results around this question are relatively varied, suggesting that respondents have different views on collecting personal data on these platforms. In the following question, 54.59 per cent say they know that these platforms monetise on their data, against 41.94 per cent saying the opposite. Given the previous question, the author comes to question the respondents' perception regarding the monetisation system of these platforms, seeing that 54 per cent claim to know that these platforms monetise their data while only 47.7 per cent claim to know that these platforms collect their data.

TABLE 11: Privacy knowledge and concerns

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Do you agree that Social Media sites are collecting your personal data?	13,22% 23	32,76% 57	6,32% 11	28,16% 49	19,54% 34
Do you agree that these platforms monetize your personal data?	20,11% 35	21,83% 38	3,45% 6	40,80% 71	13,79% 24

In this section, the author will study respondents' concerns regarding media and data collection. The researcher can see from the first question that 37.94 per cent of them say that users should change their uses for their privacy. However, 51.15 per cent say the opposite. 48,27% of the users are worried about the information collected about them, and 52,87 per cent think users should stop providing their data.

TABLE 12: Privacy concerns

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Do you agree that users should modify their use for their privacy?	10,34% 18	27,59% 48	9,20% 16	35,05% 61	17,82% 31
Do you agree that users should be concerned about the Information collected about them?	13,79% 24	21,84% 38	3,45% 6	40,80% 71	20,11% 35
Do you agree that users should refuse to provide Social Media platforms their personal information?	17,24% 30	20,69% 36	9,20% 16	29,31% 51	23,56% 41

4.4 Interpretations

For Informational purposes, the author combined the answers rated "very often" and "often" to measure a larger sample of people during the analysis of the questionnaire survey in chapter four. The same goes with the combination of "very rarely" and "rarely". In addition, all numbers will be simplified to two decimal places in the various tables and the following analysis.

One hundred ten respondents, or 63.21 per cent of the sample, scored three or higher on at least four of the different sections of the Andreessen Dependency Scale. These 110 respondents are more likely to exhibit SM addiction behaviours. In this sample, 69 are female, and 41 are male. 72,73 per cent of the addicted model are Instagram users, and 92,73 per cent are between the ages of 18 and 24. Therefore, this subsample has more women than men, 62.7% of women and 37.27% of men. Consequently, we can confirm the studies of Andreessen, Moluzzo and Monacis stipulating that women are more likely to develop addictive behaviours to SM than men.

92,73 per cent of the SM addicts sample are from the 18-24 age group; Of the 110 respondents considered addicted, 102 are in the 18-24 age group, and eight are in the 12-18 age group. 30.77 per cent of the initial 12-18 is considered addicted, while for the age group 18-24, 68.92 are considered addicted. This result also confirms the research established by Andreessen, Moluzzo, Monacis, and MIP, in which young adults are considered more susceptible to SM addiction. This result also confirms the literature review, showing the link between SM addiction and age.

Instagram is the most used media by the respondents identified as addicted. 72,72 per cent of the subsample considered addicted primarily use Instagram. Among the addict users preferring Instagram, 98.75 per cent are aged 18 to 24 years. This result goes in the same direction as the Pew Research report that indicated that 70% of American adults aged 18 to 24 use Instagram.

In the last part, of the users aware of the collection of data by these platforms, 81 of them are part of the subsample considered addicted. The authors claim that 73.64 per cent of the group thought addicts were aware of the practices, but 59,09 per cent of the subsample still share their location, 69.09 per cent share their contact information, and 55.45 per cent do not restrict access to their accounts. It is a paradox; only 29.09 per cent of the subsample considered addicts think they must change their uses for the sake of their privacy. From the original sample, 106 respondents are genuinely concerned about their information, and 91 of the respondents agree that users should refuse to provide their data.

5 Discussion

5.1 Limitations, reliability, and validity

Unfortunately, the used sample has very little insight into SM in general. This is, unfortunately, one of the first problems. The population studied here is relatively young. Indeed, many respondents are around 18-21 years old (55.17%) and lack information. They have mostly grown up with social media, and for them, SM is just an innocent way to reach their friends on these platforms. They consume these platforms and associated tools and participate in further increasing the database of these learning machines.

