



Selfie Drones

A Consumer's Perspective

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Abstract

The act of taking a selfie has become a ubiquitous social phenomenon and the selfie drone is a new technology that offers the possibility to take a new form of selfie, from above. Given how recent the selfie drone is in the market, the aim of the research was to determine consumers' perspectives on the new technology in order to assess its potential for adoption and determine how marketers can use this information in their branding efforts.

The first step of the research consisted in understanding the significance of selfie-taking practices, particularly in the lives of millennials. This group was chosen to be the main focus of the research as they were identified as the most involved in selfie-taking practices and exhibited behaviour closely related to the activity including their extensive use of smartphones and social media.

A qualitative research approach was applied through a focus group, in-depth interviews as well as netnography to explore consumers' motives and obstacles towards the adoption of selfie drones, presented here as a new technology. The findings revealed that millennial consumers appeared to be particularly engaged in selfie-taking activities, which they regarded overall as a positive tool in terms of communication and personal self-enhancement. Furthermore, consumers expressed both positive and negative perceptions towards selfie drones with regards to the products' usage situations and features.

After having analysed the current communication efforts of specific selfie drone companies, the findings were then used to establish marketing insights for the selfie drone industry to implement possible branding strategies. This was done in order to show how to effectively leverage the market potential for selfie drones. These included strategies specific to increasing brand awareness for a high involvement new technology type product in the early stages of its product life cycle and diffusion, such as influencer marketing and word of mouth marketing.



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1. Introduction

Google estimated the number of selfies taken everyday, in 2014, at 93 million (Brandt, 2014, in Kedzior & Allen, 2016, p. 1893). Selfies have been deemed a new and important form of communication reflecting the expression whereby *“a picture is worth a thousand words”* (Murphy, 2015). It appears that selfie-taking has become an integral, everyday practice for many consumers. The emergence of the so-called selfie drones offer the potential to tap into this new phenomenon of consumer behaviour and has been chosen as the research object of this study. Hereby, selfie drones can be described as a consumer version of a standard drone or unmanned aerial vehicle, mounted with a camera, for personal use.

Drones have attracted extensive media attention for their recent applications in various commercial and humanitarian contexts, thus triggering general public interest. However, the emergence of selfie drones has been met with minimal mainstream news coverage and little research has been conducted within this field, particularly with regard to the consumer. Given the potential for these devices to generate widespread interest and their potential appeal to selfie-taking enthusiasts, the following research will attempt to uncover consumers’ perspectives on the matter. The interest lies in unveiling consumers’ first hand impressions of the new technology and detect the extent of its ability to contribute to a change in the visual and social landscape as we know it.

1.1 Research Question

When buying a product, consumers are essentially purchasing *“a complex bundle of benefits that aim to satisfy your needs”* (Claessens, 2015). The aim of this project is to understand what selfie drones can offer consumers and how the latter respond to these products in terms of the way their needs can be met or how new wants or desires may possibly emerge.

According to Rowley (2002), marketing communications are key in *“creating the existence of a product or service, building relationships, and creating mutual value with customers”* (Hassan et al., 2014, p. 263). It is the marketer’s role to be in tune with its audience in order to provide an offering that can be of mutual value. To be able to achieve these goals, marketers need to understand the consumers and their complex needs, wants and desires in light of their identity projects (Arnould & Thompson, 2005).



This culturally sensitive approach will enable this project to discover the selfie drone market potential with regard to selfie-taking millennial consumers.

This research project aims to collect in-depth consumer knowledge in order to provide academically footed branding advice to selfie drone companies. To formalize this endeavour, the following research question has been formulated:

How can selfie drone companies leverage consumer insights to effectively adapt their branding strategies to the market?

In order to thoroughly answer this research question, the following sub-questions have been developed. These have been designed to explore consumer perceptions towards selfie-taking and selfie drones as well as the current branding efforts of selfie drone companies.

- *How do consumers perceive selfie-taking and how may this impact their perception of selfie drones? How may selfie drones in turn influence consumers' perception of selfie-taking?*
- *How do selfie drone companies currently market themselves?*

By answering these questions, this study will attempt to acquire rich consumer insights that, when used in combination with the knowledge from current selfie drone companies' branding strategies, will help identify key findings and their managerial implications. This research aims to reveal consumers' perceptions on selfie drones by also investigating and interpreting their behaviours.

1.2 Delimitation and Choices

This study will specifically explore end-consumers' perceptions of selfie drones. Camera drones already benefit from an increasingly important demand for business-to-business (B2B) purposes (Desjardin, 2016). Focusing on B2B contexts would have required in-depth research with businesses, which was considered to be beyond the scope and feasibility of this project given the time constraints. The focus was therefore placed on the consumer applications of the product and their associated perceptions. This allowed a concentration of the resources to be placed on understanding consumer motives and

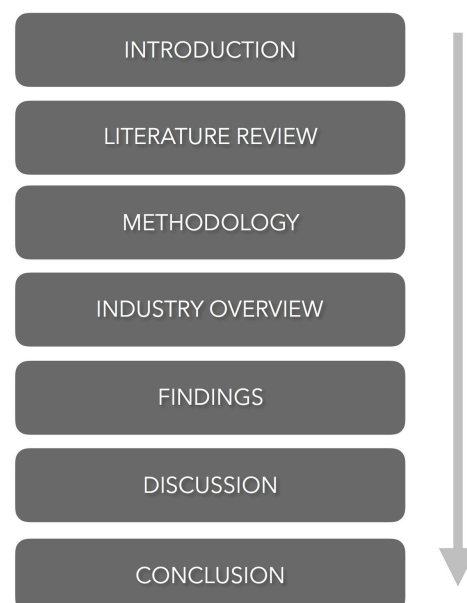


identity projects in-depth. Moreover, the selfie drone companies were also considered pivotal in order to gain a comprehensive understanding of the product's current presence in the market. It was deemed essential to comprehend consumer insights in light of the brands' current marketing efforts.

