

# *A Platform Analysis of the Habitual Flow Experience on Instagram*

*A platform analysis looking into how Instagram mobilises design choices to afford states of flow and habituation and the platform's considerations relating to design choices*

**MASTER THESIS**

**Copenhagen Business School**

MSc Business Administration & E-business

**Julie Ege Street-Hansen (93036)**

**Supervisor:** Nanna Bonde Thylstrup

**Submission date:** May 17<sup>th</sup>, 2021

Pages: 67

Characters: 156.048

## Abstract

This thesis investigates how Instagram mobilises design choices to afford states of flow on the platform as well as designing for habituation and what considerations go into the platform's design choices. The walkthrough-method is used to explore and analyse technical mechanisms and embedded cultural references on Instagram's interface to understand how it guides and shapes users' experiences on the platform.

Social media plays a big and noticeable role in electoral politics, protest and political journalism as well as taking up more time at work and during leisure time. In its early phases, social media platforms were viewed positively since they afforded their users with sociality, connectivity, a sense of freedom and control as well as a fantasy world to escape to with room for various emotions. In later years, social media platforms are often associated with out-group prejudice, less prosocial behaviour, less satisfying relationships and lower levels of moral consideration, integrity and overall wellbeing of individuals. This is despite a growing dependence on the various platforms.

The platform analysis of Instagram, one of the leading players within the social media and app marketplace as well as in changing global culture, reveals that Instagram affects the behaviour of their users and more generally, all social media platforms change users' behaviours in some ways. Research suggests users are often on more than one platform and these platforms standardise many of the same features and similar interfaces. Instagram has done it by developing a platform constituting and supporting a sense of flow for users through affordances of being entertained, sociality and loss of time among many other things. Moreover, they hook their users by creating a platform where users can feel a sense of control and an experience of being intrinsically rewarded, which also leads to users being habituated to a continued usage of Instagram and similar platforms even though users have ambiguous feelings toward the use of social media platforms.

Lastly, Instagram is a subsidiary of Facebook Inc. and their primary revenue source is advertisements, since approximately 98% of their total revenue stems from advertising. The success of the companies hinges on their ability to add, retain and engage active users and continue to be relevant for users across the globe.

## Table of Contents

Abstract .....	2
Introduction.....	4
Literature review .....	6
The Ins and Outs of Social Media .....	6
Shifting Paradigms .....	8
Organising Uncertainties .....	10
Digital Discourse .....	12
The Rise of Social Media App Economies.....	13
Affordance Theory.....	15
Creating Habituation Through Flow State .....	18
Habituation .....	19
Flow Theory .....	20
Methodology .....	23
Analysis.....	26
360 Degree View of Instagram .....	26
The Environment of Expected Use .....	31
Vision .....	32
Operating Model .....	33
Governance .....	40
The Technical Walkthrough.....	44
Registration and Entry .....	44
Everyday Use .....	47
Suspension, Closure and Leaving .....	52
Instagram's Affordances.....	53
Habitual Flow Experience on Instagram.....	56
Discussion .....	60
Limitations .....	65
Conclusion .....	66
Bibliography.....	69

## Introduction

Social media plays a big and noticeable role in electoral politics, protest and political journalism as well as taking up more time at work and during leisure time (Gruner, 2016). In its early phases, social media platforms were viewed positively since they afforded their users with sociality, connectivity, a sense of freedom and control as well as a fantasy world to escape to with room for various emotions (Sherry, 2004).

In later years, people often associate social media platforms with out-group prejudice, less prosocial behaviour, less satisfying relationships and lower levels of moral consideration, integrity and overall wellbeing of individuals (Gruner, 2016). This is despite a growing dependence on the various platforms (Gruner, 2016).

These topics are also some of the same aspects discussed in the film “The Social Dilemma” (Orlowski, 2020), which serves as a backdrop to this thesis and what inspires the overall topic and problem formulation.

According to research, there is an increase in habitual usage of various types of networking platforms in the 21<sup>st</sup> century (Soror, Steelman, & Turel, 2021). A survey from 2018 reveals that 69% of adult Americans use one or more social media platforms as well as most users check their social media accounts several times a day (Soror et al., 2021). Moreover, another survey shows that users habitually check their phones for messages and notifications once every 12 minutes (Soror et al., 2021).

One of the social media platforms being checked regularly by its users is Instagram. The company has a great presence in the app market and generally in culture and they are a player in changing the global culture, where the term ‘influencers’ gained traction for meaning popular users (BusinessOfApps, 2021), which in turn means it has developed into a popular marketing platform as well as advertising platform.

Instagram was the fourth most downloaded app in the 2010s (BusinessOfApps, 2021) and they compete in a highly competitive environment with competitors such as Facebook, YouTube, WhatsApp, Facebook Messenger, WeChat and TikTok. This industry is often characterised by innovation, rapid change and disruptive technologies and Instagram needs to remain relevant to its users by anticipating changes in their ecosystems.

Instagram has over 1 billion users worldwide, which is more than Twitter, Snapchat and Pinterest combined (Caliandro & Graham, 2020). Thus, it is one of the most important social networking sites and has been a part of a transformation within visual culture. The design exploits the affordances of mobile media and an intuitive logic of visual communication and is especially popular among the younger crowd, which are teenagers and people in their early 20s (Caliandro & Graham, 2020). The platform is not static but dynamic and the architecture keeps evolving to adapt to the latest trend in culture and the environment.

Instagram launches in 2010 by Kevin Systrom and Mike Krieger and has since developed over the years with Facebook as the parent company introducing new features catering to the changing needs of its users. Moreover, an algorithm change that moved away from showing posts chronologically to a more personalised feed including targeted advertising, which in turn changed the way users relate to the platform as well as each other (Caliandro & Graham, 2020).

This thesis wishes to explore how Instagram mobilises design choices to afford states of flow and habituation and what considerations go into their design choices.

To answer this problem formulation, three theories are chosen. First, the theory of affordances as explained by Bucher and Helmond (2018) will be applied. Affordance theory compliments the chosen walkthrough method by Light, Burgess and Duguay (2018) because by walking through the app, the researcher discovers and explains various affordances along the way.

Secondly, the habituation-sensitisation process originating from Groves and Thompson (1970) among others, along with the third theory of flow originating from Mihalyi Csikszentmihalyi (1990) are central aspects to this thesis to find out how Instagram essentially designs for habituation. Flow theory is chosen to highlight how Instagram through their design choices and affordances creates states of flow for the users. Creating flow state can further create habits for users, which is why the habituation-sensitisation process is chosen to explore, how Instagram designs for habituation.

The thesis will commence with a thematic literature review by accounting a brief history of the development of social media platforms and the competitive market of social networking sites.

The walkthrough method by Light et al. (2018) will be explained in methodology and applied in the analysis. This will be followed by a discussion with a focus on some of the issues raised in the film “The Social Dilemma” with an emphasis on younger users and the discourse of addiction as opposed to habits and the limitations of the overall study followed by a conclusion.

## Literature review

In the past decades there has been a shift in how people exercise interpersonal communication moving from face-to-face communication to an increase in usage of online social networking platforms, such as Facebook, Twitter and Instagram (Gruner, 2016). Moreover, a new screen ecology emerges centred around the big social media platforms, such as Instagram, Facebook and YouTube, where it brings news and entertainment content coupled with social media connectivity (Burgess, et al., 2016). This is coupled together with the power of the algorithm as a device of predictability and thus works as a tool with social and economic control (Burgess, et al., 2016).

When using the term ‘user’ during the thesis, it is used to refer to the human end-user for which the platform is originally designed for, even though it can be argued that advertisers, developers and researchers are also users (Bucher & Helmond, 2018), but they are not the focus of this thesis.

## The Ins and Outs of Social Media

The term social media is first used around 1994 (Baym, 2015), but it primarily gains recognition and widespread use with the development of Web 2.0 platforms a decade later, which focuses on user generated content. According to Baym (2015), too many social media scholars are focusing on how people use the social media sites and the following consequences with too little focus on the force of the platforms as actors in the socio-technical economy. The term ‘social media’ is somewhat repetitious, since all media are social, and all sociality is mediated according to Burgess, Marwick and Poell (2018).

Since social media as a phenomenon emerges and is used as a term in the early 2000’s (Lomborg, 2017), the research of social media has evolved greatly. In the early years starting from 2004, researchers mainly focus on users and the generous creative space they enjoy which the social media platforms offers (van Dijck & Poell, 2015). The following years focus on how professional activities and social media platforms become intertwined, and they become even more interconnected with different sectors in society. This gives further rise to the term ‘the platform

society' (van Dijck & Poell, 2015), which is a worldwide conglomerate with all sorts of platforms with interdependencies organised by a common set of structures.

Social media platforms are built around content sharing, public communication and interpersonal connection, which influence the lives of populations around the world (Burgess et al., 2018). Moreover, researchers believe we are amid a social media paradigm, i.e. we are in a certain moment in the media and communication history shaped by dominance of social media technologies (Burgess et al., 2018). The use and politics of social media platforms are further becoming an increasingly embedded part in everyday lives, work and relationships of individuals. In the literature, 'social media' takes different definitions making it difficult to define. Previously, there have been terms used such as 'new media', 'digital media' and 'web 2.0', but the term 'social media' is meant as internet technologies facilitating communication and collaboration by users (Burgess et al., 2018). To some extent, this definition can be considered vague and very expansive but useful, nonetheless. Lomborg (2017) states that a way to offset the definitional problems pertaining to social media is to subscribe to the technology-based understanding of "social media as digital platforms for the creation and sharing of user-generated content" (Lomborg, 2017, p. 8). According to Baym (2015), the rise of the term 'social media' is mainly about the corporatisation of the internet and how companies, such as Facebook, have created platforms utilising what people were already doing and then turned these practices into streams of revenue.

Historically, there have been two discourses of social media research (Lomborg, 2017). The first one is a utopian discourse with a focus on the potential for empowerment and emancipation. The other discourse of dystopian looks at the risks of deception and commodification of social media, which is still present to this day. The competing discourses of social media are not being reconciled or brought into dialogue but rather remain as they are as co-existing and co-evolving, which is also evident on the two different perceptions of social media by Stevenson (2018). The first one is a perception of social media as a productive bottom-up community and organic social networking platforms, where the other perception is social media are merely tools to increase the media power of celebrities, and other media actors and institutions.

Perceptions and standards of web culture or what counts as quality design practices are defined

through cultural processes and further created according to economic, ideological and professional interests of the involved parties (Stevenson, 2018).

Furthermore, there are different approaches to understand the object of social media and what social media sites are. One of the approaches is to understand that social networks are produced and generated on social media sites according to boyd and Ellison (2008). These social networks and technologies offer the opportunity of new affordances to come forth for magnifying, recording and distributing information and social acts (Couldry & Kallinikos, 2018).

Another approach from Christian Fuchs (2010) inspired by the Marxist political economy has a more sceptic look on social media sites. He looks at them as sites for unpaid labour where new forms of economic value are generated as a part of capitalism's continuing struggle to reproduce itself (Couldry & Kallinikos, 2018).

A third approach from Gerlitz and Helmond (Couldry & Kallinikos, 2018) propose a shift and transition to a like economy from a linkage economy. Now, users gain social currency from public communication of connections on social media platforms.

Patterns of interaction and sociality, which social media platforms afford, are closely linked with the objectives of the institutional market actors of social media (Couldry & Kallinikos, 2018), which is worth keeping in mind. Also, the computational rendition of social media operations shapes the social interaction on social media platforms and the following trading of data footprints.

### Shifting Paradigms

Scholars point out the shift in paradigms over the years, e.g. moving from Web 2.0 to social media, are evolutionary rather than radical changes (Stevenson, 2018). Many of the characteristics of Web 2.0 as well as social media was already pioneered earlier in the 1990's, so users were already familiar with personalisation, networking features, content generation by users and many-to-many communication. The web and how people perceive it continually evolves and factors such as culture, economy and technology help shape it, thus it does not necessarily represent radical departures from something (Stevenson, 2018).

It appears new media companies and technologies are promoted and legitimised through a prevalence of so-called web exceptionalism. It is a term used to describe how the internet is thought of as an exceptional medium of individual and economic freedom back in the early 1990's and set to displace existing media (Stevenson, 2018). Founder of Facebook and owner of



Instagram, Mark Zuckerberg, has stated that the mission of the company is to promote connectivity, openness and transparency as a part of a larger and unavoidable culture shift essential with the rise of the internet (Stevenson, 2018), which is considered to resemble web exceptionalism.

Moreover, social media can be seen as engineering sociality through algorithms, commodifying users through a process of datafication and converting personal information and data into computerised data for e.g. personally targeted advertising (Lomborg, 2017).

Models based on users' contributions to e.g. improving recommendations are actively benefitting from users' free labour and social media platforms are also profiting from users' affective processing of the valuable archives the platforms control (Stevenson, 2018). The platforms are essentially building an architecture of participation, where users participate whenever they act out of apparent self-interest.

Additionally, social media has given rise to an online infrastructure shaping the way societies are organised and publics are shaped (van Dijck & Poell, 2015). There are platform-specific and contextual features driving social media economics (van Dijck & Poell, 2015), which connect users of the platform to advertisers and data exploiters. Technological features and choice architectures are ways for the platforms to maximize the results in relation to data acquisition and advertising exposure. What may appear as a private space in the news feed of a social media platform for the user is a well-thought-out design of commercial and public space of the platform, exposing the user to varying kinds of commercial messages (van Dijck & Poell, 2015; Burr, Cristianini & Ladyman, 2018). This also affects the business models underlying the social media platforms, which play a great role in the way it is designed in terms of exposure to advertisements (van Dijck & Poell, 2015).

The challenge of research on social media platforms is how constantly and intricately entangled all different parts are in terms of user and professional practices, technological architectures and business models (van Dijck & Poell, 2015). Additionally, Lomborg (2017) believes social media as a research object and communicative phenomenon is in a state of flux.

Furthermore, users of social media actively apply the affordances of the technology to cater to their own creative and instrumental objectives (Baym & boyd, 2012). For a long time, people have used media to create identities for themselves, others and groups, but what is new to social media is the scale which people now do so on an everyday basis with a conscious strategic adoption of the available media tools for the process.

In addition, the process of creating private stories for online public to consume can develop people's self-understandings as they negotiate their positions relative to publics both intimate and unknown. The provided affordances, and architectures of a social media platform, are shaping identities, audiences and publics in rather complex ways. It is also important to have in mind the external contexts of being in an online community, i.e. the online permeates the offline world and the online always flows offline (Baym & boyd, 2012).

Some of the affordances of networked publics according to boyd (2010) that further differentiates them from other publics are persistence, replicability, searchability and scalability introducing new social dynamics, which requires people to manage audiences they cannot see and the blurring between public and private.

#### Organising Uncertainties

There are a lot of uncertainties in life, but social media platforms offer a way to organise the uncertainties into controllable possibilities like what dating apps has been found to do in a study as risk-management technologies (Thylstrup & Veel, 2020). Users seek a sense of control, and they may feel a sense of control on these platforms, because the chaos is organised in neat squares and polished surfaces.

Moreover, people often go online to be social rather than meet in person, which can be considered as a way to reduce certain risks and feel safe. But as mentioned by Thylstrup and Veel (2020), other risks emerge instead when venturing online, such as risking user privacy and safety.

Social media platforms and hereunder Instagram can be seen as organisational technologies employing various cultural techniques at their disposal. Users turn to social media platforms to solve a perceived problem, which can be a feeling of uncertainty. Platforms solve problems of uncertainty through some of the cultural techniques of the grid and scrolling like dating apps as researched by Thylstrup and Veel (2020) with the grid, swipe and geolocation. Also, there are

larger optimisation tendencies in relation to organising certain aspects of the contemporary life, where social media platforms play a role in this tendency.

In addition, social media platforms have habitual and naturalised characters and users are prompted to feel a permanent state of anticipation according to Lupinacci (2021). Users are further deliberately encouraged to expect the unexpected in otherwise non-eventful situations and have an urge of continuous connectedness with ambivalent feelings mixed into the experiences (Lupinacci, 2021). The constant feeling of expecting the unexpected keeps users hooked on the platforms with the assumption of something extraordinary might happen. Moreover, the socio-technical constructed notion of being always-on and engaging, is the only way to navigate and succeed in a persistently framed uncertainty driving the urge of continuous connectedness (Lupinacci, 2021).

Media institutions, hereunder social media platforms, are purposefully creating, fuelling and encouraging unpredictability to preserve their centrality and status while at the same time trying to navigate and adapt to an ever-changing environment, they themselves uphold (Lupinacci, 2021). Social media relies on the feeling of unpredictability from their users to captivate and encourage active engagement which is used to produce and sell predictability.

Some of the important findings in Lupinacci's (2021) research is amongst others that immediacy is one the main defining characteristics of social media, and users feel a perceived freshness in relation to new information regardless of the actual novelty of a story. For users it is more about being the first to know about a given topic, which is also a main driver behind continuous connectedness.

Further, there is also a sense of apparent endlessness attached to social media platforms. Users experience a perceived limitlessness which is related to the sequence of flow content.

Couldry and Kallinikos (2018) mention there seems to be a black box problem in relation to the social implications of the computational creation of social media, since it is not clear what institutional and technological forces are at play in this regard. To some extent, they highlight that fundamentally social media is nothing but data entities thanks to the data footprints from social

interaction between users providing the necessary material to perform the calculations and operations by social media platforms.

What makes up social media operations originate from a collection of and analysis of behavioural user data, the platforms gather and coordinate themselves of every single behavioural choice (liking, sharing, following and so on), and not user-generated content (Couldry & Kallinikos, 2018).