According to the author, the research work is limited when considering the primary data collection for this study. Indeed, a more significant number of respondents in the first instance would have allowed the research to be more accurate in terms of results. Secondly, it would also have been interesting to collect data from a demographically fair number of respondents and proportionate among gender, age, and nationality. A more precise and equal interpretation of gender, age, and culture would have allowed a more exciting and accurate conclusion. As for the answer to the research questions, it was more difficult for the researcher to clearly define how the adolescents (between 12 and 18 years old) present in the sample perceived the relationship between the attention economy and the collection of their data; given the young age and the lack of perspective that it implies.

However, despite the limitations of the work, the author relies on Andreessen, Moluzzo, and Monacis previous work regarding gender and age as essential factors in SM addiction. In addition to his research objectives, the author was able to link the work established years earlier and his literature review while creating a questionnaire survey for the respondents.

One of the limitations is that the responses of the young respondents (minors) may be highly correlated with their comprehension level of the attention economy.

5.2 Answering the research questions

To answer the first research question (RQ1) and sub research question (RQ1.1), it seems correct to say that Francophone Generation Z Attitude is extremely passive while consuming Social Media platforms. Indeed, having grown up with these platforms from an early age more than any other generation, it is hardly surprising that Generation-z consumes these SM platforms entirely without paying attention to the consequences. Of the respondents, 110 are considered addicts according to the Bergen Addiction Scale and have

already established use habits. They consume these platforms completely, making their data available. The authors claim that 73.64 per cent of the group thought addicts were aware of the practices, but 59.09 per cent of the subsample still share their location, 69.09 per cent share their contact information, and 55.45 per cent do not restrict access to their accounts. Only 29.09 per cent of the subsample considered addicts think they must change their uses for the sake of their privacy, thus showing us once again the passivity of users in the face of their excessive uses. However, it is difficult to put the blame entirely on the users. Indeed, based on the attention economy, these platforms repeatedly encourage users to consume them. Certainly, by collecting and analysing the data of billions of users, it is easy to direct the behaviour of users to influence their emotional state by driving their flow according to what the platform wants them to see or do.

The generational factor in the first instance leads this population to consume these platforms. And then, the components of the attention economy based on the study of user data will engage users, pushing them into addiction. SM addiction is thus characterised by passive respondents' excessive usage habits and a lack of concern for their data, thus allowing these platforms to exploit them in the best possible way for advertising purposes. Addiction takes over reason through a gradual, slight and imperceptible change in the user's behaviour and attitude and drives this Francophone generation-z to consume these SM entirely.

The author addresses research question 2 (RQ2) by stating that Francophone Generation-z is careless and unpreoccupied regarding their online data. They know about the attention economy, their excessive consumption, that they should change it. However, their privacy habits remain the same.

First, to answer the sub-research question (RQ2.1), it is possible to say that most generation-z is cruelly lacking in knowledge on data collection. The results around question 22 are relatively varied, suggesting that respondents have different views on collecting personal data on these platforms. However, it is worth noting that the sample studied lacks concerns as only 29.09 per cent of the subsample considered addicts think they must change their uses for their privacy. Therefore, privacy is less of a problem as they expect customisation and personalisation to live a unique experience on these SM platforms.

However, it is more important than ever to take a step back from SM for the generation-z and the generation upcoming; to be careful about what users share online, their data, and not to let the possibility of these machine learning algorithms the slightest chance to influence users in their choices.

Then, to answer the third research question (RQ3), the author interprets loyalty as the critical engagement of a generation-z with social media. Indeed, in the case of social media, user loyalty is linked to the attention economy. To answer the research sub-question (RQ3.1), SM has implemented several tools, design

processes, and data collection to know its users and engage them on their platform. Users don't want specifically to spend that much time on these platforms. But they do because it is hard to fight all the recommendations (video content, photos, purchases recommendations') based on their data. Thus, users lacking concern for protecting their data give these platforms "the stick to beat" by making their data fully available. Indeed, by possessing a deep knowledge of its users, these SM platforms can adapt each user's feeds to make them click repeatedly. The more time a user spends on the platform, the more data they will provide. In this way, SM platforms observe an increase in the amount of data collected, allowing machine learning algorithms to analyse a more significant amount of data. The more data they have, the more accurate these SM predictions will be about their users. And the more precise these SM predictions are about their users, the more successful they will be in getting them to spend time on these platforms, thus managing to monetise as much as possible on their users' interactions. It's an endless loop that keeps repeating itself, characterising the increase in the loyalty and engagement of their users.