Moreover, millennials were chosen as the focus of the research since they were identified to be heavy selfie-takers (Taylor, 2014) and thus appeared to be a relevant consumer group for devices that are branded as “*selfie*” drones.

1.3 Structure of the study

This research project is structured into seven consecutive chapters.



Source: Own Illustration

The **Introduction** presents the research topic, defines the main research question and clarifies the choices made by the researchers with regard to the project in hand.

The **Literature Review** has three main parts: the first one focuses on the concept of selfies as well as selfie drones, the second on relevant literature related to the adoption and diffusion of new products and technologies, and the third addresses different marketing strategies to increase brand awareness and influence consumer perception.

The **Methodology** explicates the chosen research methods, the techniques used for the data analysis as well as the research quality assurance and the ethical considerations applied throughout the research.



The **Industry Overview** provides an impression of how selfie brands currently market themselves.

The **Findings** section presents the results of the data analysis. This part is divided into three main parts: the first two parts focus on the perception of selfies and selfie drones expressed by consumers, and the last part briefly summarizes opinions on the industry obtained from interviews with experts.

Lastly, the **Discussion** part will interpret the data from the findings and examine them in light of the theoretical grounding. Concrete branding advice will be developed in this chapter for selfie brand companies to consider.

The **Conclusion** section will then answer the research question based on the findings and discussion of this study. It will also present limitations to this project and lay out possible future research.



2. Literature Review

2.1 What is a selfie?

A selfie is defined as a “*photograph that one has taken of oneself, typically one taken with a smartphone or webcam and shared via social media*” (OxfordDictionnaries.com). The term was coined Word of the Year in 2013 by the Oxford Dictionaries due to its rise in popularity and 17,000% increase in frequency from 2012 to 2013 (ibid). It is described as a form of photography that is casual, instantaneous and made with the intention of being seen by others, known or unknown, within a social network (Saltz, 2014).

2.1.1 Historical context

Despite the word being a recent addition to the English language, the phenomenon itself has been traced back to as early as the 19th century, when Robert Cornelius, chemist and photography enthusiast, took a photograph of himself in front of the family store, in 1839 (Illustration 1) (Weng, 2016). Capturing the correct lighting, choosing the correct exposure time and lense was considered at the time to be a technological prouesse because of the sensitivity of the daguerreotype camera (Barger & White, 1991). According to Dinius, “*photographic self-portraiture was born from the technological limitations of photography’s origins in the nineteenth century, not from twenty-first century digital innovations in the medium that have made it seemingly ubiquitous*” (2015, p. 446). In other words, the technology required extensive exposure times which made it possible for Cornelius to sit still in front of the lense and capture himself.



Illustration 1
Source: Weblink 1

Self portraits, dating back far beyond the invention of photography, have also been considered a former type of selfie, using paint and a mirror as the medium for



representing oneself. Portraits by artists including Van Gogh and Rembrandt were classified by Johanesen, Vice President of the popular digital news platform BuzzFeed, as two of the “*Most Important Selfies of All Time*” (2013). They are considered to be the pioneers of selfies, dating back to as early as the 16th Century (ibid). Artist Parmigianino’s *Self Portrait in a Convex Mirror* (1523-1524) renders a piece of art that closely includes features of a typical **modern selfie**. These comprise his lengthened arm and distorted facial features taken at an odd angle (Saltz, 2014). Famous Mexican painter, Frida Kahlo, is another example of an artist who is deemed to have contributed to the popularity of the concept of self-representation (ibid).

Artists took extensive time in recreating their image, similar to how selfie-takers have been described as manufacturing their image to produce a flattering representation of themselves (Weng, 2016). Andy Warhol was also considered to be a precursor of the selfie-taker through his popular shots in the 1970s with the Polaroid camera when it first became available (Lourantos and Kyriazopoulos 2015). In a historical context, selfies have been associated with the concept of snapshot photography that represents spontaneity and authenticity in moments of leisure (Iqani & Schroeder, 2015).

2.1.2 Technological Advancements

Far from the paintbrush and canvas, today, the ideal selfie, described by Elizabeth Day, is one that is taken from a smartphone tilted at a 45-degree angle above eye-line with an important source of light, a slight tilt of the head with a doe-eyed expression, followed by the use of a filter to achieve the most flattering shot (2013). Technological advancements have allowed the photo-taking process to shift from a skilled activity to one available to the general consumer. This shift was first made possible with the introduction of the digital camera, making the manipulation of the image **instantaneous** (Weng, 2016). Other technological advancements ranging from timers all the way to selfie sticks have also contributed to the ease of selfie-taking (ibid). The game changer that sparked an intense rise in the selfie phenomenon was the release in 2010 of the first front-facing camera on Apple’s iPhone (Lourantos & Kyriazopoulos, 2015). This new feature, coupled with the **emergence of social media platforms** that encouraged users to upload photos, created a favourable environment for the boom of the selfie. The selfie is thus a phenomenon that has been driven by technological advancements,



facilitated by the aggregation of digital and networking sites all in one mobile device (Kedzior & Allen, 2016).

2.1.3 Selfies: a societal phenomenon

It is only since the recent technological advances that the selfie has fully emerged as a societal phenomenon. A more comprehensive definition of a selfie was suggested by Weng (2016, p. 1775):

*The selfie is a self-expressive photograph featuring the photographer as the primary individual in relation to any secondary products in the background that is **consciously created**, modified and shared with others to varying degrees, conditional on the dynamic interaction between the personal and situational factors present and facilitated by technology.*

Its diffusion is undeniably linked to the rise in popularity of photo-sharing platforms including Facebook and Instagram (Weng, 2016). In the cyberspace, “from Tumblr to Instagram, individuals are sharing more than ever before” (Stoller, 2013, p. 8). Research suggests that millennials are those who have taken to the activity the most with over one in two people stating they had already posted a selfie to a social media platform (Taylor, 2014). Millennials can be described as a very large cohort of the population, born between 1980 and 2000 (Goldmansachs.com). They are **digital natives** that share an affinity with technology and are heavy social media users (ibid). This consumer group will be described in more depth at a later stage of this study.