Moreover, people use different types of communication or platforms depending on the type of relationship they have with the person they are communicating with. This is important to understand how relational dynamics and contexts shape the usage of social media, which stems from the term 'polymedia' (Sinanan & McDonald, 2018). Furthermore, polymedia can also be used as a theory, and it highlights how people choose certain media to communicate specific messages, and the media helps constitute the social relationships. Different societies have adopted social media into social norms, uses and meanings, perhaps lessening the growing concerns of cultural homogenisation the ubiquity of social media brings (Sinanan & McDonald, 2018).

#### Digital Discourse

Scholars within digital discourse research start with a premise of all language is inherently and unavoidably social (Thurlow, 2018). Within this field, there are three broad organising principles, which are discourse, multimodality and ideology, and it attends to micro-level linguistic practices as well as the macro-level social processes (Thurlow, 2018). Discourse studies recognise there is an inherited mediated nature in all communication moving beyond computer-mediated communication but understands that communication is always mediated in some way. Moreover, the main concern for digital discourse studies is how language effects social and cultural processes as well as the everyday functions and use of language (Thurlow, 2018). The situated and spatialised, including mobile, experiences of social media are also sought to be understood by digital discourse. Further, an understanding of how the use of language nourishes ideological systems is sought as well as how ideologies affect the way language is used (Thurlow, 2018).

To some extent, language and communication are commodified, instrumentalised and technologized in contexts of social media, and digital media is also used to form and influence the communicative practices of users (Thurlow, 2018).

Additionally, technology has been taken up as a rhetorical resource (Thurlow, 2018), since social media is used more often now as tools for performing access, staging participation and interaction. According to Thurlow (2018), it can resemble what another scholar, Norman Fairclough, calls synthetic personalisation, which is the way organisations address mass market audiences as they are individuals and, in this process, technology is the key.

### [The Rise of Social Media App Economies](#)

There is great complexity in the political economy of social media, and it affects how social media functions in users' everyday lives across the world. Some of these issues include competition policy, digital activism, cultural imperialism and the ideological foundations of Silicon Valley (Couldry & Kallinikos, 2018).

Historically, the first regular use of the word 'app' (as shorthand for 'software application') originated in 1985, when the MacApp programming tool was released by Apple (Wilken, 2018). However, the use of 'app' first becomes common to refer to software designed to run on mobile platforms and devices in mid-2008 after Apple launches the App Store.

Moreover, the phrase 'app economy' is used as a way to describe the revenues being earned from the platforms from sales of apps, in-app purchases or in-app advertising (Wilken, 2018). Moreover, the app economy can further be described as a collection of innovative ecosystems, where each ecosystem consists of a core company creating and maintaining their platform, the app marketplace and companies creating apps and mobile devices for the platform (Wilken, 2018). According to Wilken (2018), there are two core companies controlling the platform- and app marketplaces in a larger social media app ecosystem, and these two companies are Apple and Google respectively with its iOS and Android platforms.

Users of social media platforms are according to some scholars (e.g. Christian Fuchs, 2010; Dallas Smythe, 1977) the chief labour force in generating content making social media profitable, influential and valuable (Vaidhyanathan, 2018). Users create and produce work which social media companies then frame and distribute on their platforms. Social media gathers the contexts of personal, political, commercial and cultural onto one platform and thereby constructs new standards and norms.

Many, if not all, social media platforms entirely rely on their users working as unpaid volunteers and their creative labour, which according to Fuchs (2010) can constitute a relationship of exploitation (Vaidhyanathan, 2018). To add further complexity, the roles of producer and consumer blurs at best. It can be hard to define what users really are, since they to some extent can be described as consumers, commodities or raw material in itself or even labour besides users of social media platforms (Vaidhyanathan, 2018). According to Vaidhyanathan (2018), a social media platform, such as Instagram, sells the monitored attention and habitual preferences of their users since users are the product as well as the producers.

Social media platforms can improve search results or recommendations for their users by collecting, harvesting and analysing user data and recognising relationships between pieces of information. Google is one of the first companies to understand and utilise the vast amounts of data collected on users, and the company introduces their advertising programs in the early 2000's proving very profitable (Vaidhyanathan, 2018).

In 2012, Facebook introduces their own advertisement placement programs so they can harvest and use data from their users to select and prioritise users' content on their news feeds as well as optimising user-targeted advertising. This achievement for Facebook makes it possible to generate a substantial revenue and make a great profit (Vaidhyanathan, 2018).

But seen from the users point of view, it is not clear how user data is harvested, where, for how long and for which purposes. Thus, the practice of data harvesting is mostly hidden by users. Some of these practices may be outlined under 'privacy policies' on company websites, but they may appear uninviting and hard for users to understand. Users ends up with default options often favouring the companies instead (Vaidhyanathan, 2018).

Furthermore, targeted advertisements potentially shape consumer behaviour and culture by reflecting the various preferences expressed by users on platforms (Vaidhyanathan, 2018). Moreover, news and information fed to users is filtered through a system whose biases are undisclosed and not acknowledged. Prices can even differ between users for the same product based on different data histories.

Through filtering the content showed on users' feed, users can end up in filter bubbles, leading to ideological or other interest groups refraining from interacting with other people different from

themselves (Vaidhyathan, 2018; Burr et al., 2018). This has potential political, cultural and social implications.

In addition, the potential harms of social media platforms are often centered around liability and avoidance and not responsibility (Gillespie, 2018). Platforms are usually seen as environments where users can conduct free speech, but when either a government, a certain user or the public get aggravated over a particular action, the platform is often demanded to do something. Even though, the platform may be equipt to perform certain actions, it is difficult to pursue individual actors, since it consumes a lot of time and resources with often little impact (Gillespie, 2018). Moreover, platforms may also get the blame for a certain problem, which is not theirs to begin with. However, a fallacy of displaced control has happened because platforms make human behaviour a lot more visible.

So, when users say and perform less fortunate actions, platforms tend to get the blame. That is not to say, they do not carry some of the responsibility at times. According to copyright laws, intermediaries such as social media platforms can be held accountable for their users' activity if they have a financial gain from the illicit transaction or if they have some material effect on the transpired transaction (Gillespie, 2018).

Additionally, platforms are dynamic. They change along with their operations and usage, business and revenue models. A stabilising factor in all of this is mobile smartphones all connect to a central ecosystem, where apps are a central part driving the levels of investments in social media services and take-up of social media apps (Wilken, 2018).

### Affordance Theory

The term and concept of affordance can be used to understand and analyse social media interfaces as well as the relations between technology and its users (Bucher & Helmond, 2018). Generally, the concept of affordance is used to describe what material artefacts allow or afford individuals to do (Burgess, et al., 2016). Affordances manifest themselves in relations between platforms and their types of users, which can be the end-user, advertisers or others according to Bucher and Helmond (2018).

Affordance is understood in many ways across different fields and scholars. James Gibson (1982) originally conceived the concept of affordances within ecological psychology, where it first is

referred to as the relationship between an animal and the environment, and he also emphasises affordances are a relational property (Bucher & Helmond, 2018). The animal, or maybe rather the individual, do not see the environment but rather see the affordances or possible actions the environment offers the animal. Moreover, affordances are relative to the animal, i.e. affordances do not change, they will always be there to be perceived as the animal needs them or perceives them (Bucher & Helmond, 2018). Affordances constrain and control behaviour, but it does not cause the behaviour according to Gibson (1982).

The concept is further developed by Donald Norman (1990), whose conceptualisation of affordances as perceived and actual properties of a thing helps determine how an artifact can be used, which is broadly embraced in the design community (Bucher & Helmond, 2018). Through the notion of perceived affordances, artifacts can be designed to either encourage or constrain certain actions, which places a certain level of power in the hands of the designers with their design choices. In this conceptualisation, it is also important whether the user in fact perceives the proposed options for actions designed in the artifact, i.e. affordances need to be visible for the users. This is important in relation to user experiences and interface design in digital media and tech industries (Bucher & Helmond, 2018).

Furthermore, some technological affordances may also be hidden and not perceptible for the user at first glance on the interface, but may require a mouse-over on a graphical computer interface to make it visible (Bucher & Helmond, 2018).

Another conceptualisation of affordance is social affordances, which are the social structures taking shape in connection with a certain technical structure (Bucher & Helmond, 2018).

Technological changes afford for social relations and a social structure and there are ways technology affords social practice. Almost like Gibson's (1982) notion of the way affordances can either control or constrain behaviour, technological properties can enable and constrain sociality in particular ways. Technology affords sociality, but so can people also do for other people, in the sense how people behave, move or co-exist in an environment then afford cues as to how other people should act (Bucher & Helmond, 2018).

Furthermore, affordances can be functional as well as relational as proposed by Ian Hutchby (Bucher & Helmond, 2018). He developed the concept of communicative affordances referring to the action possibilities emerging from certain technological forms. Affordances can be functional



in a way that are enabling and constraining at the same time, and they can also be relational in the sense the affordances of an object may vary depending on the individual (Bucher & Helmond, 2018). This term is similar to social affordances but differs in the way that it focuses specifically on the influence of technology for communication and not just how technology can constrain and enable social actions.

This conceptualisation has especially been used in relation to research on mobile media and the way it has altered communicative habits and practices (Bucher & Helmond, 2018). The affordance of availability of mobile devices have altered the level of availability and the different ways of being available. This is relevant in relation to Instagram, which is specifically designed to mobile devices and not computer screens. This perspective on affordances focuses on more high-level abstractions of affordances of mobile devices (Bucher & Helmond, 2018).

Furthermore, two more conceptualisations of affordance have recently seen the light of day. The first one is imagined affordances emerging between the perceptions, attitudes and expectations of the users, and between the materiality and functionality of the particular technology as well as the intentions and perceptions of the platform designers (Bucher & Helmond, 2018).

The other conceptualisation is vernacular affordances emphasizing how people understand affordances in their meetings with technology, i.e. researchers and designers cannot always assign affordances to social media, they need to be grounded in the perceptions and experiences of people engaging with the technology (Bucher & Helmond, 2018).

Fundamentally, a feature is not merely a feature since there are certain connotations attached to it. Features mediate and communicate something, i.e. they relate to certain affordances (Bucher & Helmond, 2018). Features and essentially the connected affordances can bring out intense feelings of emotions. A feature on an interface on a social media platform suggests certain things, but what they exactly suggest or afford is not always set in stone. The simple act of clicking on a button may suggest other things, since there are various meanings, feelings and expectations afforded to this seemingly simple act (Bucher & Helmond, 2018).

Moreover, certain features, such as the change of the star button to a heart button on Twitter, can be due to features on other sites and thereby to some extent 'forced' upon them to the grave dislike from loyal users (Bucher & Helmond, 2018). But by standardising a mode of engagement

across the services, the perceived range of potential actions linked to the features or affordances are also affected.

Additionally, affordances are often conceptualised on two distinctive dimensions, either on an abstract high-level or the more concrete low-level dimension (Bucher & Helmond, 2018).

High-level affordances can be the various kinds of dynamics and conditions media and platforms enable. danah boyd (2010) argues social network sites are shaped by four central high-level affordances of persistence, replicability, scalability and searchability, which structure the level of engagement of users in the various environments.

The mobile phone enables and exemplifies certain affordances, which are convenience, availability, location and multimodality according to Schrok (Bucher & Helmond, 2018). This means mobile media affordances are mainly about the communicative practices and habits they enable or constrain.

Low-level affordances concern the materiality of the specific medium, such as particular features, buttons or platforms (Bucher & Helmond, 2018). Technical features afford certain actions such as clicking or liking.

Furthermore, social media platforms can be characterised by the combination of an infrastructural model with programmable and extendable infrastructures as well as the economic model of connecting end-users to advertisers with a mediation of stakeholder relations (Bucher & Helmond, 2018), which certainly holds true for Instagram which will become more apparent in the analysis.

Lastly, affordances are the reflection of the complex co-evolution of users and environments, i.e. the social media platforms. End-users essentially fuel the algorithms by clicking and liking in turn generating information flows being fed back to end-users. Furthermore, the clicks and likes from end-users also drive an interest and engagement from developers and advertisers which help keep the platforms in business (Bucher & Helmond, 2018).

### Creating Habituation Through Flow State

Social media platforms use and rely to some extent on cultural techniques to keep their users hooked. The platforms rely on habit-forming techniques such as flow, which will be discussed later. Moreover, it can be argued that social media platforms are designing platforms to users in a

habitual pattern of usage where the focus is mainly on the process rather than the goal itself (Thylstrup & Veel, 2020).

#### Habituation

According to the research by Soror et al., 2021, there have been an increase in habitual usage of social media platforms in the 21<sup>st</sup> century, where users experience ambiguous feelings towards their own usage. While the users feel the habitual use of social media is wearying distractions as well as generating negative emotions, many social media users do not have any intentions of stopping their use of social media (Soror et al., 2021).

Habituation can be defined as “a behavioural response decrement that results from repeated stimulation and that does not involve sensory adaption/sensory fatigue or motor fatigue” (Rankin, et al., 2009).

There are two primary milestone papers about characteristics of habituation, which are from Groves and Thompson from 1970 and Thompson and Spencer from 1966 (Rankin, et al., 2009).

Habituation is about how one’s nervous system reacts to and evaluate incoming stimuli and filtering out stimuli not considered important as well as cataloguing important stimuli.

Rankin et al. (2009) explain very generally how habituation works, which is “anytime we put an animal into a test chamber we first allow it to ‘habituate’ to the environment” (p. 138).

Furthermore, every time something new is added to the environment the animal will habituate to the new type of stimuli, such as a loud noise. The article highlights the concept of habituation is a vast compilation of cellular mechanisms recruited differently in various parts of the nervous system in different kinds of neurons (Rankin, et al., 2009).

Soror et al. (2021) mention the role of habitual usage of social media is shaping the so-called pull and push forces which the social media companies use (with a clear focus on pull forces) driving the decisions of the users to continue use of social media platforms.

The pull forces are the positive factors attracting users to continue use of a technology, and the push forces are the negative factors driving users away from a continuance of use of a technology (Soror et al., 2021). One of the pull forces from social media are dependency of social media.

Soror et al. (2021) believe there are dual mechanisms at play in relation to continued usage of social media, where habit plays a role in the decision of continuing to use social media building

upon the habituation-sensitisation perspective from Groves and Thompson (1970). It explores the impact of two mechanisms with which habits influence behaviours.

An elaboration on the dual process of habituation and sensitisation is that two processes, which is one decremental (habituation) and one incremental (sensitisation), independently develop in the minds of people and then in conjunction affect the final behaviour outcome (Soror et al., 2021).

Thus, the two process routes are assumed to be independent, since they are supported by different parts of the brain as well as the processes can happen in relative isolation depending on differences in stimulus, training and the individual (Soror et al., 2021). Nevertheless, the outcome of behaviour is yielded based on both processes combined.

The term 'habitual media' is introduced in an article where it references work from Wendy Chun. The term is defined as the use of media that has become repetitive, tedious, unexciting and embedded in the routines of users' daily lives (Petrychyn, 2021). The use of social media platforms has become an integral part of the daily lives of users to such a degree users no longer notice or acknowledge the use of media. It has now become habitual, such as brushing one's teeth or taking a shower, and not something new. Moreover, as "repetition breeds expertise" (Petrychyn, 2021), repetition also breeds habitual use. Social media affords escapism and a sense of task-oriented habituation, especially during the COVID-19 pandemic, which this article centres around.

Petrychyn (2021) also delves on how habits operate, and highlights that habits are things we learn from each other and they make us like others. By posting one's habits and routines especially during pandemic times, it is a way for users to reach out and find a common connection, more so than pre-pandemic times.

Lastly, the habituated use of social media is afforded a further layer of habituation when users share it online as part of their daily routines (Petrychyn, 2021). When users share their daily routines online, they confess, and confession is one of the primary modalities of being online and all social media are essentially fuelled by confessions (Petrychyn, 2021).

#### Flow Theory

The habitual use of social media can furthermore be linked to an experience of flow when using the platform. Enjoyment of media, hereunder social media platforms and thus Instagram, results from an experience of flow, which is realised when there is a balance between the content of media message and the user's ability to interpret that (Sherry, 2004).

The concept of flow theory can be applied to study enjoyment of media as well as why and how a social media platform such as Instagram designs their interface so their users can have an experience of flow while scrolling.

The concept of flow theory originated in the 1970's and later revised by Mihaly Csikszentmihalyi (1990) as a way to account for the pleasure found in everyday activities. It can be defined as the holistic sensation people have performing with total involvement (Beard, 2015). The positive psychological state can be achieved through a balance between associated challenges with a situation and the abilities of the person to meet the demands of the challenge and accomplish it (Beard, 2015).

Enjoyment or the experience of being in a state of flow is a self-motivating experience characterised by amongst others a sense of control, distortion of temporal experience and an experience of the activity being intrinsically rewarding. Thus, it is much more about the process than the goal, which may be considered an excuse for the process (Beard, 2015; Sherry, 2004). In research literature, intrinsic motivation has often been seen as a necessity of flow, and it can be defined as the individual's interest in the task or as the individual's satisfaction from partaking in the task (Bucher & Fieseler, 2017).

According to research performed over the years, people primarily use media for enjoyment as well as to solve perceived problems resulting from an interaction between basic human needs, individual differences and societal pressures (Sherry, 2004). These result to a variety of perceived problems and motivations, where gratification is sought from the media as well as elsewhere.