5.3 Dialogue between critical results and knowledge base

This research work revealed that Social Media addiction is more present in women, even though the initial female sample was smaller than the male sample. Thus, the author perfectly links the results of his research with that of Andreessen, Moluzzo and Monarchs.

Ninety-three per cent of the subsample of consumers considered addicted fall into the 18-24-year-old category, confirming that Andreessen, Moluzzo, and Monarch's studies say that young people are most likely to become addicted to social media.

Added to this, this questionnaire survey demonstrated the consequences of the attention economy. Indeed, as Tristan Harris explained, Social Media do not hesitate to set up several features to exploit users' weaknesses and capture their attention. Whether through the implementation of tools, data collection or algorithms in charge of analysis, Social Media encourage users to consume these platforms entirely. Indeed, through the questionnaire survey, the researcher could see that many users are passive in front of the media while knowing that their use is excessive and they have activities and work to do. Indeed, the personalisation of the feed of its platforms specific to each user, taking into account the study of data, dramatically encourages users to consume these SM platforms. Machine learning algorithms make these personalisations and follow the implementation of objectives and goals by collecting data and making predictive assumptions on a statistical basis to calculate which content would be the most capable of driving users to consume more.

Therefore, it is relatively complex to get rid of them; these generations lack knowledge and concerns first and do not take a step back regarding their excessive consumption of these platforms and private data, thus highlighting their passivity. Considering that Generation-z grew up with this technology from a young age, gradually moving away from human relationships, this sense of Social Media addiction is much more profound. It makes it impossible for most of them to question the change in their use of Social Media and the real intentions of these platforms. Thus, user passivity and engagement are seen as a direct consequence of the tools implemented by these social media platforms. Through a design process based on creative and innovative design methodologies, technology hijacks users' psychological vulnerabilities and transforms them into an engagement. Tristan Harris, a pioneer in human technology, had demonstrated that social networks do not hesitate to implement several features to exploit our weaknesses (the leverage effect, reward system, dopamine effect, facial recognition) and transform them into engagement in the context of the attention economy and targeted advertising.

5.4 Compliance with research ethics guidelines

The research ethics guidelines are consistent with what was previously stated. Respondents voluntarily participated in this questionnaire on their initiative through posts found online on LinkedIn and other well-known social media platforms.

Surname and first names that could lead to the identification of a respondent have been removed, making each participant anonymous. Readers of this research paper will be aware of the trends established by the author's analysis (see chapter four) based on data collected through the questionnaire survey without disclosing the respondents' specific information.

Every effort has been made not to cause harm to any respondents. Through this research work, the author seeks to make information more available to help generation-z and future generations. This thesis aims to bring more information to future generations to take more steps back from the methods and practices of these Social Media platforms without pointing to any specific respondents in this research work.

6 Conclusions

The problem with the Generation-z population studied is linked with its consumption itself. Indeed, as explained above, many respondents are aware of collecting personal information and monetising without changing their consumption. Indeed, users are passive and careless in front of the social media attention economy. They spend more time on social networks than expected, even if they have something to do. Faced with this observation of themselves and their uses, users should distance themselves from these platforms and enjoy more the pleasures of real life. However, users' habits are ingrained, and they don't dissociate themselves from these SM platforms.

In the context of this study on the Francophone population, the author can rely on what was said in the literature review. Indeed, the countries mentioned above (France, Senegal, Congo, and Algeria) are part of an individualistic culture. Therefore, the Francophone population studied tends to connect to these platforms to search and obtain information (Lee et al., 2014) without any fundamental objectives. However, with infinite streams based on users' data previously collected, these platforms can send personalised content that they will enjoy indefinitely. Thus, it becomes quickly possible to get lost through these media and start developing an addiction by repeatedly spending much time, thanks to the design-thinking process and technological implementation present on these SM platforms.