Popular mainstream news outlets often cover selfie related topics, which arguably reflects the ubiquity of the phenomenon. Influential figures including **celebrities** Justin Bieber and Kim Kardashian as well as politicians such as Barack Obama (Illustration 2), and public figures including the Pope have also taken selfies, further propelling the activity to becoming a worldwide phenomenon (Day, 2013).



Illustration 2: Group Selfie, David Cameron, Helle Thorning-Schmidt and Barack Obama
Source: Weblink 2

Saltz coined selfies as a significant addition to art and described the phenomenon as a genre rather than a style, thus affirming that it will last as a form of **self expression**, used by the masses (2014). Colman stated in the New York Times that the selfie *“is so common that it is changing photography itself”* (2010). Art historian Batchen noted that selfies reflected *“the shift of the photograph from memorial function to a communication device”* (Batchen in Colman, 2010, p. 10). Saltz furthers this statement by reaffirming selfies as an art form through the act of making them public (2014). New York Magazine qualifies the phenomenon as a new visual genre that has *“changed aspects of social interaction, body language, self awareness and privacy [...], altering temporality, irony, and public behaviour”* (Saltz, 2014). Selfies have changed the way we communicate with one another, shifting the dialogue from written to visual (Katz & Crocker, 2015). They are an effective means of communication as images are more powerful than words and can capture us in a **dynamic** way, thus reflecting our aliveness (Lourantos & Kyriazopoulos, 2015). On one hand they offer a unique way of bonding with the receiver by means of humorous interaction, majoritarily on SnapChat and on the other hand they also allow the sharing of an **enhanced version** of one’s self, on Instagram mainly (Katz & Crocker, 2015). SnapChat CEO, Evan Spiegel, explains: *“Historically photographs have been used to save really important memories, major life moments, but today, with the advent of the mobile phone and the connected camera, pictures are being used for talking”* (Titcomb, 2015). There has been a visible shift in the way people use photos which explains the popularity of SnapChat, a platform where instant and ephemeral photos can be shared.



In addition to the communicative and connective purpose of selfies, the visual collection of personal experiences and emotions constitute a means of **saving memories** that has been described as *“a source and authenticator of autobiographical acts”* (Smith & Watson, 2010, p. 22). Mobile visual content can be collected to document and archive our past experiences (ibid). The magazine GQ, for example, wrote an article about the way Andy Warhol used selfies as a means of documenting his life, the modern day version of a diary (Braunstein, 2015). Capturing footage through mobile devices enables the capture of everyday experiences to create more vivid memories. These can instantly be shared and allow a connectedness to be formed with the audience (Berry & Schleser, 2014).

2.1.4 Selfies in a Social media context

The selfie is anchored within a network of social media users. Social media can be defined as *“user-based community services where people can construct a public profile, connect with counterparts and share personal experiences and thoughts within the digital community”* (Berezina et al., 2015; Hoffman and Fodor, 2010; Lee et al., 2013 in Cobanoglu 2017, p. 735). Selfies are used as an instant means of visually communicating the context in which we are, with a predetermined concept of who we think we are with a particular audience in mind (Saltz, 2014).

The emergence of social media has led to the creation of **digital identities** whereby people are sharing their lives more than ever before (Stoller, 2013). Instagram is one example of a photo-sharing platform that allows consumers to share photos to their digital timeline, thus contributing to the elaboration of their human brand narrative (ibid). Instagram counts over 600 million accounts (Statista.com, 2016) and over 60% of them are owned by young adults (Pew Research Center, 2016). The use of #hashtags is a means for the user to make his photo easier to find in relation to a particular theme. The #selfie has accumulated over 290 million posts and #me almost 315 million, reflecting the overwhelming use of selfies as a means of interacting with one another (Instagram App, 12/05/2017). There has also been a clear shift from textual to visual content as it is **more engaging** (Pollard, 2015) and easier for the brain to digest in the overcrowded social media space (Rutledge, 2013).



Social media has changed the way individuals behave and has also blurred the lines between private and public, becoming an intrinsic element of our culture (Stoller, 2013). Blogs are a very popular platform, mainly used for self-expression, socialisation and documentation (Bronstein, 2013). They present a way of connecting with people of similar interests in a cyberspace that feels secure, even given the online public nature of the platform (ibid).

2.1.5 What do selfies say about us? Notion of self

According to Presi et al., selfies allow the viewer to attribute certain values and motives to the one taking the selfie (2016), thus offering the potential to gain insights into their social background and status (Barthes, 1970). Selfies not only allow the taker to share public moments, they also invite people into their private environment, making it possible to **connect** with those who are not physically present (Hess, 2015). This has been enabled by mobile devices that have become an integral part of people's daily activities (Presi et al, 2016). They enable the capture of actions that were typically taken at home to be taken outdoors (ibid). Thus, people are able to duplicate themselves, extending their physical presence in both space and time through the use of mobile devices (Sloop & Gunn, 2010), creating a hybrid environment (Souza e Silva, 2006, in Hess, 2015).

Schau and Gilly suggest that our digital representations "*blur the distinctions among the material, the immaterial, the real and the possible*" (2003, p. 401). Additionally, digital platforms allow people to constantly represent themselves to their audiences "*beyond the regional setting*" (ibid, 2003, p. 387). They can **control their identity** by managing the impressions they convey to people, a concept first touched upon by Goffman in 1959 (in Schau & Gilly, 2003). People can choose what they wish to share thus putting forward their desired self, constantly switching between online and offline dimensions (Hjorth & Pink, 2014). The idea of extended self first put forward by Belk has been reassessed with the proliferation of a more visual online world comprised of social media, blogs and vlogs, amongst others. This shift has created the concept of ourselves as "*avatars*". Social media creates a new realm whereby the individual separates from his reality to be his digital self (Belk, 2013).