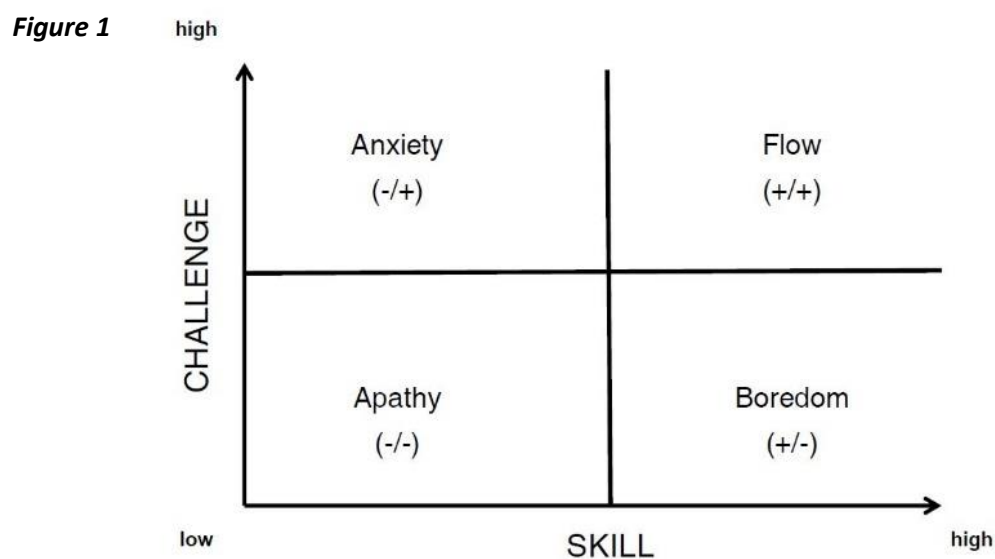
According to older studies from the 1960's and 1970's, there are seven basic uses and gratifications of television, which can further be extended to today's media landscape of apps (Sherry, 2004). These seven uses of media are entertainment, information, social utility, arousal, to pass time, relaxation and to escape. Further, entertainment is also revealed to be closely linked to emotional enjoyment, and sometimes these two concepts are used interchangeably.

Such as habituation and sensitisation is not mutually exclusive, so is it for arousal and relaxation, where enjoyment can both be seen as a relief from overstimulation through relaxation or under stimulation through arousal (Sherry, 2004). Social media platforms can thus provide an escape to a fantasy world where various emotions can be discovered.

In broadcasting, the planned flow has become a well-known strategy for ensuring people will continue to stay tuned in for longer periods of time watching television and later various media. With a planned flow, the media fills time by ensuring something transpires with a focus on the explosiveness of the present and the drama of the immediate keeping the users hooked on the same channel or platform (Lupinacci, 2021).

The state of flow can be experienced when striving to achieve a goal, e.g. playing a certain instrument, and it is realised when there is a balance between the difficulty of the task and the skill of the person performing the task (Sherry, 2004). Engagement is flow. The state of flow or enjoyment will be prevented and simply not occur if the balance cannot be achieved.

Users of media platforms tend to find enjoyment when there is a balance between familiarity and freshness (Sherry, 2004). Therefore, when social media platforms follow the norms and characteristics of the media, they make it easier for users to “read” the content or understand how to use the interface.



Furthermore, phenomenology is central to flow theory, thus it is an individual’s perceived experiences that matters the most (Gruner, 2016). Gruner (2016) has developed and adapted further on Csikszentmihalyi’s (1990) eight distinct channels into four quadrants of anxiety, flow, boredom and apathy based on the levels of challenge and skill related to a task (figure 1).

The flow quadrants are used in his study to compare low and high media users across various outcomes. As expected, being in a state of flow is where the users experience the highest levels of

creativity, engagement and energy, but the mood is experienced more positive during boredom (Gruner, 2016). The various feelings when in different quadrants will not be delved upon in this research, but they are nonetheless still valid feelings experienced, since they are feelings, Instagram can also afford their users. In addition, Gruner's (2016) research also suggests the context is important when researching usage of social media, since the relationship between mood and media use depend on how, why and when the chosen media is used.

Moreover, Sherry (2004) argues that use and enjoyment of media has a lot of similar aspects as flow, which are: "focused concentration, loss of self-consciousness, a sense that one is in control of the situation, distortion of temporal experience, and the experience of the activity as intrinsically rewarding" (p. 336).

What can prevent this flow is if there is a mismatch between the media skill of the individual and the difficulty of the message or medium.

Flow theory has been used in several research areas such as video games (Sherry, 2004), self-tracking technologies (Lomborg et al., 2018) and more. Just like social media is a part of users' daily lives and routines so has self-tracking technologies become a part of the everyday lives of users.

Users flow when they use self-tracking techniques to go through an everyday life routine extracting habitual and meaningful practices (Lomborg et al., 2018).

In the research of self-tracking (Lomborg et al., 2018), the concept of flow is used to understand the temporal lock-ins of practices pertaining to self-tracking in sequences and repetition and how the technologies succeed on the data sequences created by users to retain these users as well as creating a sustainable business.

Moreover, the paper states that use of self-tracking can belong to a more general symptomatic tendency in an algorithmic cultural dynamic (Lomborg et al., 2018), where social media platforms actively reinforce positive feedback loops and filter bubbles to keep their users hooked.

## Methodology

Studying social media is methodologically diverse, dynamic and challenging, where single-platform studies have become the norm in relation to social media research with digital methods (Rogers,

2018). This thesis is a single-platform study but there will also be shown consideration towards the general market of social media applications because they are all intertwined in an ecosystem.

The methodology of any domain depends on clarifying what types of objects are being researched, which in this instance means clarifying the ontology of social media. On the surface, the ontology of social media may appear unproblematic (Couldry & Kallinikos, 2018). There is an infrastructure on the different social media sites with a significant huge presence in users' everyday lives, which remains the focus of everyday habits of checking and updating, spreading and sharing with the network.

The object of study may not be so easy to decipher considering the billion users of Instagram. According to Couldry and Kallinikos (2018), if one look at the question from one point of view only, it may appear more straightforward – the differing social media sites are platforms where the commercial operations support social activity – and the design and infrastructure are important. But with so much else, it is not that easy. The ontological questions of what social media is and in what sense social media is actually social as well as the epistemological questions of what we know about social media, i.e. the knowledge on the subject of social media.

To perform a critical platform analysis of Instagram, the walkthrough method by Light, Burgess and Duguay (2018) is chosen for this purpose. This approach to study an application's interface is a way to analyse the technical mechanisms and embedded cultural references to understand how it guides and shapes users' experiences on the platform. It involves a step-by-step observation and documentation of the app's screen, features and the flows of activity (Light et al., 2018).

Moreover, the process is contextualised within a review of the vision of the app, operating model and governance and thus map out how the application works – both the expected use and actual usage.

This method examines the affordances at various levels ranging from the app's buttons to its interaction with the operating systems, hardware, structures of connectivity and other apps from the extended environment (Light et al., 2018). Moreover, this type of method allows the researcher, me, to imagine the range of affordances perceived by the user, since I will be "walking" through the various features, which incorporates elements of ethnography through observation and producing field notes. Technology and culture help shape and influence each



other, which is an integral part to the walkthrough method because it is a process of identifying cultural values entrenched in the features of the app and then picturing how the features seek to support values among its users.

Furthermore, the walkthrough method also combines certain elements from Critical Technocultural Discourse Analysis (CTDA). CTDA mainly focuses on the interface of the technology alongside its user practice, whereas this method focuses on the interface elements and their relation to the environment of the app of expected use (Light et al., 2018). Thus, this method helps provide a systematic approach in identifying cultural discourses shaping as well as being perpetuated by elements of the interface allowing for an integration with other frameworks such as discourse analysis.

This method affords me as a researcher a high mobility to access all corners of the media interface to reflect on the feelings and affordances in the various areas. I have pre-established knowledge and impressions as an already existing user of Instagram, which to some extent influence the reading of interface affordances. So, the embodied knowledge is entangled together with the analysis of the interface and the sequential flow through the walkthrough of the app (Møller & Robards, 2019).

A review of the app's vision, operating model and governance contextualise this process. Science and technology studies and cultural studies supply the analytical power to identify connections between these contextual elements and the app's technical interface. Also, I must account for the socioeconomic and cultural aspects of platforms beyond users, content and technology (Light et al., 2018).

Thus, the walkthrough method starts off with an analysis of the expected use by going through the vision, operating model and governance of Instagram to gain an understanding of how designers, developers, publishers and owners expect their users to obtain and integrate Instagram into their technology usage practice.

Thereafter, the walkthrough will commence with the aspects of the technical walkthrough, which is the main data-gathering procedure where I engage with the interface of Instagram, working through several screens, tapping buttons and exploring the many menus while uncovering the mediating characteristics of Instagram.

The different ranges of uses are grouped into three stages for gathering data by documenting and analysing 'registration and entry', 'everyday use' and 'suspension, closure and leaving'.

Some of the ethical considerations using this method are that while it avoids interacting with other users, there is still a possibility other users may consider the created dummy account real and they may try to interact and engage with the account. During this research, attempts from other users to engage with the dummy account will be ignored. Moreover, user information can be observed and recorded during the walkthrough of Instagram, but since I will not be engaging directly with other users, I will therefore not be able to get an informed consent. Thus, should I happen to obtain user information from other users which is not otherwise public, these data will be anonymised.

I will not treat myself to ethical liabilities by engaging in conversations with other users, which means some of the usage and affordances of the platform cannot be explored. Moreover, by being the only participant, the reflective potential of engaging with others is not present (Møller & Robards, 2019).

## Analysis

The analysis will start off with an introduction of Instagram with some highlights of their history and monumental reveals and changes over the years to give a clearer picture of the company before the actual walkthrough.

### 360 Degree View of Instagram

Instagram launches October 6<sup>th</sup>, 2010, where it quickly becomes popular among people across the world. The social media app, where users can share photos and videos, has, within their first day of launching on Apple's mobile operating system, already gathered 25.000 users. Within a little over two months later, Instagram reaches one million downloads and users. Sometime before the launch of Instagram, Apple launches their iPhone 4 which features improved camera functions which proves to be good timing for both companies (Blystone, 2020).

With a rapid growth in user base, Instagram also attracts further attention from interested investors, among others Benchmark Capital, Twitter and Facebook. By April 2012, the app is released for Android phone users and it gains more than one million users within a day, adding to

the already approximately 27 million users. Shortly before Instagram's Initial Public Offering (IPO), Facebook acquires the company for \$1 billion in cash and stock (Blystone, 2020).

Now, Instagram roughly has one billion monthly active users worldwide and 500 million daily active users, where the largest share of users is aged 34 years or younger making the platform especially interesting for marketers (Statista, 2021).

It is often referred to as the number one photo-sharing application with a focus on photographs taken on mobile devices with social media capabilities similar to Facebook (Blystone, 2020). Instagram acts as a form of digital memory box, and the platform has further extended this function into the context where the actual practice and role of photography has changed drastically over the years (Caliandro & Graham, 2020). The naturally memorable work of photographs has become interconnected with many social and communicative functions. Instagram consists of multimodal semiotic resources of video, images, sounds, speech, text, captions and hashtags, which all fuse together to create social meanings occurring in combinations and further change over time to create and reflect boundaries of sociality (Hurley, 2019).

The name is a combination of Instant and Telegram and the thought behind the app is to focus on the functions of photos, commenting and liking as well as keeping it minimalistic and require as few actions as possible from the user in experiencing photo-sharing.

Instagram offers different features on their interface and the platform has added several new features over the years. Generally, the interface allows users, who have created a free account, to upload media in the form of both pictures and videos. However, the meaning of a free account can be questioned. It is free in the sense that no monetary exchange has taken place, but users pay in a sense with their personal data as well as time, attention, the content they generate, their social networks and metadata about themselves and their everyday lives (Qiu, 2018). Thereby, Instagram accumulates valuable information about its users and usage as well as patterns and profiting from it with e.g. targeted advertising. Moreover, the platform can also use data to make sure its users spend more time on the platform which in turn makes sure the company can gather even more user data.

However, looking at it from a positive point of view, users receive more convenient and personal online experiences, but negatively speaking, the social media platform thus has more effective

corporate surveillance over its users making them susceptible to targeted advertising (Qiu, 2018). This also reflects the asymmetrical power of social media platforms since social media companies often dictate the terms of exchange.

Since the acquisition of Instagram by Facebook Inc., relatively small changes have been made to the interface, where Instagram chooses to keep the simple and intuitive user experience and focus on their core service of photo- and video-sharing capabilities (Blystone, 2020).

The company incorporates the hashtag in January 2011 after Twitter users unintentionally invents the hashtag as ways of connecting and conversing at a conference and afterwards it spreads to other social media platforms such as Instagram (Klemons, 2020).

In June 2012, Instagram rolls out the Explore feature to explore new content, accounts and hashtags, both for the user to search and as content suggestion made specifically for the individual user. Thus, Instagram recommends various images and videos based on collaborative filtering according to Head of Instagram, Adam Mosseri (Patel, 2021), since the company is looking at finding other people who like the same content.

In general, social media takes a visual turn around 2013, where there has been a dramatic increase in image circulation (Faulkner, Vis, & D'Orazio, 2018), which involves the popularisation of image-centric apps including Instagram. A part of this new visual turn on social media platforms is the selfie culture, where several studies have already been conducted. This thesis will not concern photographs per se, but it is unavoidable not to mention some aspects of it, since Instagram is based on sharing of images. A study from 2013 learns it is mainly women and younger people who take more selfies (Faulkner et al., 2018).

The platform incorporates advertisements and sponsored posts in October 2013. Accordingly, there are issues in the back end with enabling their ads program to synchronise with Facebook's pre-existing advertising platform (Klemons, 2020). In addition, Instagram enables Direct messaging in December 2013, so users now can have private conversations with their friends while remaining on the platform. Previously, if users wished to share their thoughts, it would be as a comment on a post for the whole world to see.

In March 2016, the company extends the length of videos users can upload from 15 seconds to 60 seconds. Further, Instagram also changes the way posts are presented in a user's feed. They switch from a chronological feed to an algorithmic feed, which presents content based on what Instagram thinks the user would like to see (Klemons, 2020). Facebook makes the same change to their algorithm around the same time (Constine, 2016), which is in essence collaborative filtering. This type of filtering uses previous ratings supplied by various users given to an item as background data (Szczerbicki & Nguyen, 2010). The opinion of other users is utilised, so this may be compared to a classic word-of-mouth. Instagram may be using a hybrid approach, which is a combination of often the collaborative filtering and content-based filtering, which is when the system employs the features of the items as background data (Szczerbicki & Nguyen, 2010). The recommended content will be like what the user has previously shown interest in.

Furthermore, the feature of Stories is introduced in August 2016 and quickly gains popularity (Klemons, 2020). Stories is ephemeral, i.e. the content disappears after 24 hours, something which is popular among the younger demographic and also similar to Snapchat, another social media platform Mark Zuckerberg has tried to buy several times over the years. Snapchat is the first platform affording its users to send ephemeral messages. The platform thus offers especially younger users a temporal fastness and ephemerality in their daily exchanges (Møller & Robards, 2019).

Instead, Instagram incorporates Stories as a way to keep the younger users happy and a way to keep them satisfied and clicking, and for the platform to stay in the social media game (Klemons, 2020). Even though Snapchat is considered a rival regarding Stories, they are soon overrun with Instagram's daily active user count of 500 million compared to Snapchat's number of 249 million daily active users (BusinessOfApps, 2021). Mosseri has in interviews been quick to give credit to Snapchat with the invention of this new popular format: "They invented that format. They get the credit for that format" (Byers, 2020). Since then, many new various features have been added to Stories.

The founders of Instagram, Kevin Systrom, computer programmer, and Mike Krieger, software engineer, resign from the company in September 2018. The declining autonomy of Instagram after Facebook acquires the platform in 2012 are some of the apparent reasons mentioned in the press and media (Constine, 2018). The founders of Instagram and Zuckerberg worked well together, but

over the years Facebook is pushed more onto the platform and loyal Facebook employees are brought on board to Instagram, such as Adam Mosseri, who later becomes Head of Instagram (Constine, 2018).

IGTV, short for Instagram Television, is rolled out in June 2018 allowing users to upload videos longer than one minute. Facebook has long been interested in video, so it appears natural that Instagram also goes down this route (Klemons, 2020). There are some issues with the rollout and use of the feature. Instagram has to some extent been able to handle them but not without criticism from users and tech experts. According to Mosseri, some of the issues pertaining to IGTV is that users do not clearly know what it is and does, however Mosseri believes “the shift to video is, in some ways, as important as the shift to mobile” (Patel, 2021), which may be why both companies have pushed this format and since generally videos have been growing on all major social media platforms.

Furthermore, the platform introduces the feature of Reels in August 2020 as a response to TikTok, which quickly becomes popular during the summer of 2020. Reels resembles a lot of the same features as present on TikTok but customised to Instagram after the company unsuccessfully created the standalone app Lasso, which quickly was shut down (Klemons, 2020). With this new feature, Instagram tries to tap into what their competitor have deemed valuable and important to understand, as Mosseri says “We try to learn from competitors. You try to take your ego out of it ... and try to understand the reason behind their success” (Byers, 2020). Reels has not experienced the same fast user growth as Stories. Some assume it is due to the more complex nature of making a Reels video, which requires a bit of editing before uploading to the feed as opposed to Stories, where the user quickly can make a video and post it directly. Moreover, it is important platforms change and make sure the value is immediate for users, since “any large app is going to have to change. Otherwise, they become irrelevant over time” (Patel, 2021) as Mosseri has previously mentioned.

In November 2020, Instagram rolls out one of the bigger redesigns of the app, where amongst others they move the Reels button front and centre, where the button for creating a post previously is located, which can be a sign showing how invested Instagram is in making Reels a big success (Klemons, 2020). Additionally, Mosseri states ads will eventually come to Reels to help

users browse through products to drive the growing e-commerce side of business, which is a direct source of revenue as well as helping with ad relevance (Boorstin, 2020). Moreover, Instagram also adds a Shopping tab showing their increased investment in the e-commerce side of social media. It is also a testament to how dynamic platforms and Instagram are.