The problem is also coming from the social approval coming from social media. Indeed, the problem with the new generations is that SM platforms act as a social approval intermediary. Indeed, whether the user's publications are rewarding or not, through the tools installed, having many likes, comments, and shares on its posts can inflate the ego of its users by being seen as someone attractive. This is the dopamine effect implemented through the reward system present on these platforms. Young users who follow these methods do not enjoy the present moment. The goal now is to post their whole life and show their activities, luxurious lifestyle, and fancy clothes. Unfortunately, this is not natural and tends to change a person's mood depending on the social approval received in return. Thus, faced with positive support, the user will try to renew this feeling even if it means doing everything to achieve it, diving a little more into the addiction.

However, the user is confronted with many design methods. A part of the Francophone population studied claimed to know it; Social Media collects and monetises personal data through data analysis of all user interactions (post liked, facial recognition, personal information, localisation, studies). These Social Media affect users' choices and behaviours by guiding them indirectly. Through their data, these Social Media do

not hesitate to show the user what he wants to see, what he likes, to make him fully consume these platforms. Social Media platforms slightly modify their behaviours and consumption habits through these tools, making them more addicted afterwards, permitting a higher engagement and loyalty from users.

So, despite the knowledge of the negative impact of social media, the loyalty of Social Media Generation-z users keeps increasing, allowing for more data to be collected and making the predictive analysis of users more accurate each time users connect and interact. The more precise the predictions, the more the financing system of these platforms will be profitable.

Users need to be careful with their online data and protect themselves. Unfortunately, the generation-z that has grown up with these platforms from an early age is careless about the information they share online, the collection of their data and their excessive uses. Despite the number of people who know about collecting their data, few were willing to act against these more than dishonest methods. Thus, this young generation needs to learn more about these platforms, their design methods, and technology implementation and understand that they are the product and not the users.

6.1 Key Findings

The author highlights that in the case of this francophone individualist culture, they tend to connect to these platforms to search and obtain information without precise objectives. We have seen that the attitude of the French-speaking Generation Z is highly passive when it comes to social media consumption. Thus, the tools put in place by these platforms tend to make them engage as much as possible, leading gradually to an addiction.

It can also be argued that the French-speaking generation-z is careless and unconcerned about their online data. Thus, this population leaves the opportunity to these platforms to exploit this data to engage them in the attention economy further. With infinite streams and data previously collected, these platforms can send personalised content that users will enjoy indefinitely, making them spend much time on it repeatedly. At the same time, they have activities, work or family to see but remain highly passive for the benefit of these platforms.

Therefore, in this research, the author highlights loyalty as the critical engagement of a generation-z with social media. Indeed, by implementing several technological tools, design processes, and data collection, it is possible to guide users through a gradual, slight and imperceptible change in users behaviour and perspective, making them more and more addicted to these platforms.

However, it is difficult to blame the users who lack knowledge of these dangers. Firstly, the generational factor rapidly leads this population to consume these platforms as a fashion effect. Then, faced with many technologies, composed of algorithms, data sciences, facial recognition, artificial intelligence, trying to hijack people's psychological vulnerabilities to consume, it is difficult for the user not to fall into the trap despite the awareness he has of its excessive use. Being aware of excessive use is one thing; however, very few are willing to change their habits in the case of the Francophone population studied.

6.2 Managerial implications

Regarding managerial and societal implications and seeing the processes put in place by its platforms to engage its users, it is essential to act at the level of users, founders of its media, and governments. Thus, the radical reorganisation of the digital infrastructure is paramount; it is more than necessary to drive a complete change towards a human technology that supports well-being, democracy and a shared information environment among its users (Dudovskiy, 2021).