On the flip side, recent research studies have shown that the act of taking a selfie has been positively correlated with possessing **narcissistic** personality traits (Fox & Rooney, 2015). People are more focused on taking a picture of the moment rather than living in the moment, with hopes of obtaining validation through social media (ibid). People feel the need to prove their activities through photographic evidence (Murphy, 2015). The Hollywood actor and avid selfie-taker James Franco counters these findings stating that selfies are “*tools of communication more than marks of vanity...Mini-Mes that we send out to give others a sense of who we are*” (2013, p. 12). Saltz describes them as “*little visual diaries*” (2014, p. 2) and a form of self-documentation for our own records or to be shared with family as archives of our own experiences (Rettberg, 2014).

Selfies offer the opportunity for individuals to construct their digital human-brand, in an online world, unrestricted by reality (Eagar & Dann, 2016). Different types of selfies exist but the most prevalent one, according to the study conducted by Eagar and Dann on narrative constructs of selfies from online photo-sharing platforms, is the **autobiographical** selfie (2016). These allow individuals to share their experiences to others as a means of communication and transfer of information. Other types include the travel diary selfie that embeds the individual in a particular physical space (*diegesis*) and offers mass appeal even to those that do not know the individual, achieved through the use of a textual narrative and hashtags to provide further meaning (Munar, 2011). Another genre that is worth pointing out is the “*Romance of Togetherness*” selfie that places the individual within a social context with the desire to convey this to his audience (ibid). All genres present a dichotomy between authentic and inauthentic sharing, all contributing to the individual’s digital identity (ibid). There appears to be a combination of “*performance, narrative and audience*” (Eagar & Dann, 2016, p. 1852).

Selfies are considered to be a means of **empowerment** based on the ability to control the way one chooses to represent himself in the digital sphere (Kedzior & Allen, 2016). They offer the photographers a means of controlling their own image, within the realms of the technology’s possibilities. However, another aspect to consider is the increased pressure that one might feel to constantly renew oneself, especially for the younger generation whose identities are linked to their presence on social media (ibid). Individuals become a spectacle to others and are controlled by their **desire to impress**, creating a paradox with the notion of empowerment (ibid). One of the motivations for



posting a selfie on a social media network is to receive instant gratification from peers, which, depending on the feedback received, could have a positive or negative effect on self-esteem (Pounders et al., 2016).

Some authors argue that the predominant reasons for sharing a selfie is to show off or to seek **group acceptance** (Lourantos & Kyriazopoulos, 2015). Therefore, there appears to be a dichotomy between selfies as a form of empowerment and selfies that transfer control to the viewer who has the final say in whether he grants the taker with self validation (Murphy, 2015). As Murray states: *“Popularly regarded as a shallow expression of online narcissism, the selfie is both adored and reviled; yet it flourishes as one of the most effective outlets for self-definition”* (2005, p. 490).

Additionally, Jenna Wortham noted in a New York Times article that people prefer to interact visually and selfies have resurfaced the human element of interaction that had been lost through purely textual exchanges (in Murray, 2005). Professor of media psychology, Pamela Rutledge, explored the selfie phenomenon and reinforced their use as a means of **self-exploration** that is normal for humans that are social beings with an inherent need for social acceptance (2013). They also allow a certain degree of rawness that is far from the idealised and fabricated professional visuals we are exposed to. They may also be considered as imbricated in a wider context that showcases the photographic technique rather than the person (ibid). All are elements that constitute a complex phenomenon that goes beyond the apparent exposure of one’s self for social validation.

2.1.6 Fad or forever?

Recently, the selfie phenomenon has received an extensive amount of criticism due to accidents they have caused. Selfies have been portrayed in the media as being a dangerous activity (Bratskeir, 2016). The quest to take the perfect selfie has led to situations in which people have put themselves in danger and in some cases has led to fatal accidents. Adweek wrote a shock article with the headline: *“Which was more deadly in 2015: shark attacks, or selfies? The answer might surprise you.”* (Cohen, 2016). The answer is selfies. Almost 130 deaths by selfies have been reported since 2014 (Mohn, 2017). The most common cause is falling from great heights (Illustration 3).



Illustration 3: Free Climbing Selfie
Source: Weblink 3

The Russian Government even issued a public campaign to raise awareness of the dangers of taking selfies (Murphy, 2015). This was subsequent to the emergence of an online craze to achieve the most daring selfie leading to what has been described as an extreme selfie subculture (BBC World Service, 2017).

Other new inventions such as **selfie sticks** have taken the activity a step further by placing a smartphone at the end of a rod to take a photo from a wider angle (Weblink 4). Selfie sticks have since been banned in numerous different public places including museums and festivals due to the nuisance they cause. This is where the concept of selfie drones come in. These gadgets could potentially offer a safer way of capturing moments without putting people in danger. What all these selfies have in common is their static photographic nature and the limited span of reach due to the physical limitations of using a hand-held smartphone. Selfie drones directly address this issue by offering consumers the opportunity to take photos and videos of themselves from a distance. To discover the potential for selfie drones with regard to consumer adoption, it is first important to define what exactly the term selfie drone means.

2.2 Defining drones

The word *drone* is originally used for meaning a low, monotonous humming sound and the male of a bee (Weblink 5), resembling elements of what is more recently associated with the word drone: *A remote-controlled pilotless aircraft or missile*. They are essentially flying robots and one of their most recent developments come under the

form of quadcopters that can lift vertically from their four fast-spinning rotors (Weblink 6). Drones were first developed for military purposes, starting with unmanned aerial vehicles (UAV) during World War I, later followed by the Predator that became the public image of drones, shortly after the 9/11 attacks (Dillow, 2014). Drones are originally associated with their application to military operations to launch strikes and conduct surveillance tasks. They have been scrutinised by the public eye for contributing to the threat of the dehumanisation of war and its possible consequences (ibid). Barack Obama's extensive use of the unmanned aircrafts has further contributed to the general unease towards them (Nesta.org.uk, 2017).