Adam Mosseri says that reasons for these changes are that it is time for change, since “how people create and enjoy culture has changed” (Sehl, 2021). It is a decision the company has considered deeply because they do not see it is a risk of changing too fast but rather a risk if they do not change at all and they end up becoming irrelevant. Moreover, Mosseri writes in a post on Instagram in relation to the changes on the home screen that these changes represent how young people and creators use Instagram and how they engage with the world, since they have “seen an explosion in short, entertaining videos” (Sehl, 2021), which can be a reference to TikTok without mentioning the competitor completely.

The added Shop tab on the home screen is for users to easily “support small businesses, find personalized recommendations, shop product collections and more” (Sehl, 2021). This type of announcement is an example of Instagram using synthetic personalisation, which is where a company addresses a mass audience as individuals. Announcement changes are often reported to the platform’s users through Instagram, either on their own account or through Mosseri’s account, where it is reported in down-to-earth announcements often using ‘you’ which can both be understood in both the singular and plural forms.

Now, there are estimated to be 1.16 billion users as of the third quarter in 2020, with an estimated gender split of 51% women and 49% men, and approximately 70% of Instagram’s users are under the age of 35 (BusinessOfApps, 2021).

### [The Environment of Expected Use](#)

This part of the analysis accounts for some of the socioeconomic and cultural aspects of Instagram. The environment of expected use seen from the company’s side can be determined by looking at their vision, operating model and governance. For many Silicon Valley start-ups including Instagram, there is the Californian Ideology inherent in them which they wish to spread to people across the world. The Californian Ideology believes an increase in computer technologies will bring positive consequences and entrepreneurial technology culture will reward the smartest

and hardest workers as well as universal prosperity is pursued best through a free market (Marwick, 2018).

#### Vision

The vision of an app shows their purpose, the target user base as well as various scenarios of use, where it provides information concerning activities it is meant to support, provide and enable (Light et al., 2018). Moreover, it informs users what they are supposed to do and thereby how the app can be used and by whom. Apps can distribute their vision through numerous channels such as app stores or websites.

The founders of Instagram develop the app with a vision of providing a space where people can get a feeling of accomplishment that they have taken and created a beautiful picture with the help of Instagram's filters. They see Instagram as the adult version of being a child drawing a picture, they are proud of and showing it off to people (Kennard, 2021). The founders furthermore see this as a powerful instinct and a huge component of their exponential business growth. Helping people create something they are proud of while maintaining the simplicity is important to attract and gain new users.

Moreover, they aim at solving three problems, albeit it may be three simple problems with three simple solutions. The three solutions are to make images beautiful, share it on multiple social networks and upload images quickly (Bulygo, 2021).

The overall goal and mission of Facebook with its subsidiaries is according to themselves "to give people the power to build community and bring the world closer together" (Facebook, 2021) by building useful and engaging products and services. This enables people to connect and share with family and friends as well as discover and learn what is going on around the world and remain connected everywhere by accessing the various services and products. Specifically for Instagram, it is a platform enabling people to "express themselves through photos, videos, and private messaging, and connect with and shop from their favorite businesses and creators" (Facebook, 2021) through the various features on the interface. Thereby, the platform helps bring people closer to each other and the things they love.

Now, Instagram has the same clear vision and statement displayed on both the App store on Apple (Apple, 2021) and on their website, which is "Bringing you closer to the people and things you



love” (Instagram I., 2021). Additionally, there is an emphasis on the community feeling as well as feeling safe in being oneself and expressing who one is. It is a relatively practical vision statement on both sides with a great emphasis on the features, the interaction as well as the experience Instagram wants to afford their users.

Instagram aims to provide a platform, where people can be creative and share their creativeness with their friends as well as people, they do not necessarily know, but then hopefully grow a safe community while using their platform striving to be simple and easy to use (Apple, 2021).

According to an article, Instagram has three core values shining through their mission and vision statements. The core values are 1) community is key, 2) encourage creativity and 3) simplicity is important (Statement, 2019). Users are their number one priority, and they try to tailor their features to be as user-friendly as possible while trying to foster creativity and a longing for users to come back and use their platform. Furthermore, communication and creating moments are some of the important objectives for Instagram, which can be a reason why they for a certain amount of time have shown caution in changing their interface and focus on simplicity with an ease of uploading, editing and sharing images (Statement, 2019), but the company pushes the boundaries a bit with their update in November 2020, which some users are questioning and critiquing (Coggan, 2020).

#### Operating Model

Instagram’s business strategy as well as their revenue sources determine their operating model, which also indicate the fundamental political and economic interests.

Many apps allow access to certain services in exchange for personal user data which then can be sold to advertisers or data brokers (Light et al., 2018), indicating that generating revenue for the company may not involve a monetary exchange.

Instagram is an application that can be downloaded free, and it is compatible with iOS and Android devices offering in-app purchases (Apple, 2021). Instagram receives funding and investments over three rounds before Facebook acquires Instagram in 2012 followed by an IPO on May 18, 2012, and the company type is therefore public (NASDAQ:FB) (BusinessOfApps, 2021). They grow in relation to monthly visits as well as monthly downloads with a respective growth of 2.85% and 18.99% according to statistics from Crunchbase (2021).

In 2013, Instagram is monetised as an advertising platform (BusinessOfApps, 2021). After Facebook acquires Instagram back in 2012, it can be difficult to make accurate revenue statistics, so it must be done on estimates according to Business of Apps (2021).

Instagram is a part of the ecosystem of Facebook. Moreover, the US Securities and Exchange Commission (SEC) also states that more than 90% of the company's total revenue stems from advertising revenue, where 50% comes from the US and Canada and 25% from Europe (SEC, 2021). Furthermore, the SEC has Facebook Inc. in the business of "services-computer programming, data processing, etc.." (SEC, 2021), so it can be argued the SEC cannot define exactly what Facebook and thus Instagram do specifically.

There are two core companies within the innovative ecosystem of the app economy, which are Apple and Google as mentioned earlier (Wilken, 2018). Instagram is essentially a part of both, but it can appear there may be stronger links to Apple due to the first presentation as an app on the iOS system and later the Android system.

Furthermore, since Facebook Inc. owns Instagram, the company does not have their own Annual Report, but rather it is a part of Facebook Inc. as a subsidiary, thus when reading the Annual Report of Facebook for the fiscal year ending December 31, 2020 (Facebook, 2021) to gain knowledge of their operating model and revenue sources, some inferences must be made.

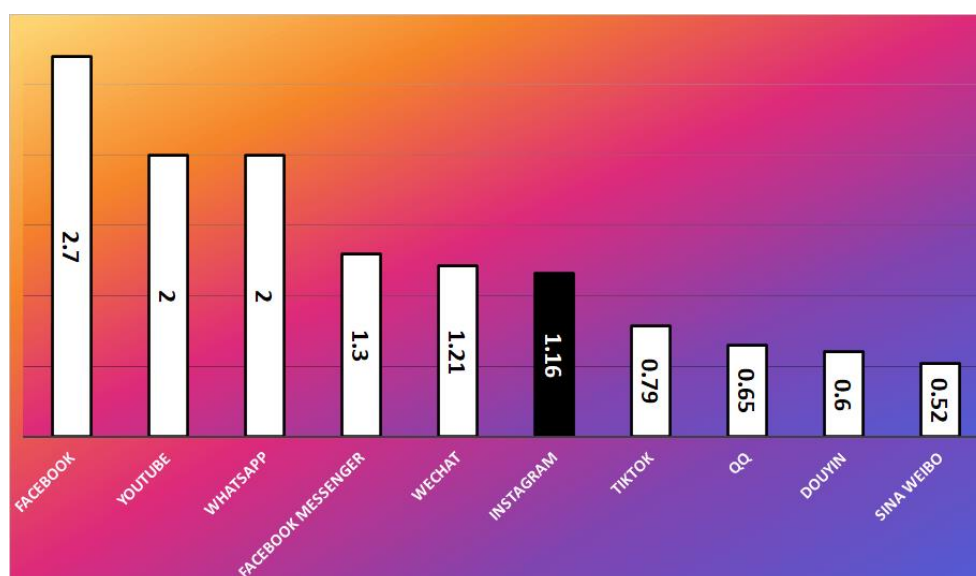
Additionally, a part of their business strategy is trying to differentiate themselves from other platforms by being more focused on visual communication and not supporting links or text posts in the feed, which also to some extent makes it harder to really define what Instagram is, as Mosseri says:

"We value personalization. So your Instagram is going to be very different than mine, and that's okay, but that does make it harder to really put your finger on what exactly Instagram is. It's a different thing for everybody who uses it" (Patel, 2021).

### *The Competitive Marketplace*

If one compare Instagram to other social media apps according to their number of users, they are approximately number six from the top (figure 2) (BusinessOfApps, 2021). It does not come as such a surprise that the other platforms before Instagram are Facebook, YouTube, WhatsApp, Facebook Messenger, WeChat and then Instagram. Facebook Inc. owns not only Facebook and Messenger but also WhatsApp and Instagram, where Google is the owner of YouTube and the last on the list, WeChat, is a Chinese-owned company developed by Tencent.

**Figure 2**



Furthermore, TikTok is just below Instagram with a number of 79 million monthly active users compared to Instagram's estimated 1.16 billion users (BusinessOfApps, 2021). Although, TikTok's monthly active user number is estimated as high as 1.1 billion users as of February 2021 according to other media outlets (Wallaroo, 2021), which also shows how fluctuating the statistics of social media platforms made available to the public can be. Also, TikTok's userbase is slowly aging upwards and their userbase is approximately between 13–40-year-olds, roughly the same as Instagram's.

In relation to having made the usage of Instagram into habitual use, the time spend on the platform has slowly but steadily been increasing over the years and in 2021, users now spend averagely 29 minutes on Instagram (BusinessOfApps, 2021).

In 2019, 35% of US teenagers says Instagram is their favourite social media. That number has since dropped to 25% which is another evidence of TikTok's popularity among the younger users (BusinessOfApps, 2021).

Some of the affordances of Instagram can on the background of statistics be summed up to users seeing it as a platform to connect not just with their friends but also to explore new things through e.g. influencers. Moreover, 66% of users use Instagram specifically to interact with brands and 53% will even follow a brand for their content alone (BusinessOfApps, 2021).

Moreover, 23% of 16–24-year-old from the UK, US and Germany believe Instagram is the brand most representative of society compared to any other brands confirming how Instagram forms and mirrors worldviews of especially younger users (BusinessOfApps, 2021).

An estimation of time used on social media in general in 2019 has come to one hour and fourteen minutes, and this number will only increase according to users of Instagram. They say, they believe their usage will only increase over the coming years (BusinessOfApps, 2021), which to some extent also shows the habitual usage of social media.

However, the actual estimation of time spent on social media is hard to estimate and predict, e.g. another media, Recode, reports users on average spent 53.2 minutes on Instagram and this is only among its US Android users (BusinessOfApps, 2021). This can also point to habituation of usage of Instagram.

Moreover, according to data from Facebook and Instagram themselves, 91% of the users reportedly use Instagram to follow at least one of their interests, which can be one of the top three interests on Instagram, which are ‘travel’, ‘music’ and ‘food and drink’ (BusinessOfApps, 2021).

Instagram builds the platform around affordances of sociality and connectivity and supporting users in their interests through technological and social affordances. Accordingly, “Instagram is a place where people go to look good, and to look at things that look good” (BusinessOfApps, 2021). The company is often used as a source to seek new products and services as well as research or decide whether to purchase a product or service according to Facebook Business statistics (BusinessOfApps, 2021), which means Instagram is a part of the shopping process for users.

Facebook Inc. states they compete with other companies delivering “connection and communication products and services to users online” (Facebook, 2021) as well as within the business of selling “advertising to businesses looking to reach consumers and/or develop tools and systems for managing and optimizing advertising campaigns” (Facebook, 2021). Moreover,

innovation, rapid change and disruptive technologies often characterise these businesses, which means Instagram needs to anticipate changes in their ecosystems in which they operate as well as cultural changes in society in a highly competitive environment.

The Annual Report specifically mentions some of their competitors by name: “Google, Apple, YouTube, Tencent [WeChat], Snap, Twitter, ByteDance [TikTok], Microsoft, and Amazon” (Facebook, 2021), since they offer services where their users can share, connect and learn new content and information online or enable marketers to connect with existing or new audiences.

Essentially, Facebook Inc., hereunder Instagram, operates within several ecosystems. Users are thus embedded in larger platform economies via data brokers, advertisers and other social media platforms. The ecosystem of apps where businesses compete to attract, engage and retain users to use their products, and the ecosystem of advertising, where they need to attract and retain businesses using the free or paid business or advertising from the company. In addition, the ecosystem of a desirable workplace to attract and retain developers to build persuasive mobile and web applications integrating them with their already existing products. Finally, the ecosystem of developing and delivering consumer hardware as well as virtual reality services and products.

Facebook Inc. has a strong focus on providing products and services social by design, i.e. their aim is to have “people and their social interactions at the core of the product experience” (Facebook, 2021).

Furthermore, the report highlights that historically the number of users on Facebook Inc.’s platforms have grown organically with existing users inviting their friends to connect with them. Facebook Inc. further supports this electronic word-of-mouth with internal efforts to further stimulate interest and awareness. The electronic word-of-mouth is essentially what every online platform desires, but it also makes a business more susceptible to negative feedback from users and perhaps ultimately a loss of users due to e.g. bad media coverage concerning class action lawsuits or suspicion of violating antitrust laws, which Facebook is currently under fire for in regards to the acquisitions of Instagram in 2012 and WhatsApp in 2014 by the Federal Trade Commission (FTC) and the attorneys general from 46 states in the US (Facebook, 2021).

Facebook Inc. believes they will continue to be subject to various litigation as well as formal and informal inquiries and investigation within the US and outside. It is of course bad media coverage

because it hurts their brand but also since it costs a lot of time and money and more with fines or settlements reached.

Facebook and thereby Instagram are very much depended on other actors to keep their user growth, engagement and monetisation on mobile devices growing. As they write in the Annual Report of 2020, there is no guarantee “popular mobile devices will continue to feature Facebook or our other products” (Facebook, 2021). There is a dependency on the interoperability of Instagram with popular mobile operating systems such as Android or iOS, and if issues such as technical issues or bugs should happen it can potentially harm Instagram.

As it is mentioned in the literature review (Gillespie, 2018), at times social networking sites are blamed for things their users say or do, because they have provided the platform, and the question is thus who is to blame? Facebook Inc. mentions they are especially exposed to claims regarding “defamation, dissemination of misinformation or news hoaxes, discrimination, harassment, intellectual property rights, rights of publicity and privacy, personal injury torts, laws regulating hate speech or other types of content, and breach of contract, among others” (Facebook, 2021).

This thesis is not exploring this issue, but it is an interesting and relevant question. Moreover, it also shows what issues concern the society at large and the fact that Instagram and Facebook are blamed and sometimes accused of these statements essentially affects their brand and business as well as user growth and engagement (Facebook, 2021).

#### *Revenue Source*

Instagram’s success ties closely together with a devoted and growing mobile user base (Simon, 2021). Advertising has become the monetising model over the years as it has not been clear to begin with how the platform could generate profit (Simon, 2021). Furthermore, due to the fundamental visual aspect of Instagram, it appears to be a clear and natural platform for branded advertising, and Instagram can become a dominant platform for advertising in the 21<sup>st</sup> century, if it is not already due to the general move away from use of desktops (Simon, 2021).

In 2019, it is reported Instagram brought in \$20 billion in ad revenue which is a nice portion compared to Facebook’s estimated ad revenue of \$70 billion (BusinessOfApps, 2021). Moreover, in relation to marketing, 39% of brands spend over 20% of their marketing budget on influencer

marketing and using Instagram as a marketing platform has become central in the strategy for many companies.

In the third quarter of 2020, Facebook Inc.'s revenue is \$21.5 billion, and 98.6% of this revenue comes from advertisements, approximately \$21.2 billion (BusinessOfApps, 2021). Moreover, mobile revenue accounts for 94% of Facebook Inc. ad revenue in the second quarter of 2019. Since the acquirement of Instagram, the ad revenue of Facebook has risen more than 21 times from 2012 to 2020. Facebook's annual revenue in 2019 is \$71 billion, and again 98.6% of this revenue come from advertisements (BusinessOfApps, 2021).

Apparently, net revenue is a more complex matter to figure out. Nonetheless, Facebook has been a profitable company since the fourth quarter of 2012, which is after the acquirement of Instagram (BusinessOfApps, 2021). In addition, Facebook has paid a hefty fine of \$5 billion due to a violation of data privacy laws to the FTC.

A lot of Facebook Inc.'s success and financial performance hinge on their ability to "adding, retaining, and engaging active users of our products, particularly for Facebook and Instagram" (Facebook, 2021). They also openly state they substantially generate all their revenue from advertising on Facebook and Instagram (Facebook, 2021), thus it can seriously harm their business if they lose marketers, or the marketers choose to reduce their amount of spending on advertising. The third-party advertising marketers, Facebook Inc. has, do not have long-term advertising commitments, which is common within the industry (Facebook, 2021).

The ads, which the company sells to marketers, enable them to reach users based on different factors such as age, gender, behaviour, location and interests, which means to target the right advertisements to users, Facebook and its subsidiaries need data from its users.

Users leave digital traces behind through usage of social media platforms opening up opportunities for social media companies to read past interactions and emotions as well as implying future directions or tendencies (Møller & Robards, 2019), which they can use for their own gain.

Besides advertising being critical to their success and revenue, the size of the user base and the level of engagement of users are also monumental to their continued success, since the financial performance depends on their ability to add, retain and engage active users (Facebook, 2021). If

the products and services offered by Facebook and their affiliates are not considered “to be useful, reliable, and trustworthy” (Facebook, 2021), then the various platforms, and especially Instagram, will not be able to either attract or retain users or even maintain or increase the frequency and duration of engagement of users.