In that way, the humane technology centre founded by Tristan Harris is working to foster a global shift toward a humane technology that supports our well-being, our democracy and our shared information environment. It is essential to mobilise technologists, business leaders, and policymakers through media campaigns, working groups, and high-level briefings on the Time Well Spent by users on these SM platforms. In my opinion, it is vital to accompany tech leaders to a more transparent, ethical, and healthy technology for its users. Indeed, thanks to the leak of the "Facebook Files" by Frances Haugen, a former employee, we can see that these Social Media are aware of some negative adverse effects of Instagram on users' mental health and well-being, especially among teenagers. The same goes for the Cambridge Analytica scandal revealing the leak of 87 million users' data by Facebook, highlighting the drawbacks of the social media business model. Many executives from these tech giants have shown that SM platforms algorithms have become so complex that they took over their author's control (Harris, 2019; Lauer, 2021). Thus, the actions are still too weak. These platforms do not hesitate to use all means in their capacity to increase their profits. And this is understandable from a business point of view. However, in the case of social media, increasing profit means increasing user engagement, which can lead gradually to addiction.

Considering the critical role of Social Media for the younger generation, it is essential to act for the well-being and development of future generations. Even if regulations regarding data privacy start to arrive in Europe, for example, it remains vital for states to protect the welfare of their citizens and impose transparency when it comes to using users' data for marketing and advertising purposes, as it is done with telecom companies.

6.3 Recommendations for future research

According to the author, this subject is essential to address and remains interesting to study from a personal perspective. Young people are constantly exposing their lives on these media, spending more time filming their time at restaurants, soccer games, and concerts than enjoying the event itself. Therefore, it is crucial to provide support and information to these young populations to help them take a step back and detach themselves from these social media platforms. It is more than time to take the lead on this issue and encourage the younger generation to learn about it and educate themselves on data privacy and technological point of view.

Moreover, it turns out that the author also has a strong interest in data science and would like to pursue his master's degree in this direction. Thus, during his master's thesis, it will be interesting to test the relationships with inferential statistics between the different variables established in the research framework; whether the higher the knowledge and concern of users about privacy, the stronger their privacy habits are. And it would also be interesting to test the relationship between the dependence on social media with the privacy habits of users.

Consequently, in a future research project, the researcher would like to focus on the relevance of algorithms for social media, considering the results of this research. It would be fascinating to look at the structural aspects of collective artificial learning and learn more about how these platforms tap into their users' weaknesses and convert them into an engagement. To do so, a deeper understanding of data science and computer programming is needed. It would allow us to step back from the goals of these machine learning platforms and see how they could develop creative solutions regarding humane technology.

7 References

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8 Appendix

Appendix 1- Questionnaire Survey

Part 1: Demographic Information

- 1) What gender are you?
- 2) What is your age?
- 3) What is your status?
- 4) What is your nationality?
- 5) Which Social Media do you use the most?

Part 2: Social Media Addiction

- On a scale from 1 to 5, with one being "very rarely" and five being "very often";

- 6) Have you spent any time thinking about or planning to use Facebook or Instagram?
- 7) Have you ever thought persistently about the content you see on social networks after use?
- 8) Are you spending more time on social networks than expected?
- 9) Are you driven to go on these platforms while you have something to do?
- 10) Are you driven to use these platforms to forget your problems?

- 11) Are you led to use these platforms to reduce feelings of guilt, anxiety or depression?
- 12) Have you ever taken to cut all links with social networks?
- 13) Have you tried reducing your use of these platforms?
- 14) Have you ever been irritable after being prevented from using social networks?
- 15) Have you ever felt a sense of unease after being prevented from using these platforms?
- 16) Do you think these platforms can rub off negatively on your work/studies?
- 17) Have you ever had to give less priority to your hobbies or family because of these platforms?

Part 3: Privacy Habit

- On a scale from 1 to 5, with one being "very rarely" and five being "very often";

- 18) Do you share your location?
- 19) Do you share your contact information (email, phone number)?
- 20) Do you share personal information without considering who can access it?
- 21) Do you restrict access to your Social Media accounts?

Part 4: Privacy Knowledge and Concerns

- On a scale from 1 to 5, with one being "strongly disagree" and five being "strongly agree",

22) Do you agree that Social Media sites are collecting your data?

23) Do you agree that these platforms monetise your data?

24) Do you agree that users should modify their use for their privacy?

25) Do you agree that users should be concerned about the Information collected about them?

26) Do you agree that users should refuse to provide Social Media platforms with their personal information?