In the last few years, drones have received extensive media attention from their development for **commercial purposes**. The New York Times compared drones to computers, stating in 2011 that *"they are here to stay and the boom has barely begun"* (Bumiller & Shanker). Commercial drones are already benefitting industries ranging from real estate and agriculture to media, search and rescue, wildlife conservation and medicine to name but a few (Desjardin, 2016). In 2010, Parrot Drone was introduced at the Las Vegas Consumer Electronics Show as the first smartphone controlled device (ibid) (Illustration 4).



Illustration 4: Parrot Drone
Source: Weblink 7

Since then, the popular global company Amazon recently announced its first successful delivery with the use of a drone (Hern, 2016).

Furthermore, Facebook's Project Wing is also researching ways of providing internet to remote places through the use of drone technology (Pagliery, 2014). In 2014, the Federal Aviation Administration announced they would retract certain regulations for the use of drones for television and cinematographic purposes which shortly led to the



announcement of a Top Gun 2 film starring Tom Cruise alongside drones (Dillow, 2014). These high profile announcements as well as unprecedented technological developments, including drone taxis to be launched in Dubai by the summer of 2017, have attracted major public attention thus furthering general awareness regarding the technology (Morlin-Yron, 2017). However, news outlets have coined these types of inventions as a gimmick with no viable future submitted to uncertain regulations (Smith, 2017). The question is whether this will be the case for selfie drones.

2.2.1 Selfie Drones

A selfie drone can be defined as a drone mounted with a camera used for private purposes, as opposed to commercial ones. Forbes has described them as varying from toys to aerial selfie sticks, but with the potential nonetheless to increase the public support of commercial drones, in a “*carrot-stick-carrot*” approach (Stone, 2017). The technology may be received with a certain amount of **scepticism** as suggested by Yahoo saying that the idea of a selfie drone might seem “*silly*” (Pegoraro, 2017). However, the fact that the Consumer Electronic Show in 2017 had an entire floor dedicated to drones with a significant portion specifically for selfie drones (ibid) arguably reflects the potential growth anticipated for this category. Their prices vary greatly from tens of dollars up to a few thousand dollars for the more sophisticated models (Weblink 8). The well-known GoPro camera, best known for its extreme sport applications, can be mounted onto drones. The company has also recently released its own selfie drone, the Karma (Weblink 9).

Mainstream news outlets including the Financial Times have coined the selfie drone as a “*hit*” (Bradshaw, 2017). This positive news coverage can only further increase general public awareness and help enhance the image of these products (ibid). A recent article in the New York Times also stated that SnapChat was working on its own selfie drone that would allow the company to reach new levels with its current users (Benner, 2017). This venture supports the fact that selfie drones are considered to be the next step in selfie-taking behaviours (ibid).

Selfie drones are becoming more and more available and affordable, as the popular news outlet, The Telegraph, stated that they have “*soared in popularity with models on sale for as little as £40 featuring on many must-have gift lists this Christmas*” (Gosden,



2014). Various different startup companies are entering the market in hopes of capturing the latter. Jess Perez, Marketing Director of the Chinese Selfie Drone company Ehang, states *"there's so much opportunity in the drone industry to respond to what customers need and want"* (O'Brien, 2015). Ehang's Ghost has been used for capturing moments from playing golf to walking down the aisle, whereas for example the AirDog, another selfie drone brand, focuses on extreme sport usage from surfing to skiing. Selfie drones can be used for a plethora of applications (Weblink 10).

By focusing on consumer needs, companies such as Ehang and AirDog have been able to successfully crowdfund to get their products to market. The startup selfie drone industry has attracted millions of dollars in the last few years from venture capital sources (O'Brien, 2015). Other major competitors in the market include DJI, ZeroZero Robotics, Parrot, Rova, Blade, Walkera, Heli-Max and more recently Airselfie (Illustration 5).



Illustration 5: AirSelfie
Source: Weblink 11

Some feature facial recognition and covered propellers (Hover Camera Passport by ZeroZero Robotics (Weblink 12)), tracking systems (Norwegian startup Staaker), a cable device attached to the user (FotoKite) and stabilizing technology. Another example includes Hobbico's C-me drone with an 8 mega-pixel camera and 1080p HD video (Stone, 2017) and others with wifi-connect systems that allow live feed directly to the smartphone (Weblink 13). Polaroid, well known for its on-the-go photo taking, also announced at the CES 2017 that it was launching 3 different selfie drones that promise to capture the public's attention (Stone, 2017). Polaroid President and CEO, Scott W. Hardy stated: *"With the introduction of our US drone line, Polaroid is truly taking the experience of capturing life's most memorable moments to a new level"* (ibid). Front



runner in the market, Chinese company DJI, does not benefit from the same notoriety but may be able to counter this as it has made its selfie drone available in popular stores including Walmart and Target (ibid). There are a multitude of different types of selfie drones available on the market that all offer the possibility of saving and sharing the footage gathered with friends and family and with potentially broader audiences on social media.

2.2.2 Flight Regulations

The regulations that apply for the flight of recreational drones remain unclear. According to the European Aviation Safety Agency itself, the smaller drones are increasingly being used within the European Union, *“under a fragmented regulatory framework”* (Easa.europa.eu). In the United States, the Federal Aviation Administration published a new set of regulations that authorise the use of UAVs under 55 lbs without any pilot license requirements (Faa.gov). Overall, smaller recreational drones benefit from limited regulations but are subject to the basic requirements for the device to always be within the pilot’s eyesight and away from protected areas including private properties, congested areas and airports (ibid). As the devices have the capacity to take photos, they should comply with the basic rules of photography in private and public places, as stipulated in a Danish government website dedicated to drone flight rules (Weblink 14). These Danish regulations provide a commonly found set of rules that exist in multiple countries, albeit with a few variations. These include the following:

- Maximum allowable altitude is 100 meters and you should constantly be able to see the drone.
- Overflight of people is not allowed, and lives and property should not be exposed to danger.
- Distance to the lanes on public aerodromes must be at least 5 km and at military air bases at least 8 km.
- Distance to major public roads and urban areas must be at least 150 m.
- Overflying densely populated areas is not allowed.