A lot of Facebook Inc.’s significant revenue stems from Facebook and Instagram, thus focus is on improving and securing a user base and engagement on these platforms. If Instagram is not able to positively affect user retention, growth and engagement, it can potentially harm their business, since the product becomes less attractive to marketers, developers and users. Therefore, a loss of marketers or a reduction by marketers’ spending can thus affect the business and financial condition of Instagram as well as the rest of Facebook Inc.

Additionally, they rely a great deal on the measurement tools available to figure out whether the advertisements are targeted correctly through e.g. impressions or clicks. Moreover, revenue is recognised through the display of impression-based ads, when an advertisement is displayed to the user, or action-based ads, a user takes the action the marketer signed on for in the contract period (Facebook, 2021).

Further, these targeting and measurement tools depend on other incorporated data signals from user activity on services which they do not control because they are from third-parties. If there are any changes in the regulatory environment, e.g. the General Data Protection Regulation (GDPR) in the European Union, or third-party mobile operating systems and browsers, e.g. updates to Apple’s iOS systems, the products and platforms of Facebook Inc. and its advertising revenue have and will be affected by these changes.

### Governance

The governance of Instagram concerns managing user activity as well as enforcing norms and values. Furthermore, it outlines who is allowed on the app and what types of activities are allowed (Light et al., 2018). This can be enacted through formal Terms of Service and/or informally by encouraging users to act a certain way e.g. by looking at Frequently Asked Questions (FAQ), where there often is an articulation of community norms and preferred user practices and informal manner. In addition, the length, complexity and nature of Terms of Services indicate perceptions of governance from the company (Light et al., 2018).



Instagram has a revised Terms of Use as of December 20, 2020 (Instagram, 2020) governing a user's usage of Instagram. When users create an account, they agree to the mentioned terms. Instagram writes they agree to provide the user with the 'Instagram Service', which include everything related to Instagram: "products, features, applications, services, technologies, and software" (Instagram, 2020) and it is all with the goal of advancing their mission of bringing the user closer to the people and things they love.

Moreover, they explain what it more specifically entails to experience the aspects of the Service. It includes being offered personalised opportunities. Instagram builds systems trying to help them understand what users care about and then use this information to help users create, find, join and share various experiences. But these systems do more than help users find what they care about, because finding out what users care about also means the platform can target their advertisements better by collecting user data. Moreover, the mentioned experiences can furthermore mean advertising that is relevant for the individual user. By highlighting and offering offers and targeted advertising from third-party companies, it helps keep Instagram's operating model and revenue source going.

Furthermore, Instagram also mentions the different offers, content, accounts and features they recommend that are based upon what the user and others do on and off Instagram (Instagram, 2020). Mosseri states in an interview that "on content policy, we have the same rules [on both Facebook and Instagram] because it helps us keep more people safe and make less mistakes" (Patel, 2021). What this also means is they gather third-party data, e.g. through the use of cookies or the operating systems of Android or iOS, which helps the company sustain their operating model.

Instagram explicitly writes that in order to foster a positive, inclusive and safe community and environment the company uses all available information, i.e. data, to keep the platform secure, which is a way to regulate user activity by surveilling the platform. But the collected data can potentially also be used for other purposes, which is perhaps why Facebook Inc. is relatively often prosecuted.

Head of Instagram states that at times there can be tensions between some of their values, such as speech and safety. "We have to navigate that tension" (Patel, 2021) by still creating safe

environments, where people can express themselves while also allowing and defending things the company does not necessarily agree with.

Instagram uses the available technology as well as develop it further to serve their growing community and it is a central part of being able to keep up the 'Instagram Service' (Instagram, 2020). The company uses technologies like artificial intelligence and machine learning, which – according to themselves – give them the power to apply complex processes across their Service. It also gives them the power to gather user data to make services better and more personalised but also making more personalised targeted advertising sustaining their operating model.

Moreover, for Instagram to be able to operate their global Service, they need to store and transfer data across systems all over the world, i.e. across nations. This means different legal systems and requirements are at play for Facebook Inc.

As mentioned, to be able to show relevant ads, offers and sponsored content, Instagram mentions they use data from Instagram, other Facebook products and from third-party partners, thus users' data travel through several systems. However, the company is very adamant they do not sell users' personal data. They only use the personal information such as activity and interests to show relevant ads.

This point of sharing across platforms is something Mosseri speaks about in an interview, where he says:

“We try to share as much as we can because, honestly, the Instagram team is lean and mean, and we want to stay that way, but we want to get as much leverage from the broader company as we can” (Patel, 2021).

The operating model is sustained by selling advertisements to other companies, and users agree to this when they download the app for free and then agree to be shown ads from businesses and organisations promoting various products and services.

During the Terms of Use agreement, there are a lot of links to further explain Instagram's business and how they operate. However, a user hardly ever reads this, which is understandable to read, but adding all the extra links to further explain certain points, if the user wishes to know more, makes it more confusing and to some extent questions the integrity of the company. The

questions of how, where, how long and for which purposes Instagram harvests data are not all that clear. On the surface, the Terms of Use is clear but as mentioned all the extra links make it unclear and uninviting to find out and set one's own settings, which means the settings are mainly by default favouring the company.

Moreover, Instagram writes who can use the platform, e.g. a user must at least be 13 years old (Instagram, 2020) (but in Denmark a user can be 12 years old (Apple, 2021)), and how a user cannot use Instagram, e.g. a user cannot impersonate others or provide inaccurate information, thus information given must always be up to date. Thus, the operating model can be sustained, because with accurate information they can provide targeted ads and the vision can also be fulfilled by ensuring a safe environment and community.

Furthermore, when a user signs up to use Instagram, they inadvertently give permission to certain aspects. Instagram does not claim ownership of users' content, but users are granting them a license to use the content (Instagram, 2020). Users can in this regard be seen as free labour as mentioned in the literature review (Vaidhyanathan, 2018), since to use the platform, Instagram may in turn use and distribute how they see fit. Users provide the content, and the company is granted "a non-exclusive, royalty-free, transferable, sub-licensable, worldwide license to host, use, distribute, modify, run, copy, publicly perform or display, translate, and create derivative works of your content" (Instagram, 2020).

Instagram can use users' information in relation to further advertisements because users give their permission for Instagram to use e.g. their username and profile picture without any compensation to the users. This can have consequences, if a user e.g. by mistake likes a product or account and in turn the user can be juxtaposed with that brand or product.

Furthermore, Facebook Inc. states in their Annual Report they will continue to focus on the main revenue growth priorities of "(i) helping marketers use our products to connect with consumers where they are and (ii) making our ads more relevant and effective" (Facebook, 2021).

This means they have a very strong focus on advertising and connecting marketers with the right consumer and user base to further their operating model. This leads to the next phase of the technical walkthrough, since Instagram is a revenue source for the parent company and the marketers need to tailor their advertisements to the users where they are, and many of them are

on Instagram. The interface of Instagram and its affordances as well as the flow state on the app and habitual usage during a technical walkthrough will now be looked at.

### The Technical Walkthrough

The platform analysis of Instagram will first describe the low-level affordances of the platform, the material aspects and architectural features and properties of Instagram. Secondly, it will describe the high-level affordances, i.e. the social and communicative affordances the platform offers its users. There are certain affordances which are applicable and describe social media platforms in general but there are also some specific affordances for Instagram, which will be explained during the analysis. Additionally, good affordances can enhance the usability of a design and influence the way it is perceived by users (Bucher & Helmond, 2018).

Social media platforms constitute a form of environment made up of pathways and features. Bucher and Helmond (2018) stress no two platforms are exactly alike even though many of them use the same features and functionalities such as likes and hashtags. Platforms are essentially programmable infrastructures that can be further built on. They mediate interactions and relations between several parties.

### Registration and Entry

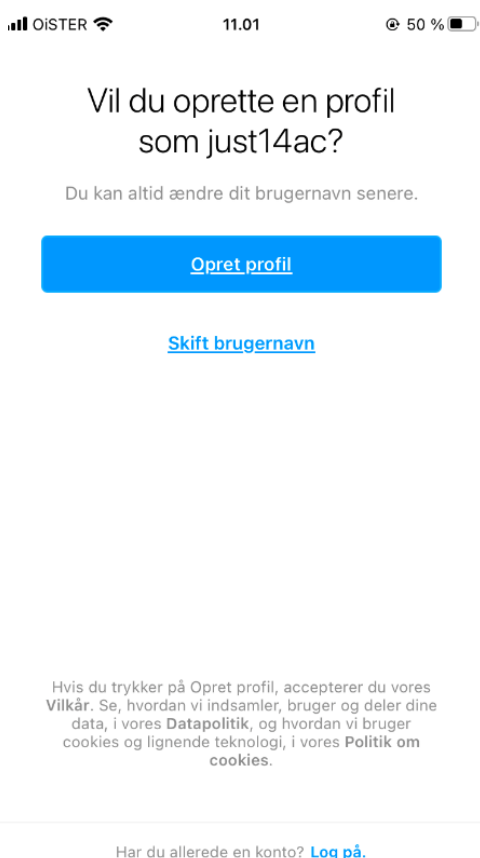
The starting point of the technical walkthrough starts with setting up the dummy account on Instagram. The app is downloaded on a smartphone since Instagram is initially developed for mobile devices. The expected use of the app is often strongly communicated during the registration phase. Welcome screens may state the vision and the operating model may also become apparent. Further, the governance may also become evident through an agreement to the Terms of Use screen. The how to screens also show the preferred user practices seen from the company's point of view.

I already have a profile on Instagram, so for this purpose I log out and return to the first screen of creating a new account. The first suggestion is the feature of using my already existing Facebook account. Then, it subtly writes below some of my closest friends by name and the total of my network who also uses Instagram. This is the platform's textual tone and content in use nudging me to connect to other accounts to streamline the experience and perhaps gaining more user data. Then, I click on the 'create a profile with telephone number or e-mail' button.

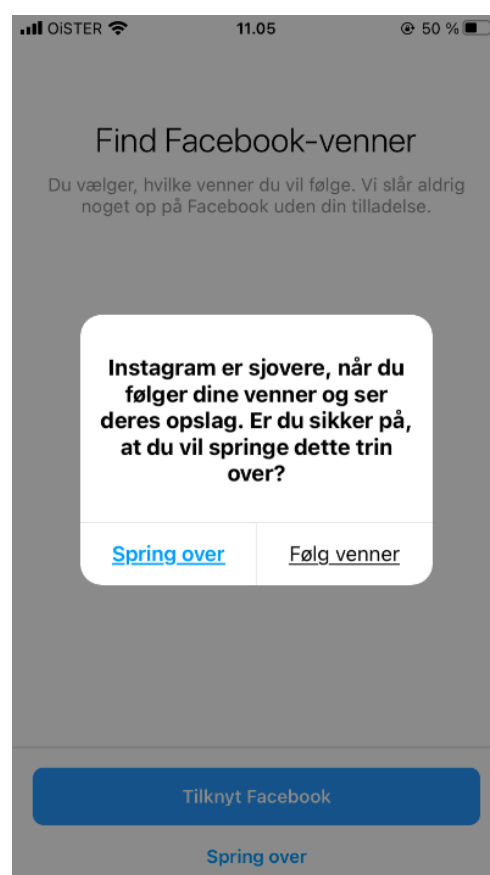
After typing in my (student) e-mail, the platform urges me to type in the verification number sent to this e-mail. Afterwards, I type in my name followed by password on the next screen, which below the box of 'save password' is already checked on my behalf. The user interface arrangement guides me nicely through the set-up of the account with clear buttons indicating where to click next, e.g. to add one's birthday.

The next screen consists of Instagram asking to create a profile with a suggested username, which they write can be changed later suggesting openness. At the bottom of the page, it is written in relatively small grey letters that if I press 'create account' I also agree to their terms as

**Picture 1**



**Picture 2**



well as links to their data policy and their policy on cookies, which is a way of using mediating characteristics of arrangement and features (picture 1).

The very first page shown after creating the account is 'find Facebook friends', so I can add Facebook to my account or skip it (picture 2). I choose not to have it associated for this purpose. A pop-up screen follows by stating 'Instagram is more fun when following your friends and their

posts', also a feature where they nudge the user to connect their social media accounts in a friendly tone. And then asking if I am sure I want to skip this step, which I do.

Thus far, Instagram has been able to create a good useability while setting up the account. The technical affordances of e.g. buttons and minor text fields communicating their desired action for me to take as a user have been made clear and I have not been unsure of which steps to take in creating the account. Which also means the perceived affordances of the platform have been somewhat successful. The platform encourages me to fill in various fields while creating the account as well as encouraging me to connect with other social media platforms, which I have not done. However, the designers have made certain design choices encouraging me to connect with Facebook. They have not hidden their affordances, thus making them useful for users to comprehend, since they have clearly put forward their social affordances, i.e. the high-level affordances, which can be enjoyed by finding one's friends on the app (picture 2).

Furthermore, some of the suggested accounts on my new profile are accounts having a vast following to begin with or are popular according to Instagram (BusinessOfApps, 2021). Just to name a few of the first accounts – Virat Kohli, Leo Messi, Jennifer Lopez, Cristiano Ronaldo, The Rock and the next is again an “account” saying, ‘add contacts – find people you know’ clearly indicating and enabling further activity.

However, after a small break, which lasted a couple of hours, this changes. When I return, the platform suggests I should follow Virat Kohli, Katy Perry, National Geographic, Beyoncé and Taylor Swift, which is a lot more female accounts than previous. A reason behind this can be, Instagram has gained access to some of the third-party data from my smartphone, which I agree they can access, i.e. the operating system iOS, since I have an iPhone.

As it is right now, Instagram knows my birthday (age), registered e-mail, name and possibly also my location. I have not filled out my sex, so they do not know I am female, however based on my name they can figure this out, perhaps also based on data extracted from third-party systems. I do not have anything in my news feed, because I have not chosen to follow any accounts yet. This also means they cannot provide me with personalised targeted advertising yet. As mentioned by Vaidhyanathan (2018), targeted ads can shape consumer behaviour, thus the operating model and design of the app can lead to behavioural changes in users.

For this research, I choose to follow some of the popular accounts Instagram suggests to me, so I can experience and account for a normal everyday use of the platform seen from a user's point of view.

Moreover, it is possible to make one's profile private, but Instagram does not ask if I want the account be private or public. It is a default setting where the platform makes the decision for me, which can mean Instagram wants the account to be public suggesting the amount of content they have access to and then redistribute for marketing purposes or third-party use in relation to advertising. This public setting can be changed if the user goes into the private settings afterwards.

Furthermore, affordances are objects showing users the actions they can take (Bucher & Helmond, 2018), e.g. a button is designed to look as if it needs to be pushed or turned also referred to as low-level affordances. Instagram has been able to design buttons which appear clickable, it affords its users to click on it, which is also thanks to the standards and norms of social media platforms in general. During the registration phase everything is clear – to be able to get to the next phase all important buttons are made a shade of blue to indicate the user needs to click on it to advance. In relation to connect with a Facebook account, the platform clearly wants the user to click on 'connect with Facebook' which is the same with steps of connecting with the contacts on the phone, i.e. the button affords the user to click on it as a default.

#### Everyday Use

During this stage, I record what registered users regularly engage in of activities, and the functionalities, options and affordances the app provides along the way and in general. By going through the app's basic functionality, it gives a sense of what activities it enables, limits and guides users towards (Light et al., 2018).

The screen refreshes after I click on various accounts suggested to me, so it shows the immediate personalised interface. It is a very basic layout and arrangement, where the clear focus is on the images in the feed (picture 3).

At the very top is the Instagram logo, which the user can click on and it will redirect to the top of the news feed or if the user is somewhere else on other features it will redirect the user back to the start.

Next to it is three different icons, users can click on. First is a square with a plus sign in the middle, this will create and upload a post in the regular news feed.

Next to this is a heart, which in itself connotes feelings of affection and love, i.e. positive feelings. Clicking on this feature, the user is shown the activity of people who starts to follow you, or if a user posts content in the news feed or in Stories, people who likes or comments on this will show up under the 'activity' icon. Also, suggested accounts will be here, but this also shows up during the news feed scroll through.

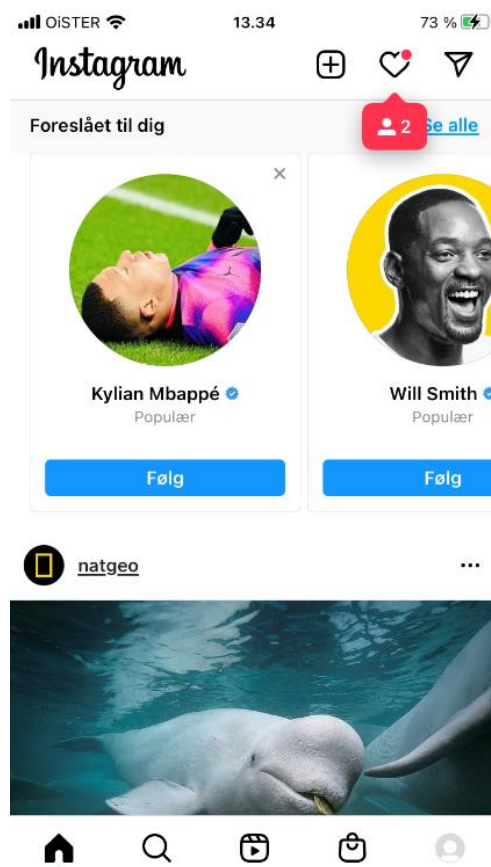
The notifications give a sense of vibrating life, as described by Lupinacci (2021), and the platform further encourages to foster a continuous connectedness and to generate active engagement from users. Even though, notifications can be turned off, so they do not pop up on the screen, the notifications are still there when you log on to the platform.

The last button at the very top is what resembles a paper airplane, an icon for Direct messaging, which is where the user can write messages with other users and thus experience more of the communicative affordances of the platform. Since I do not connect the application with my contacts, the platform once again suggests for me to connect my contacts with the app or search for friends.