It appears that the Danish Air Navigation Act stipulates that all selfie-drone owners must be insured with a number registered to the owner of the drone who must be over 18 years old (ibid). The United Kingdom has issued a Drone Code to set the guidelines for UAV users which are similar to other countries in the EU. In the UK, insurance is not



needed to fly a recreational UAV even though it is recommended. An insurance, available from £35 sterling, would cover the user for any public damages caused to a property or a person (PCadvisor.co.uk). Additionally, UK law is proposing to increase the fine to more than £2,500 for flying over no-fly zones and making it obligatory to register all drones over 250 grammes (Caa.co.uk). Moreover, according to the Directorate General for Civil Aviation (DGAC), France has forbidden the use of drones to record people or vehicles and share the footage without the subject's approval. Overall, the rules differ from country to country and are incoherent, making it assumingly difficult for users to fully comprehend what they are accountable for (Easa.europa.eu).

2.2.3 What the future holds

In order for brands to keep up in the fast moving consumer environment, it is important to stay in touch with what consumers are seeking, as they are the driving forces in the economy (Florin et al., 2007). **Individualism** is one of the mega-trends that could allow selfie drones to thrive in the current market. The millions of social media users and bloggers reflect the consumer's desire to be "*seen and heard*" (ibid, p. 221), offering enticing conditions for selfie drones that tap into this particular aspiration, to prosper in time. Forbes is confident in stating that even though talks of selfie drones have been around for a while in the drone community, 2017 promises to be: "*the year that selfie drones finally become available for everyday consumers*" (Stone, 2017).

According to a recent report, consumer drones sales are forecasted to quadruple over the next five years, boosted by decreasing prices from the rise in competition and the new technologies, making them easier to fly for first timers (BusinessInsider.com, 2016). So much so that the term "*selfie*" has been replaced by some with the word "*dronie*" to describe the act of taking a photo or short video of oneself with one of these devices (Amlen, 2014). Selfie drones allow users to take impressive photos that include a much broader backdrop than the ones possible at the moment, even with the extended reach of a selfie stick.

The abundance of available selfie drones of all shapes and sizes with a broad price range have made them more affordable and arguably more appealing to the mass market. Therefore this new technology could potentially be **adopted** by more than just hard-



core drone enthusiasts. The next section reviews literature concerning technology/product adoption and consumption.

2.3 Adoption and Consumption of New Technological Products

In order to later analyze the consumer's thoughts on selfie drones and possible consumption patterns, theory on new product and technology adoption will be reviewed. The most important positivist theories of technology adoption and innovation diffusion will be presented to then advance onto the **cultural influence** on consumer choice that draws a more chaotic picture of the consumer's decision-making process. This literature review focusing on interpretivist theories will aid this research to extract in-depth knowledge of consumers' internal motives and obstacles to adopting new technologies. This will help determine what role selfie drones might play in consumer lives.

2.3.1 Scientific Paradigm

There are two scientific paradigms in social science, the positivistic and the interpretivist paradigm. The interpretivist paradigm roots from the humanistic school of philosophy, whereas the positivist one stands for the traditional beliefs of general observability found in natural sciences (Gummesson, 2000). When reviewing early theories on new technology adoption, the majority of the literature that was found is of a positivistic nature. It was deemed important to review technology adoption and diffusion processes outlined by positivistic theories in order to understand general factors relevant to the spread of new technologies. This research project however aims to discover possible **motives and obstacles** to selfie drone technology adoption, thus trying to discover the "*inner experience of participants*" (Corbin & Strauss, 2008). This will be achieved by using interpretivist theories.

2.3.2 Product Life Cycle

Technology can be described as "*a tool, technique, product, process, physical equipment or method*" that can "*extend human capability*" (Schön, 1967). The selfie drone can be considered a technology if perceived as a tool that helps extend the human capacity to capture footage. Furthermore, its change in application from military to consumer use can be considered radical, creating a technological discontinuity (Kaplan & Trispas, 2008, in Taylor & Taylor, 2012). Selfie drones have entered the "*era of ferment*" in which



there is uncertainty around the product and consumers are unsure about their preferences (ibid). This reflects one entity of the macro technology life cycle. Taking into consideration the S-Curve commonly assigned to technology progression whereby it *“advances slowly at first, then accelerates, and then inevitably declines”* (Foster, 1986, p. 20, in Taylor & Taylor 2012), selfie drone technology arguably finds itself in the early stages whereby products are still being fine-tuned. These are made in response to teething problems that can be addressed early on in order to propel the technology into the acceleration phase where a larger proportion of consumers may be attracted to the product.

Similarly, the Product Life Cycle (PLC) can be considered to understand the current market situation of selfie drones. The Product Life Cycle illustrates the various stages of a product throughout its existence in the market. These include the following: introduction, growth, maturity and decline (Marketing-Insider.eu). The PLC model has been deemed valuable in orienting the strategy of the brands to address the market situation appropriately and anticipate its progression. However, both the S-Curve approach and the Product Life Cycle have received extensive criticism regarding their validity as it is considered difficult to place products within one particular stage of the models (Taylor & Taylor, 2012). Arguably, selfie drones find themselves between the introductory stage and the growth stage of the Product Life Cycle. The industry shows a growing number of competitors with products that are starting to attract more and more customers and other brands are still currently in the launch phase. Additionally, products may not necessarily experience the phases of the concept in a linear way as suggested by the model (Grantham, 1997). Therefore, it is important to keep a flexible approach when considering the Product Life Cycle and its implications for the analysis of the market's adoption of selfie drone technology.

2.3.3 Technology Acceptance Model

The Technology Acceptance Model (TAM) might be of interest to this study, as it provides different dimensions to a product that make it more or less likely to be adopted by its users. The model was originally proposed by Davis in 1986 for the field of Information Technology (IT) and has been empirically validated and extended since. Most early academic work in the field of technology acceptance focuses on products and services that enhance (organizational) productivity (Venkatesh et al., 2012). Later, the



model was also applied to other fields including e-commerce, communication technologies and fashion technology (Gao, 2005; Koufaris, 2002; Lin, 2003). TAM sources many of its basic assumptions from the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975), which is based on social psychology. It describes a person's individual attitudes and more generally, their social norms, to explain acceptance behaviour (Johnson et al., 2014). TAM uses two important attitude constructs which include *perceived usefulness* and *perceived ease of use* of a technology to explain usage behaviour (Davis, 1986). Perceived ease of use describes how **effortlessly** one can use a particular system, whereas the perceived usefulness of a technology describes how the system could enhance the consumer's **performance**. The perceived ease of use has a causal effect on the perceived usefulness (ibid). TAM explains these two important factors that could play an important role in the adoption of the particular technology under scrutiny in this project, the selfie drone. This project does not aim to extend or further validate the TAM. Instead, it takes its two factors (perceived ease of use and perceived usefulness) into consideration when exploring the consumer's thoughts and motives with regard to selfie drone technology.

The original TAM has mostly been used to explain the adoption of technology in an organizational setting, focusing mainly on innovation in the realm of information technology. However, there has been a study on the user acceptance of Facebook that extended the model's application to investigate end users usage behaviour in a non-organizational context (Johnson et al., 2014). Our research on selfie drones will also focus on the end-consumers, outside of an organizational setting, taking the focus away from the realm of the firm to a private context. Especially relevant for this research might be what Johnson et al. (2014) discussed as *perceived playfulness* - an aspect that positively influences perceived usefulness. The hedonic value of the technology (compare van der Heijden, 2004) might thus be a main driver for consumption for selfie drones.

2.3.4 Diffusion of Innovation

There has been a plethora of diffusion theories, but Rogers (1995) was one of the earliest scholars to present a more comprehensive theory for diffusion of innovation (DOI). In this theory, an innovation is considered a practice, idea or product that is perceived as relatively new (Rogers, 2003). Rogers pictures new product adoption as a

process of **communicating** the innovative product through different channels to the members of a social system (ibid). Many scholars have identified different variables that affect the speed of the diffusion of innovation (Chu, 2009; Wejnert, 2002). One set of variables focuses on the differences in individuals that lead to innovation adoption at different stages of the diffusion process (Goh, 2014). Secondly, the characteristics of the diffusion network have also been deemed an important variable (Chu, 2009), for example the role of opinion leaders and their influence on consumer attitudes. A third category of variables is the perceived attributes of an innovation that have an especially influential effect on consumer perceptions and behaviours, leading to innovation diffusion (Rogers, 2003).

Rogers (1995), in his diffusion theory, distinguishes between different groups of consumers based on the adoption timing of an innovation, where the early group convinces the later group to use an innovation. Later, the *Technology Adoption Lifecycle* was introduced advising marketers to increase the different adoption groups consecutively, e.g. innovators, early adopters, early majority, late majority and laggards with specifically tailored marketing and communication strategies (Moore, 1991) (Illustration 6). It seems valuable in this context to explain the five segments in more detail to provide a sense of the differences in consumers and how these differentiations might also be observed in the data collection phase of this research project.

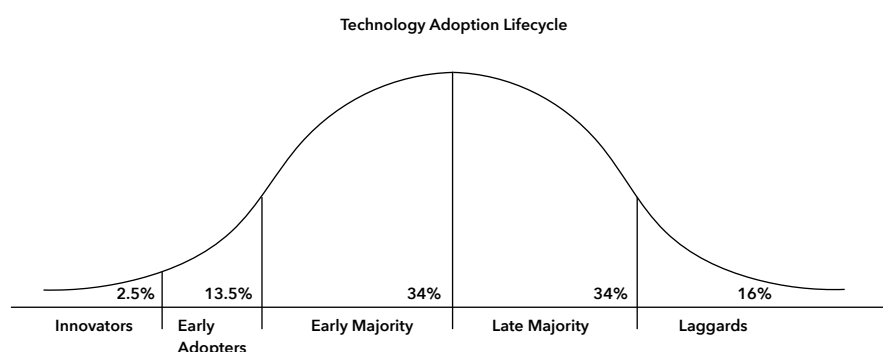


Illustration 6
Source: Own illustration based on Rogers (1962)

Innovators: The innovators are the first key group for any high-tech marketing company, as they are deemed competent to make early evaluations of the technology (Moore, 1991). They are highly interested in the newest products and it is considered important to communicate the complete truth to them (ibid). These consumers are very knowledgeable and therefore their insights could be used to improve a product. They



also want technology that is cheap, as one of their main beliefs is that technology should be free or at least available at low cost (ibid). Communication to this group can be direct (through online channels) and should contain mainly factual information.

Early Adopters: These consumers are visionaries who have a dream which does not entail the technological product itself, but what it enables them to do (ibid). The early adopters often act as opinion leaders that have relevant social ties to further promote the new technological advancement. Other consumer groups follow the example of early adopters because of the benefits of the new technology (ibid) and the cultural expressions (Holt & Cameron, 2010) that they convey when using it.

Early Majority: The consumers in this group have been characterized as pragmatic (Moore, 1991), adopting a product when it has been freed of initial glitches that were discovered by the first two consumer groups. They also generally appear to be more price sensitive than the early adopters.

Late Majority: These are the conservative users that take a long time to trust a new innovation (ibid). They tend to believe in tradition rather than in progress, which makes it hard for a high-tech company to effectively market their products to them. These conservatives can be described as fearful of innovative technology, only using it once it has been thoroughly tested by the previous consumer groups. These consumers like to buy pre-bundled packages where software and hardware immediately work together and no problems occur in usage (ibid).

Laggards: The laggards are generally extremely sceptical of new technologies and are often unwilling to adopt it, even though the technology is widely used (ibid). An interesting aspect of these consumers is their input on why they do not want to use the new technologies.