Just below this top bar, is where the feature of Stories is located. The first is where I can upload my own content to Stories and next to it is people, I follow who uploads Stories which will be there for 24h before it disappears again.

Then the user will see the news feed with images and captions as well as options to either like, comment or share the post, which can be done through either uploading it on one's Stories, send to friends or save the post. The images in the news feed are one of the ways Instagram affords its users to be social, and how the technology affords social practice.

There are also three small dots in the right-hand corner of a picture, which the user can click on and several options become available. With the first option in red to 'report' if the user finds the content offensive or it violates Instagram's Terms of Use. In addition, the same three dots are also



**Picture 3**

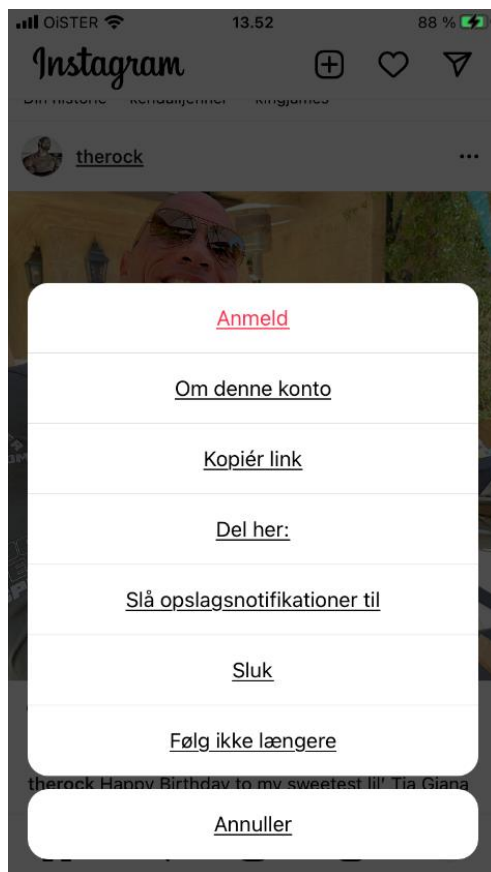


used on Facebook's platform with similar affordances on the posts. The perceived affordances of the feature are to enable users to take actions on the post and constrains users in the way that the only available options are displayed and no more (picture 4).

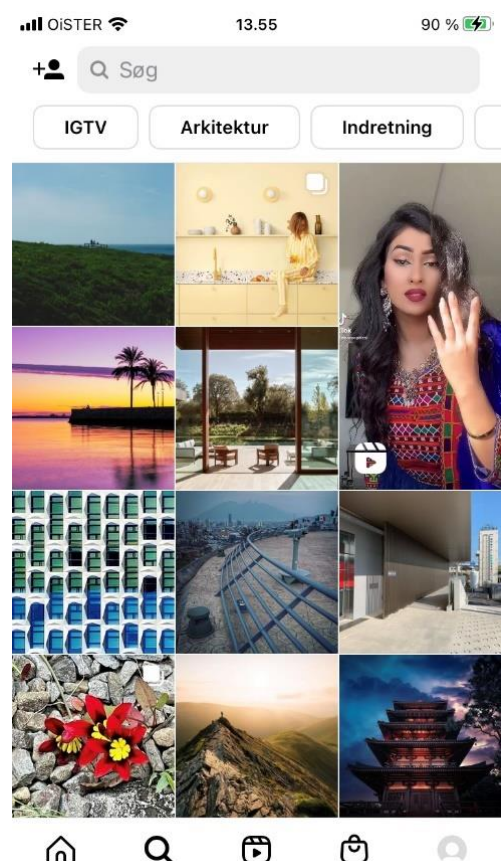
The bottom of the platform locates a menu bar with five icons. The first is a house, which redirects the user to the home screen with news feed, similar to Facebook's icon.

The second is an Explore/Search icon resembling a magnifying glass, which bears cultural associations and is often understood as an indication of searching or magnifying something to gain a better understanding. Here there is a search bar at the top followed by menu bars of interests, the user may find interesting, and then various images users can explore in a grid layout (picture 5).

**Picture 4**



**Picture 5**



The grid has become a cultural technique as mentioned in the research article by Thylstrup and Veel (2020). It is a method which has been used for millennia to bring some sort of order to chaos and organise information. At first hand, it has not been intuitive in use and it has required practice to learn the grid for users, thus the grid is a cultural technique, users have acquired to use (Thylstrup & Veel, 2020). Therefore, the grid emerges as a cultural technique as an organising

principle on Instagram, most prominently in the Shop icon, the Explore function (picture 5) and on users' own profile with an overview of posted content.

The grid consists of an outline of thumbnail size images for viewers to scroll through and navigate. Furthermore, users of Instagram can get lost in the grid of informational infinity of e.g. the Explore function on Instagram. The grid simultaneously offers a sense of control and overview while also being as a spatial device essentially saying, 'and so on'. This type of limitless information being available for users is a way for them to find new information but also to get lost in while being in a state of flow.

The third icon is for watching, making, commenting and sharing Reels, which is a relatively new feature on Instagram. The feature is a square with a movie icon in the middle. The bottom menu bar turns from white to black when clicking on the Reels icon, which bears resemblance to the layout and colour choice from the rival TikTok. A lot of the same icons appears from the other pages and menu options, so it appears relatively intuitive.

The fourth icon at the bottom is the Shop icon, also new to Instagram. It bears resemblance to the Explore feature as it has the same search bar at the top, interests just below followed by square images in a grid with names of various shops users can scroll through. Thus, making the perceived affordances more visible for its users and creating better usability.

As Thylstrup and Weel (2020) state, gestures and most prominently the swipe on Tinder have become a cultural technique many dating apps now use, the scroll on Instagram has also become a cultural technique innate to many social media platforms. The gesture of scrolling through various images on the news feed bears several sentiments. Instagram users who keep scrolling without acknowledging a post with a like or comment are just moving on to the next content which may be something they like.

Instagram users are also often compelled to keep scrolling to find out what happens next, which resembles what behavioural psychologist B.F. Skinner (Thylstrup & Veel, 2020) named 'variable ratio enforcement'. This need to find out what happens next also draw lines to habituation and habitual behaviour in the design of an affective trigger structure of the grid and scrolling.

As mentioned, Instagram affords its users a way to zone out and be in a flow state as well as an experience of some sort of control in an otherwise uncertain world. By being in a flow state, the

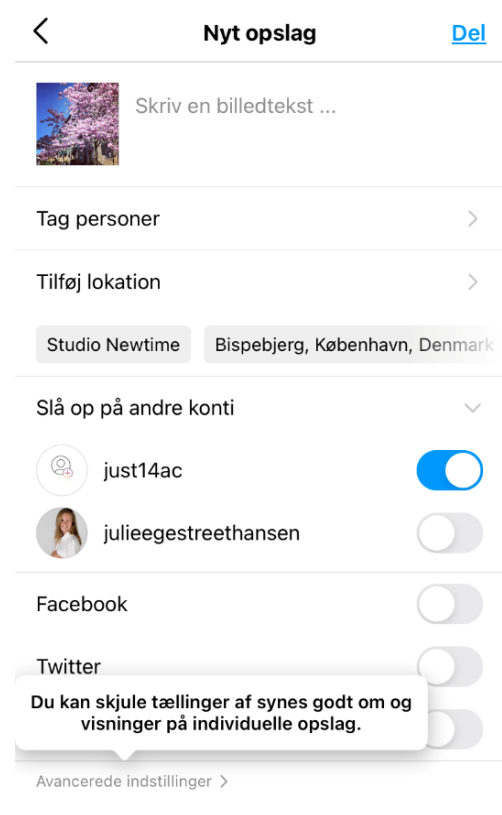
platform momentarily affords the user a breather and not necessarily to think of the true eventualities in life, such as political unrest, sickness and poor social relations.

Finally, the last icon in the bottom menu bar is the user's own profile depicted as the head of stick figure, a cultural association for people. Here users can see their profile picture, change it and add to one's own Stories by clicking on the plus sign at the picture. Also, number of posts, followers and follows as well as editing the profile. At the top right corner, the user can also add a post to the news feed and click on the information button which is resembled as three linear strips with similar connotations as the three dots mentioned earlier.

To better understand the user's activity flow, I, the researcher, must follow some of the same activity flows to better understand the navigation of the app. Thus, I post a few images in the news feed. But since I am trying to minimise my interaction with other users, I am not liking, commenting or sharing anything due to ethical considerations thus limiting some of the same activity flows a normal user experiences on a daily level.

I choose to post images which can fall under the three most popular interests on Instagram, which are 'travel', 'music' and 'food & drinks' (BusinessOfApps, 2021) to get a feel of the experience of posting content on Instagram but also to see if there are users that react to some of these posts based on hashtags and how it looks on the platform. By clicking on the square icon with a plus sign for generating content I am met with options of posting various content. Here, I choose a regular post, which is depicted as a grid. Instagram has access to my photos, making it easier to upload a picture. After having chosen a picture, several options of various filters come up. Moreover, it also affords me the option of further editing, e.g. the light or contrast, to personalise it and be more creative.

The next button in the right corner is clearly visible with a



**Picture 6**

blue colour compared to the white on black on the other options and features. On the next screen, a caption and hashtags can be written, people can be tagged, a location can be added, or sharing on other accounts on Instagram or social media platforms, Facebook, Twitter or Tumblr. A relatively new feature on Instagram, which currently is still being tested and slowly rolled out in various parts of the world (Lerman, 2021), is that it gives me the option of hiding the number of likes on individual posts to ease social pressure on the platform. When writing the caption followed by hashtags, it generates suggestions of possible hashtags and the number of posts containing the hashtags, so I can pick a popular hashtag or create a unique hashtag. Finally, I click on the share button, which is also in blue font in the right-hand corner making it easy to locate (picture 6).

#### [Suspension, Closure and Leaving](#)

When I close my account on Instagram I essentially disconnect. I try to locate the right place to close my account, and my first thought is to click on my profile followed by clicking on the icon with the three horizontal lines in the right corner of the menu bar, which shows the settings. I try to go into all the different settings with no results. To find answers I must turn towards Google, which leads me to the 'help' pages on Instagram. To either temporarily or permanently disable my account, I need to log in on the platform through a web browser and not through the app.

At the top of the page, they remind me that by deleting the account all photos, comments and likes will permanently be removed and if I just want a break, there is also the option to take a temporary break with a link affording this action. Then, the page describes the steps towards a request of permanent deletion of an account, which informs me that after 30 days the account including its information will be permanently deleted. However, "It may take up to 90 days to complete the deletion process after it begins" (Instagram H. C., 2021).

Additionally, after the 90 days there may still be copies of my content in case of legal issues, term violations and harm prevention efforts. Thus, there is not a complete break between the user and Instagram. I then log in to my account through a web browser, where Instagram asks me if I want to take a break instead of deleting the account to keep me as a user, followed with answering why I wish to delete my account.

Afterwards, Instagram still wishes to retain user engagement with a statement of should I regret the deletion I can within the 30 days still reactivate my account with all of its information. And just

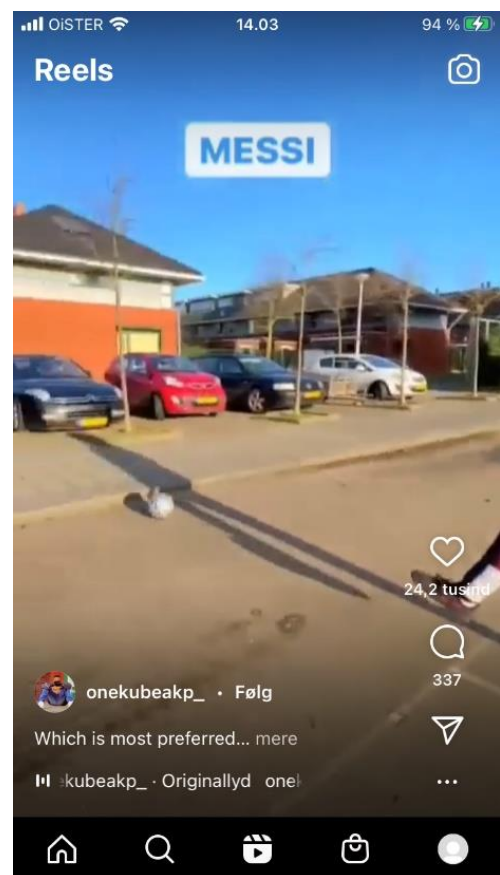
before I click on the blue button to delete, or rather request a permanent deletion, they write the account will be hidden up until the 30 days and afterwards deleted. However, they can make it clearer that they retain my information, which they do not.

After I click on the button, a pop-up box emerges asking me if I am certain I wish to delete my account. They once again remind me that if I should regret my decision, I can always change it within the following 30 days. Instagram uses affective content and tone with a somewhat symbolic persuasive work by informing me I can always come back to reactive the account during the 30 days, which they have continually used throughout the request of deletion process.

#### Instagram's Affordances

The menu system of Instagram is tightly structured and thus easy to navigate for users to follow with tightly organised navigation texts but mainly navigation images, since it is a photo-sharing app. The navigation structure remains almost the same when the user is clicking on the different features, except with changes when clicking on the Stories or Reels icons (picture 7).

The menu icons are key features which can symbolise cultural representations, e.g. the like button, 'the heart', on Instagram is a feature also found on other platforms such as Facebook and Twitter, and there are certain affordances and connotations connected to this simple feature. Users can e.g. mean they like the posted image, it is nice to look at, they like and agree with the caption written by the user who posts it.



**Picture 7**

The symbolic representation and aesthetics of the app is very clean and simple with a white background, black lettering and small black symbols, which also can be alternated if the user on their smartphone changes their setting to dark.

The simplicity and very subtle colours appear to emphasise the streamlined functionality of the app without being too rigid because there are no edges except for the posted pictures. The square icons have soft edges giving it a nice and welcoming look. Moreover, the app is mainly interest-

based rather than e.g. a location-based service such as certain dating-apps (Thylstrup & Veel, 2020).

Instagram has several affordances. Since affordances constrain and control behaviour, and it does not cause the behaviour, Instagram provides an environment where its users can explore this environment and its actual and perceived affordances.

The surface is relative to its actors, i.e. the environments, which are highly malleable and personalised as opposed to Gibson's notion of the natural environment which is the same for all involved actors. Social media platforms afford personalised environments to its users and the affordances are thus relative to the individual users. Additionally, social media platforms inhabit both the user and non-human actors, e.g. the algorithm, which are each feeding each other with information back and forth.

Affordances need to be visible for users and for a lot of it, it is true for Instagram. They strive towards designing a simple interface with the technological affordances for users to understand. A lot of the features also exist on similar social media platforms, which means it is easy for users to switch between platforms and know what to do, which essentially is the notion of polymedia, meaning users practise a wide variety of communication media.

Some of the technological affordances may be hidden and not at first glance perceptible for users and may only be discovered through use over a longer period of time, e.g. instead of just clicking on the magnifying glass, the user can hold it down and it will immediately open up the search bar and keyboard to type in whatever the user wishes to search for.

Furthermore, there are ways technology affords social practice and relations, and Instagram being a technology affords a sense of sociality and connectivity on the platform. They have done this by providing an environment for their users to connect and share experiences. Thus, technology affords sociality. Technological properties and features can enable and constrain sociality in particular ways, which resembles Gibson's notion of the way affordances can either control or constrain behaviour. The technological affordances in Instagram's infrastructure affords a sense of sociality. Social actions are afforded through the various features of like, share, comment and direct messages between users. Additionally, Instagram along with other similar social media platforms afford the sense of instantaneity, co-presence, fleetingness and genuineness which are

then important for the companies to gather data to sustain their operating models also mentioned by Lupinacci (2021).

Communicative affordances refer to the action possibilities emerging from certain technological forms. The affordance of availability of mobile devices has altered the level of availability and the different ways of being available, which can be seen with Instagram. The app is specifically developed to use on mobile devices and not computer screens, so the user can always easily access the app, which is considered as high-level abstractions of affordances of mobile devices and Instagram (Bucher & Helmond, 2018). Contrary, low-level affordances concern the materiality of the specific medium, such as particular features, buttons or platforms, which afford certain actions such as clicking or liking as mentioned earlier (Bucher & Helmond, 2018).

The four central high-level affordances of persistence, replicability, scalability and searchability according to danah boyd (2010) help shape social networking sites and thereby Instagram. These affordances in turn structure users' level of engagement in the various environments (Bucher & Helmond, 2018). In the case of Instagram, it can be argued to be true.

Instagram has shown persistence in various aspects. They have endured and lasted for more than 10 years in a highly competitive market with many competitors as well as a persistence in their design and infrastructure. They continue to keep a simple interface for users.

In terms of replicability, Instagram can as such be replicated or copied if it is peeled down to its core functionalities and features, which is a platform where users can network and be social online.

Instagram's interface can be reprogrammed and changed by developers and designers and thus be changed in size or scale and have the scalability required by social networking sites according to danah boyd (2010).

The last affordance of searchability is also something Instagram has both in the sense that it is searchable as well as a user can easily search for something on the platform by using the technical feature of the magnifying glass.

Lastly, users end up fuelling the algorithms by clicking and liking on various technical features along the way on their flow, which then in turn generate information flows being fed back to the

users. The clicks and likes from users also drive an interest and engagement from developers and advertisers which also help keep the platform in business and sustain the operating model.

#### Habitual Flow Experience on Instagram

Instagram uses various pull forces, which the habitual use of social media platforms influence, also mentioned by Soror et al. (2021). The positive factors attracting users to continue use of a technology is defined as pull forces, and these can even create a dependency, maybe even addiction, of social media. Some of the pull forces Instagram uses are that a user's friends are all using this platform so to maintain a relationship and not feel left out, the user should also be on the platform.

Other positive factors can be the design of the platform. It is a very clean experience, and the icons are easily recognisable and inviting. Moreover, every time users scroll and see a new post or watch Stories, they expect a reward which is the image itself, which they are granted, and it may be partly due to the algorithm of Instagram that is not chronologically filtered but rather a collaborative and content filtering, so to some extent users will keep on scrolling infinitely. Users will then be in a sense of flow, where time and place do not exist.

It can be argued that Instagram designs their interface and infrastructure to solve the perceived problems or use cases mentioned by Sherry (2004), which are entertainment, information, social utility, arousal, to pass time, relaxation and to escape. Further, they create a flow for users on their platform which habituate users and thus making their platform a daily habitual use, since Instagram provides an escape to another world where various emotions are discovered. It can also be argued, Instagram designs their interface so their users can have an experience of flow while scrolling.

But Instagram is not alone in it, since research (Sinanan & McDonald, 2018) suggests users are often on more than one social media platform. It can appear it is a collective of social media platforms habituating users into checking their social media platforms several times a day.

Moreover, looking at the habituation-sensitisation perspective, it can be argued the dual-process has taken place for users when using Instagram. As Soror et al. (2021) mention, there may be dual mechanisms at play in the decision of continuing to use social media and ultimately making it a habit. It concerns the impact of two mechanisms with which habits influence behaviours of users. The final behavioural outcome is yielded based on both processes combined, thus users may



experience a sensitisation process in the beginning, since they are not familiar with the platform and the received stimuli. They will thus have an incremental experience, where they expect a reward of some sort with the usage of Instagram. Over time, when they have become accustomed to the platform and its stimulus, they will have a decremental experience and will habituate, where they have come to expect the unexpected echoing some of the findings from Lupinacci (2021). But even though the two processes happen in relative isolation in different parts of the brain, they will eventually 'meet' to make a decision regarding the behaviour, e.g. stop or continue usage of Instagram.

Additionally, a continued utilisation of Instagram results from an experience of flow because users experience a balance between the content of media message and their abilities to interpret that. When users are active on Instagram, they can achieve the positive psychological state through a balance between associated challenges on the platform and their abilities to meet the demands of this challenge and accomplish it. When users experience habituation, the associated or perceived challenges of the platform are not that big and the required abilities to use the platform are relatively easy, since it resembles a lot of the same actions required on other social media platforms, so they can easily achieve a state of flow.

Moreover, it is a self-motivating experience to be in a state of flow for users, so if users e.g. do not experience to be in control in their everyday lives at work or in other areas, users can seek this sense of control on Instagram, because it is a habitual flow experience where there is a distortion of time and the activity will feel intrinsically rewarding. This also means it is mainly about the process of e.g. scrolling through news feeds or watching Stories than actually achieving a certain goal.

Social media platforms such as Instagram can exploit users are experiencing being in a state of flow. When a user is in a state of flow, the algorithm of Instagram keep them hooked on the platform by retaining them in a filter bubble by continuing to show them content like what they have previously viewed or liked or what their friends like, which is also a way to habituate users. Mosseri states he really believes in the ranking system of the current algorithm, because "ranking is a really good way of making the most of people's time. There's way more out there than you and I could consume on a given day" (Patel, 2021). He recognises, Instagram has a responsibility in terms of algorithmic transparency and algorithmic bias to not amplify polarisation, even though he

mentions it is a trend going back to way before the internet and social media platforms even existed, thereby to some extent relinquishing some of the responsibility.

Furthermore, engagement is flow, and Instagram as well as other social media platforms work towards increasing the engagement of users, which is a statement previously made in e.g. Facebook Inc.'s Annual Report (Facebook, 2021). So, it can be argued that Instagram designs the platform to keep users hooked. The design choices can have altruistic intentions, i.e. to provide a place to escape and fulfil the platform's mission and vision, but it can also have more commercial intentions of simply keeping the operating model sustained by gathering data to perform targeted advertising.

Walking through the app, there is a sense of familiarity and freshness and thus an enjoyment using the platform, which also means users are closer to achieve a state of flow. Instagram appears to be following the norms and characteristics of social media platforms, which makes it easier for users in general to "read" the content or understand how to use the interface.

Further, cultural processes influence the perceived quality design practice (Stevenson, 2018), which can refer to the standard and norms used by social media platforms. These are also influenced and decided by economic, ideological and professional interests. Facebook as a parent company and Instagram as an affiliate are big players in the social media market (BusinessOfApps, 2021) and can thus be considered as trendsetting. Moreover, it can appear users eventually pick up on new changes over time, e.g. Stories, which proved to be successful quickly, where IGTV appears not to be a success story as of yet (Klemons, 2020).

Instagram aims at preventing a mismatch between user skill and difficulty of the message and medium to better the conditions for a sense of flow, since one of their key concerns with their interface and a mantra for them is: simplicity. With everything they do they aim at maintaining the simplicity and thus keep the skill level at a point where most users can reach, which have been important from the very beginning (Kennard, 2021). Furthermore, the norms or formal characteristics many social media platforms strive to achieve with having a lot of the same affordances, i.e. buttons and features, also help keep the required level of skills at more or less the same level, so new users can easily enter and current users feel comfortable. Some of the formal

characteristics are e.g. having a menu bar featuring icons either at the top, bottom or both, where many of the symbols resemble each other.

Furthermore, Csikszentmihalyi (1990) mentions some activities are more likely to create a state of flow, and in relation to social media platforms and more specifically Instagram has somewhat concrete goals and the rules are simple. Users set their own goals, the provided action by Instagram on the platform are adjustable to the level of capabilities of the individual user, the feedback is instant and clear, i.e. dependent on the goals set by the user, the feedback can just be scrolling through the feed or when posting an image, likes and comments will be shown as they come. It can be argued that Instagram possesses ideal characteristics to create and maintain an experience of flow which is brought on when the level of capabilities of the user matches the difficulty of the platform.

Likewise, Instagram affords feelings of closeness and sameness, which is consistent with the vision of Instagram to foster a safe environment and community, where users should feel comfortable to express who they are and share it with their network.

As mentioned earlier, affordances constrain and control behaviour, but it does not cause the behaviour. The affordances of Instagram can be said to guide the behaviour e.g. when posting an image on the platform. When I choose to post an image, it affords me five different options of where to post content, then further to use filters or enhance the image in any way the platform affords. In addition, it affords me to describe the image with a caption and hashtags, so other accounts can discover the post. The immediate constraints in the Instagram environment are e.g. that in order to uphold the Terms of Use and provide a safe community, I cannot post certain content which may offend other users.

Moreover, if I as a researcher are to situate my own findings in Gruner's (2016) four quadrants (figure 1, p. 23), the flow on Instagram is achieved since there is a match between the skill and challenge level. At times, there can be an experience of apathy, which is a lack of interest and enthusiasm. This is experienced when there are both low levels of challenge and skill. Maybe it is dependent on the time-of-day Instagram is being checked. Despite the feeling of apathy, I nonetheless keep scrolling which can further be attributed to the habitual usage of the app as well as what Lupinacci (2021) refers to. The mood is not something I research but cannot help to notice

to some extent. It is all about the context and when and why, a user checks Instagram, such as what are the purposes and where is the user physically at the time?

Lastly, social media sites design to capture attention and engage their users according to Gruner (2016), thus social media platforms alter the behaviour of its users, since at times the platforms replace physical socialisation with online sociality.

I as a researcher and part of generation Y or millennials just short of generation Z by a few years, I have grown up with web 1.0, web 2.0 and the explosion of social networking sites. So, a lot of the platform-specific affordances, the knowhow of moving around on various social platforms, is something I know and can leverage. I know how to navigate the platforms, thus some of the necessary skills needed to navigate on the platforms is not something I need to be taught beforehand, which also may have coloured my experience as a researcher during this thesis.

## Discussion

It can appear more or less everything can become an addiction or at least a habitual habit, if one takes a look in the book “Addiction by Design” by Natasha Dow Schüll (2012). At one point, she attends a meeting for gambling addicts, where the participants are talking about what they are addicted to in general, and some of the answers are e.g. “Vitamins/other health foods”, “Internet use” and “Taking care of your child” (Schüll, 2012, p. 241). The first two can both be considered as good and bad addictions in the right amounts, i.e. everything in moderation. The question is then, who decides what the right amount and moderation is? Who is in control of deciding the right amount of internet usage or social media platforms? Essentially, it should be the person performing the action who should be in control to figure out if the habitual usage or addiction is in or out of control. However, when it comes to younger users of social media platforms, they may struggle with this since parts of their brain is not fully developed yet (Csikszentmihalyi, 2021).

A lot of development happens in the transition years between childhood and adulthood. Especially in the brain where the neural pathways in relation to reward processes develop at a greater speed compared to processes involved in cognitive control, which is some of the explanation for a greater risk-taking tendency among teenagers (Csikszentmihalyi, 2021). This is also relevant regarding the processing of stimulus in the habituation-sensitisation process mentioned earlier. Moreover, besides physical changes during puberty, the social and psychological changes are

especially interesting since teenagers experience a development in reasoning skills, rational thought and moral judgement (Csikszentmihalyi, 2021).

Furthermore, it can appear social media companies are merely taking advantage of the middle ground between being in and out of control by offering up a platform and a way to socialise with their choice architecture, i.e. deliberate decisions pertaining to their interface (Burr et al., 2018) and the affordances they offer their users in the environment. This means that choice behaviours by users can be affected by nudging to them through e.g. how various options and choices are presented on the interface to create a flow state, which a platform like Instagram practices.

According to Schüll (2012), there can be possible addictive consequences for users due to flow as a designed technology-induced temporal state of mind. The addictive consequences are particularly interesting in relation to young people, since their brains are still in a developing phase. So, if users at a young age already have created a habitual usage of social media platforms, it can potentially create addictive behaviours. One of the main hooks on users could pertain to the achievement of creating positive feedback loops, such as from the study of self-tracking (Lomborg et al., 2018).

As young people are growing up and going from child to adult, they are doing it so under surveillance from both peers and agencies trying to enforce certain choices upon them. These adolescents are building both their selves and society as they experiment with the possibilities of social media through the search for love, fearing death and combining the 'me' and the 'we' in new dynamic groups (Burgess et al., 2018). Furthermore, the creative and communicative dynamism from the adolescents demonstrate the insecurities, apprehension and differentiation that is often associated with growing up as one of the engines behind economic productivity in a creative period.

There has been an increase of social networking among young people and with the findings from research (Gruner, 2016), it can be troubling to hear users report lower levels of their mood and lower levels of creativity and derive overall less meaning. Also, it is troubling in relation to young users who can be considered as high media users as well as the overall increase of digital media and social media platforms in society for both work and leisure time.

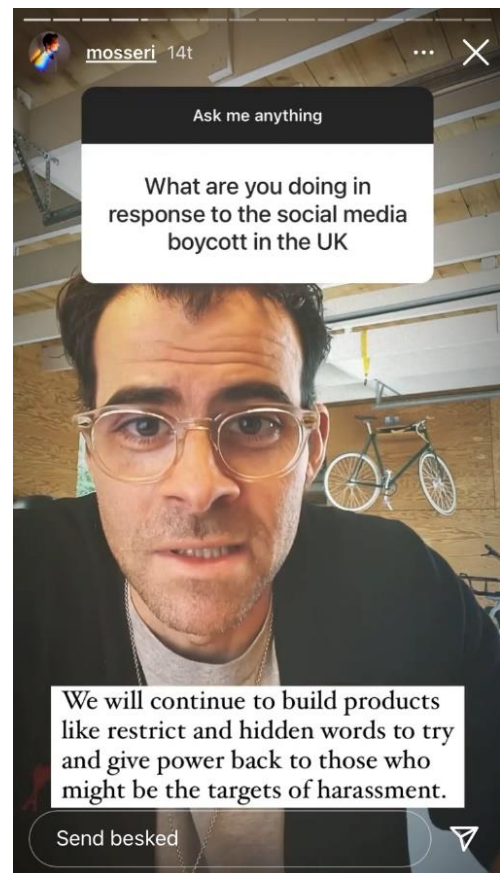
Besides the social media platform is increasingly being seen as a pragmatic platform for interaction especially among young people, the platform can also be seen as a medium where young people can amplify their voices, foster connections as well as stay in touch (Gruner, 2016). Thus, there are good and bad aspects in relation to social media. Young people can more freely express themselves, and a moderate level of time online can be good, but a high use of social media may have consequences such as being able to regulate emotions, creativity and moral evaluation.

In a Stories post on Instagram, Mosseri urges his users to ask him anything on April 30, 2021, and one of the questions relate to a social media boycott in the UK among various sport teams due to several players experiencing online hate such as racism, aggression and online trolling (BBC, 2021). The Head of Instagram answers the question by saying the company will continue to try and protect the creators, i.e. the users, on their platform by fostering a safe environment to express oneself. This can be done by continuing “to build products like restrict and hidden words to try and give power back to those who might be the targets of harassment.” (picture 8)

This move towards building products into Instagram may be considered as a late response to the overall negative consequences of habitual usage of social media and its

affordances as well as a response to accusations made in the film “The Social Dilemma”. It can also be evolutionary in the sense that they react to what the public wants and adapt to changes in society to survive in a highly competitive environment.

As mentioned earlier, the context of media usage is important. Mood, engagement and so on are perhaps important perimeters in relation to young users. Gruner (2016) mentions that if students are provided access to multiple platforms of media, which can give an overabundance of ideas, it can in turn diminish creativity and instead give rise to uncertainty and increase competition.



**Picture 8**

Moreover, young people can easily be affected, and the Cultivation Theory mentioned in the research of Gruner (2016) suggests that overall, the increased usage of social media can alter individuals' perspective on others, i.e. how they look at them and their opinions and their behaviour towards other people. Social media platforms can potentially enforce stereotypes and restructure how individuals make certain decisions and solve problems, which echoes how filter bubbles and echo chambers work (Burr et al., 2018).

The lack of focus on possible negative consequences of social media platforms, which is an issue brought up in the film "The Social Dilemma", is also something Instagram comments on – here in relation to the US election in 2016 and the spread of misinformation on Facebook, which Instagram is also accused of in the 2020 election (Guthrie, 2020): "It took us too long to focus on the negative that can come of connecting so many people at scale", says Mosseri, which was Head of Facebook's News Feed during the US election in 2016.

Furthermore, Mosseri directly comments on the film "The Social Dilemma" and the accusations made in the film concerning platforms being designed to be addictive, as well as the online bullying concerning young users.

"The film [The Social Dilemma] was very one-sided and a bit sensational. What we are trying to do is make the best out of someone's time. We try and make sure that what we do is valuable to people. We try to show you what you are most interested in. We are not trying to make someone addicted. I think that the film took some of the characterisations too far, but honestly there are a lot of really important issues that are brought up that are a good thing" (Guthrie, 2020).

Moreover, Mosseri appears to take the responsibility seriously about being a big organisation and taking privacy issues as well as the algorithmic ranking on their shoulders. He admits the way their algorithm works and ranks various posts essentially affects people and the company is "expressing some sort of value judgment. We are valuing relevancy" (Patel, 2021). Therefore, Instagram must show caution, since they do not know what matters and what is relevant for users, so "we have to use proxies, and those proxies can be gamed and they can lead to problematic outcomes" (Patel, 2021). However, in the end Instagram is also a business with commercial interests, which makes it hard for the user to know what the platform's intentions truly are.

Furthermore, Mosseri acknowledges a lot of the media criticism towards Facebook are merited, since the company reacted too late to some of the issues. However, he believes Facebook as a parent company to Instagram has shown unprecedented commitment to correct the problems and he thinks this should be recognised.

“We invest more than anybody else does in these problems,” he says. “You can disagree with specific policy decisions or enforcement decisions. But people who accuse us now of not having good intent, of not actually trying to take our responsibility seriously and not investing appropriately to fix those challenges, are just not looking at the actual facts.” (Byers, 2020)

The constant encouragement of continuous connectedness from social media platforms raise concerns regarding users’ mental health in relation to dealing with information overload or connection overload (Lupinacci, 2021). This aspect is particularly relevant in relation to young users, since they may be more susceptible to the pressure from social media due to their developing adolescence years.

There is also a feeling of anxiety tied to the usage of social media relating to unsettledness produced by social media platforms (Lupinacci, 2021). The apparent infinity of content streams creates a state of constant attentiveness, which then prompts users to stress-scroll. Young users can get the feeling of missing out by not checking their social media accounts which can prompt the feeling of anxiety. There is also a fear of not having something to talk about with your friends and a need to feel included, which young users fulfil by knowing what is going on at social media platforms at any time, all the time.

Besides anxiety, Instagram also affords a feeling of reassurance, a way to be a part of a community, which is an aspect the company strives to promote and achieve. The feeling of belonging somewhere is important for young people and being validated in their feelings, and Instagram can promote the feelings of belonging and connectivity.

Going forward and moving on from the film “The Social Dilemma” and the US election 2020 where the administration changed to the Democrats, Instagram and Mosseri are especially looking forward to what the guidelines will be regarding what is allowed in terms of content on social media platforms. “You have to be careful because if you go too far, you start censoring people. If



you don't go far enough, you have safety issues. It's a really delicate balance there" (Patel, 2021). This especially relates to talks of an overhaul concerning Section 230 of the Communications Decency Act in the US, which can make social media platforms liable for content posted on their platforms. As Mosseri says, "It creates an incentive for platforms to take a much more aggressive stance and all sorts of speech issues, which can lead to some censorship" (Boorstin, 2020).

### Limitations

This thesis does not aspire to be exhaustive in any way or determine what is right or wrong in terms of how social media companies are run. I choose to perform an analysis of a single service, but there are certain limitations in this regard. Researchers tend to overstate the implications of social media, such as overemphasising ways social media platforms can lead to behavioural changes in users (Lomborg, 2017). Nonetheless, I could have included the whole social media market, but I choose to focus on Instagram to have a clear focus while still aiming to maintain an overview of the general marketplace of social media platforms. I risk losing a sense of the whole market by just focusing on one platform, but due to time and page limitations, the focus remains on Instagram, where I try to compensate by still looking at some of the other platforms and how they influence each other.

A focus on polymedia can thus be an interesting aspect, which is the use of several platforms to communicate depending on users' relationship (Sinanan & McDonald, 2018). This study focuses on one platform but to have taken it further, use of polymedia can be attractive. It constitutes social relationships, which also links somewhat to affordances and the environment and what the environment affords its users and what users choose to do with these affordances as well as the platform being relational.

In relation to the chosen methods, the limitations of the walkthrough method pertain to a lack of user content, activity and attitudes from other than the researcher, which can be lessened with a supplement of app reviews, news articles or discussions from users online. Interviews from users as well as user-led walkthroughs can provide further insight into how various users engage with Instagram.

Other methods could have been used in the analysis of Instagram with thereby different outcomes. The media go-along method combines interviews and participant observations to

understand how users use personal mobile media with a focus on affordances, communications and representations (Møller & Robards, 2019).

Another option could have been the scroll back method focusing on historical digital traces and capture them over time (Møller & Robards, 2019). This method is then designed to study social media disclosure changes over time involving participants to reflect on the longitudinal nature of social media.

Furthermore, a lot of the research and scholarship done on social media research have mainly been with a focus on US context, which is not surprising considering the Anglo-centric bias across neighbouring academic fields (Burgess et al., 2018). Moreover, many social media technologies originate from the US, more specifically Silicon Valley, which includes platforms such as Facebook, Twitter, Snapchat, YouTube and Instagram, which can limit the understandings of social media technologies since a lot of the studies are generalised to English-speaking contexts as well as limited to so-called WEIRD populations – residents in Western, Educated, Industrialised, Rich and Developed nations, which is not representative of the whole world (Burgess et al., 2018).

Social media platforms or generally just the application market can be difficult to research because they are habitually updated, which means some things being analysed may run the risk of being outdated while writing. Moreover, the technological innovation of apps mainly takes place in private commercial operations, where there often is limited access to a complete market overview (Thylstrup & Veel, 2020).

## Conclusion

Essentially, Instagram are affecting the behaviour of their users and more generally, all social media platforms are in some ways changing users' behaviours. They are doing it by developing platforms that constitute and support a sense of flow for the users through the affordances of being entertained, sociality and loss of time among many other things. Moreover, they hook their users by creating platforms where users can feel a sense of control and an experience of being intrinsically rewarded, which also leads to users being habituated to continue use of Instagram and similar platforms even though users have ambiguous feelings towards the use of social media platforms. Users experience Instagram along with other social media platforms as continuous

flows and not as one post after another, which is also discovered in the research by Lupinacci (2021).

Additionally, Instagram are a part of changing the global culture (Constine, 2018). The company provides a platform where non-artists can feel creative, let people give their friends a window into their world and daily lives as well as engendering empathy and friendship (Constine, 2018).

Instagram prescribes to the first perception of social media as put forward by Stevenson (2018), as a productive bottom-up community and organic social networking platform where users can express themselves and freely be who they are. Whereas some critics prescribe to the other perception of the company as being a tool to further increase the media power of celebrities, other media actors and institutions (Stevenson, 2018), which is done through their business model with advertisements bought by marketers.

Social media platforms generally have a convenient strategy of generating interest through a perpetual potential eventfulness where every moment has the possibility to become a historical event. Although, it is often nothing more than an ordinary moment. However, the possibility of providing or just watching a monumental moment is enough to drive the engagement of users (Lupinacci, 2021).

Moreover, as it is stressed in many articles, the flux is the constant when it comes to social and mobile media, and it is replicated at an intensified scale and ubiquity (Lupinacci, 2021). In broadcasting, the sequence of flow is done through scheduling and programming, in social media it is dependent on algorithmic systems.

In relation to affordances, Instagram provides users with several social and communicative affordances such as sociality, exploring new things, escapism, arousal through the more technical affordances of features and buttons. Through Instagram's choice architecture, they create a flow state while using the platform through cultural techniques such as the grid, the heart and scrolling. This is important in relation to remembering that social media does not map out a social reality in real life, but it does establish a kind of social reality through the offering of means that users can perform certain activities recommended by social media platforms (Couldry & Kallinikos, 2018).

The way the social media platforms generate revenues signify the asymmetrical power and capabilities between user and social media platforms. Instagram generates revenue by aggregating and clustering the habits of individuals into groups, categories or profiles operating within a commercial context. Instagram is a subsidiary of Facebook Inc. and their primary revenue source is advertisements, since approximately 98% of their total revenue stems from advertising. The success of the companies hinges on their ability to add, retain and engage active users (Facebook, 2021) and continue to be relevant for users across the globe.

Lastly, the platform's design choices can have altruistic intentions, i.e. to provide a place to escape and fulfil their mission and vision, but it can also have commercial intentions of keeping their operating model sustained by gathering data to perform targeted advertising. The habitual usage of Instagram seems to be accomplished through the habituation process, where users habituate to the stimulus and they begin to expect the unexpected.

## Bibliography

- Apple, A. S. (2021). *Instagram App Store Prereview*. Retrieved from Apple App Store: <https://apps.apple.com/dk/app/instagram/id389801252>
- Baym, N. (2015). Social media and the struggle for society. *Journal of social media + society*, pp. 1-2.
- Baym, N., & boyd, d. (2012). Socially mediated publicness: an introduction. *Journal of broadcasting and electronic media*, pp. 320-329.
- BBC. (2021, May 1). *Social media boycott: Prince William and British sport taking action over online abuse*. Retrieved from BBC Newsround: <https://www.bbc.co.uk/newsround/56940024>
- Beard, K. S. (2015). Theoretically speaking: an interview with Mihaly Csikszentmihalyi on flow theory development and its usefulness in addressing contemporary challenges in education. *Educ Psychol Rev*, pp. 353-364.
- Blystone, D. (2020, June 6). *The Story of Instagram: The Rise of the #1 Photo-Sharing Application*. Retrieved from Investopedia: <https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp>
- Boorstin, J. (2020, November 12). *Instagram's Adam Mosseri confirms ads are coming to Reels and defends Facebook's 2020 election response*. Retrieved from CNBC: Tech: <https://www.cnbc.com/2020/11/12/instagram-head-adam-mosseri-on-reels-ads-e-commerce-2020-election.html>
- boyd, d. (2010). Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. *Networked Self: Identity, Community, and Culture on Social Network Sites*, pp. 39-58.
- boyd, d., & Ellison, N. (2008). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, pp. 210-230.
- Bucher, E., & Fieseler, C. (2017). The flow of digital labor. *new media & society*, pp. 1868-1886.
- Bucher, T., & Helmond, A. (2018). The Affordances of Social Media Platforms. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 233-253). London and New York: SAGE Publications Ltd.
- Bulygo, Z. (2021). *Entrepreneurial lessons from Instagram co-founder Kevin Systrom*. Retrieved from Neil Patel Blog: <https://neilpatel.com/blog/kevin-systrom/>
- Burgess, J., Byam, N., Bucher, T., Helmond, A., John, N. A., Nissenbaum, A., . . . Craig, D. R. (2016). Platform studies: the rules of engagement. *Panel presented at AoIR 2016: The 17th Annual Conference of the Association of Internet Researchers*, pp. 1-14.
- Burgess, J., Marwick, A., & Poell, T. (2018). Editors' introduction. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 1-10). SAGE Publications Ltd.
- Burr, C., Cristianini, N., & Ladyman, J. (2018). An analysis of the interaction between intelligent software agents and human users. *Minds and Machines*, pp. 735-774.
- BusinessOfApps. (2021, March). *Instagram Revenue and Usage Statistics (2021)*. Retrieved from Business of Apps: <https://www.businessofapps.com/data/instagram-statistics/>

- Byers, D. (2020, March 11). *Instagram head Adam Mosseri on how Facebook protects Instagram from scrutiny: "We have been able to learn from some of Facebook's mistakes," Mosseri said in an interview on NBC News' Byers Market podcast.* Retrieved from NBC News: <https://www.nbcnews.com/tech/social-media/instagram-head-adam-mosseri-how-facebook-protects-instagram-scrutiny-n1154556>
- Caliandro, A., & Graham, J. (2020, April-June). Studying Instagram beyond selfies. *Journal of Social media + society*, pp. 1-7.
- Coggan, G. (2020, November 13). *Instagram launches risky redesign - and users aren't happy.* Retrieved from Creative Bloq: <https://www.creativebloq.com/news/instagram-redesign-unhappy>
- Constine, J. (2016, June). *Facebook puts friends above publishers in "News feed values" and ranking choices.* Retrieved from Tech Crunch: <https://techcrunch.com/2016/06/29/facebook-news-feed-change/>
- Constine, J. (2018, September). *Why Instagram's founders are resigning: independence from Facebook weakened.* Retrieved from Tech crunch: <https://techcrunch.com/2018/09/24/instagram-founders-leave/>
- Couldry, N., & Kallinikos, J. (2018). Ontology. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 146-159). SAGE Publications Ltd.
- Crunchbase. (2021). *Crunchbase: Organization: Instagram.* Retrieved from Crunchbase.com: <https://www.crunchbase.com/organization/instagram>
- Csikszentmihalyi, M. (1990). *Flow: the psychology of optimal experiences.* New York: Harper and Row.
- Csikszentmihalyi, M. (2021, February 20). *Adolescence.* Retrieved from Britannica: <https://www.britannica.com/science/adolescence>
- Dictionary, C. (2021). *Meaning of teenager in English.* Retrieved from Cambridge Dictionary: <https://dictionary.cambridge.org/dictionary/english/teenager>
- Facebook, I. (2021, January 27). *Form 10-K Facebook Inc: Annual report [Section 13 and 15(d), not S-K Item 405].* Retrieved from SEC.report - Facebook Inc. - Form 10-K: <https://sec.report/Document/0001326801-21-000014/>
- Faulkner, S., Vis, F., & D'Orazio, F. (2018). Analysing Social media images. In J. Burgess, & A. P. Marwick, *The SAGE Handbook of Social Media* (pp. 160-178). SAGE Publications Ltd.
- Fuchs, C. (2010). Labor in informational capitalism and on the internet. *The Information society*, pp. 179-196.
- Gillespie, T. (2018). Regulation of and by platforms. In J. Burgess, & A. P. Marwick, *The SAGE Handbook of Social Media* (pp. 254-278). SAGE Publications Ltd.
- Groves, P. M., & Thompson, R. (1970). Habituation: a dual-process theory. *Psychological Review*, Vol. 77 No. 5, pp. 419-450.
- Gruner, D. T. (2016). New digital media and flow: a study of experience. *Creativity. Theories - Research - Applications*, pp. 343-362.

- Guthrie, S. (2020, October 6). *Health & Wellness: Head of Instagram: 'We should have started earlier' to combat foreign interference*. Retrieved from TODAY: <https://www.today.com/video/head-of-instagram-we-should-have-started-earlier-to-combat-foreign-interference-93215301927>
- Hurley, Z. (2019, January-March). Imagined affordances of instagram and the fantastical authenticity of female Gulf-Arab social media influencers. *Journal of social media + society*, pp. 1-16.
- Instagram. (2021). *Tips til forældre*. Retrieved from Hjælp - Center for privatindstillinger og sikkerhed: [https://help.instagram.com/154475974694511/?helpref=hc\\_fnav&bc\[0\]=Hj%C3%A6lp%20til%20Instagram&bc\[1\]=Center%20for%20privatindstillinger%20og%20sikkerhed](https://help.instagram.com/154475974694511/?helpref=hc_fnav&bc[0]=Hj%C3%A6lp%20til%20Instagram&bc[1]=Center%20for%20privatindstillinger%20og%20sikkerhed)
- Instagram, H. C. (2021). *Help Center - Manage Your Account: Delete Your Account*. Retrieved from Instagram, Inc.: <https://help.instagram.com/370452623149242>
- Instagram, I. (2020, December 20). *Terms of Use*. Retrieved from Instagram: <https://help.instagram.com/1215086795543252>
- Instagram, I. (2021). *About: Instagram*. Retrieved from Instagram: <https://about.instagram.com/>
- Kennard, J. (2021, February 1). *TJ Interviews: Instagram co-founder Mike Krieger*. Retrieved from Training Journal: <https://www.trainingjournal.com/articles/interviews/tj-interviews-instagram-co-founder-mike-krieger>
- Klemons, J. (2020, Fall). *Evolution of Instagram: a timeline of new featured and major milestones*. Retrieved from reverbal communications: <https://www.joshklemons.com/blog/evolution-of-instagram>
- Lerman, R. (2021, April 15). *What's not to like? Instagram lets users hide 'like' counts on posts*. Retrieved from The Washington Post: <https://www.washingtonpost.com/technology/2021/04/15/hiding-instagram-likes/>
- Light, B., Burgess, J., & Duguay, S. (2018). The walkthrough method: an approach to the study of apps. *new media & society*, pp. 881-900.
- Lomborg, S. (2017). A state of flux: Histories of social media research. *European journal of communication*, pp. 6-15.
- Lomborg, S., Thylstrup, N. B., & Schwartz, J. (2018). The temporal flows of self-tracking: Checking in, moving on, staying hooked. *new media & society*, pp. 4590-4607.
- Lupinacci, L. (2021). 'Absentmindedly scrolling through nothing': liveness and compulsory continuous connectedness in social media. *Media, Culture & Society*, pp. 273-290.
- Marwick, A. (2018). Silicon Valley and the social media industry. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 314-329). SAGE Publications Ltd.
- Møller, K., & Robards, B. (2019). Walking through, going along and scrolling back. *Nordicom Review*, pp. 95-109.
- Norman, D. (1990). *The Design of Everyday Things*. New York: Doubleday Business.
- Orlowski, J. (Director). (2020). *The Social Dilemma* [Motion Picture].

- Patel, N. (2021, January 19). *BANNING PRESIDENT TRUMP WAS THE RIGHT DECISION, SAYS INSTAGRAM'S ADAM MOSSERI: The head of Instagram on where social media goes from here*. Retrieved from The Verge: <https://www.theverge.com/22237648/instagram-adam-mosseri-interview-trump-ban>
- Petrychyn, J. (2021). Masturbating to remain (close to) the same: sexually explicit media as habitual media. *Leisure sciences*, pp. 138-142.
- Qiu, J. L. (2018). Labor and social media: the exploitation and emancipation of (almost) everyone online. In J. Burgess, J. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 297-313). SAGE Publications Ltd.
- Rankin, C., Abrams, T., Barry, R., Bhatnager, S., Clayton, D., Colombo, J., . . . Wu, C.-F. T. (2009). Habituation revisited: an updated and revised description of the behavioral characteristics of habituation. *Neurobiology of learning and memory*, pp. 135-138.
- Rogers, R. (2018). Digital methods for cross-platform analysis. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 91-110). Sage Publications Ltd.
- Schüll, N. D. (2012). *Addiction by Design - Machine Gambling in Las Vegas*. Princeton University Press.
- SEC, t. U. (2021). *FB : Facebook Inc: SEC CIK 0001326801: Ticker: FB*. Retrieved from SEC report: <https://sec.report/Ticker/FB>
- Sehl, K. (2021, March 9). *The top Instagram updates you need to know: March 2021*. Retrieved from Hootsuite: <https://blog.hootsuite.com/instagram-updates/>
- Sherry, J. (2004). Flow and media enjoyment. *International Communication Association*, pp. 328-347.
- Simon, E. (2021, February 7). *How instagram makes money*. Retrieved from Investopedia: Stocks: Top stocks: <https://www.investopedia.com/articles/personal-finance/030915/how-instagram-makes-money.asp>
- Sinanan, J., & McDonald, T. (2018). Ethnography. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 179-195). SAGE Publications Ltd.
- Smythe, D. W. (1977). Communications: Blindspot of western marxism. *Canadian Journal of Political and Social Theory*, pp. 1-27.
- Soror, A., Steelman, Z., & Turel, O. (2021). Exhaustion and dependency: a habituation-sensitization perspective on the duality of habit in social media use. *Information technology and people*, pp. 1-29.
- Statement, M. (2019, June). *Instagram Mission and Vision Statement Analysis*. Retrieved from Mission Statement: <https://mission-statement.com/instagram/>
- Statista. (2021). *Distribution of Instagram users worldwide as of January 2021, by age group*. Retrieved from Statista: Internet>Social Media & User-Generated Content: <https://www.statista.com/statistics/325587/instagram-global-age-group/>
- Stevenson, M. (2018). From hypertext to hype and back again: exploring the roots of social media in early web culture. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 69-88). SAGE Publications Ltd.



- Szczerbicki, E., & Nguyen, N. T. (2010). *Smart Information and Knowledge Management*. Springer.
- Thurlow, C. (2018). Digital discourse: locating language in new/social media. In J. Burgess, & A. P. Marwick, *The SAGE Handbook of Social Media* (pp. 135-145). SAGE Publications Ltf.
- Thylstrup, N. B., & Veel, K. (2020). Dating app as a mediating technology of organization. In T. Beyes, R. Holt, & C. Pias, *The Oxford Handbook of Media, Technology, and Organization Studies* (pp. 1-13). Oxford University Press.
- Vaidhyanathan, S. (2018). The incomplete political economy of social media. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 213-230). SAGE Publications Ltd.
- van Dijck, J., & Poell, T. (2015, July-December). Social media and the transformation of public space. *Journal of social media + society*, pp. 1-5.
- Wallaroo. (2021, February 6). *TikTok Statistics – Updated February 2021*. Retrieved from Wallaroo Media: <https://wallaroomedia.com/blog/social-media/tiktok-statistics/>
- Wilken, R. (2018). Social media app economies. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 279-296). SAGE Publications Ltd.