Valente (1996) connected the different consumer types of innovation adoption to a social network threshold, showing how strong and early exposure to an innovation through a social network might trigger an early adoption behaviour in the consumer. **Opinion leaders** within the social network can play an important role in the process leading to adoption (ibid). Moreover, Holt brings in cultural aspects, where consumers imitate consumption choices from the elite in order to build cultural capital (Holt &



Cameron, 2010). This might also provide interesting insights for the data collection of this research, analyzing the actual motives of consumers using a selfie drone.

Rogers (2003) presents the five stages in the process that lead to the full adoption of a new product: awareness, interest, evaluation, trial and adoption. Within the social system, there are some consumers who adopt new products faster than others, namely the innovators and early adopters. Selfie drones can arguably be classified as a new technology. It is expected that if consumers were to react positively towards selfie drones, e.g. embracing the new selfie drone technology as one of the first consumers, they would be classified as innovators and early adopters according to Rogers' definition.

Fournier and Mick (1998) have criticized the diffusion paradigm for exhibiting the source bias, e.g. emphasizing the manufacturer's point of view of pushing out an innovation instead of placing the consumer's needs, wants and desires into focus. Also, the positivity bias can be observed, such as the assumption that technological advancements are always beneficial (ibid). With their work on paradoxes in technology consumption, Fournier and Mick have considerably deepened academic work on the understanding of the influence of new technology on a consumer's life, paradoxes in perceiving technologies and coping strategies that are employed by consumers. With their findings on **technology paradoxes**, they have also enriched our knowledge on the diffusion curve. Using existing technology paradoxes, they explain how consumers avoid technology in the early stages of the technology diffusion process and only adopt in the late majority/laggard phase (ibid). Moreover, stereotyping the late majority, laggard and rejector consumer groups of the diffusion curve as a homogenous group of technophobes is possibly oversimplifying the matter (Fournier & Mick, 1998). This reveals one of the major weaknesses of the positivistic approaches of innovation adoptions, namely ignoring the inner thought processes and highly diverse motives that consumers have when adopting a new technology.

Together, the TAM, TRA and the Diffusion of Innovations (DOI) (Rogers, 1995) build the groundwork for the Unified Theory of Adoption and Use of Technology (UTAUT) (compare Gimpel, 2011) that provides the most overarching model on technology adoption so far. An important feature that UTAUT incorporates is the **social influence**



that facilitates technology adoption (Venkatesh et al., 2012). However, there have also been studies that focus on exploring non-productive, intrinsic motives to consuming new technological products (Turel et al., 2010). These studies often involve the Theory of Consumption Value.

2.3.5 Theory of Consumption Value

Through the application of The Theory of Consumption Value (TCV), **extrinsic and intrinsic motives** that influence and underlie consumer choice can be discovered (Sheth et al., 1991). In this theory, consumer behaviour is influenced by the following five values: functional, emotional, social, epistemic and conditional values (Hedman & Gimpel, 2010). As the aim of this work will also be to provide practitioners with valuable insights on ways to brand their new technology to end-consumers, TCV appears to provide a suitable academic footing, as it has been previously praised for being highly practice-focused (Gimpel, 2011).

Functional Value: Functionality is often characterized as the most important value that drives consumer choice and focuses on the perceived utilitarian, functional or physical benefit of using a new technology. Economic utility theory is interlinked with the functional value (Sheth et al., 1991) and it assumes economic rationalism, e.g. trade-off between performance and cost (Gimpel, 2011).

Emotional Value: This value encompasses a product's ability to trigger affective states in the consumer and can be measured by a set of feelings that are associated with the product (Sheth et al., 1991). Aesthetics, such as the design of the current iPhone model, can arouse strong positive or negative emotions in consumers and thus influence their product choice (ibid).

Social Value: This value sources its utility from the association of a product with a certain social group, which can have a positive or negative influence on the product evaluation process. Particularly with highly visible products (Sheth et al., 1991) or lifestyle products, the association of a product with a social group often has a strong influence on product choice. This can also be linked to theories supporting the claim that certain brands or products can be linked to reference groups. These social groups, as well as word-of-mouth, transfer meaning to products or brands, which in turn can be



used by the consumer for their self-construal (Bettman & Escalas, 2005). Studies have shown that a consumer's self-brand connections are more likely to occur when a member of the consumer's in-group also uses the brand (ibid).

Epistemic Value: The epistemic value is characterized by providing utility through the curiosity the product triggers, a sense of making new experiences that inspires to learn (Sheth et al., 1991). Epistemic value is likely to be strong with regard to a completely new product arousing curiosity among the consumers. It is only present with existing products and brands when they offer something different to the current market offerings (ibid).

Conditional Value: Conditional value exists for the consumer if the product meets the needs of a specific situation or circumstance (Sheth et al., 1991). The usefulness of an underwater camera when on a Safari trip in Kenya is likely to be much lower than on a skin-diving holiday in the Maldives.

The five consumption values make distinct contributions towards the choice process and are independent from each other (Sheth et al., 1991). In the context of a new technology, such as a selfie-drone, the theory of consumption value and especially the five values themselves might serve well to explore the different motives that consumers have in adopting and using these devices.

It appears important to also see consumption and new technology adoption in the context of social interaction. Yalcinkaya (2008) found that social interactions are a main driver for adoption of new technology and that culture influences how strong its impact becomes. As Pace puts it, "*When there is a discussion around meanings that were once taken for granted there is a space for innovation*" (Pace, 2013, p. 41). This shows how changes in social interaction and culture create space for innovative products that accommodate new needs, wants and desires.

In today's society, especially through the emergence of smartphones with cameras and widespread social media use, consumers become **creators** of [visual] content that is available to many people (Banks et al., 2008). This is a process in which [semi-] professional content is not just available to celebrities, advertising agencies or Hollywood; consumers can also present themselves to a large audience. This



development might create the space for more innovations that enable the consumers to take visuals from new angles and positions in novel usage situations. Here, the selfie drone as an innovation could tap into a cultural meaning construct that could facilitate its adoption.

2.3.6 Cultural Influence on Consumption

A research tradition that diverges from the positivist models of explaining consumption and product adoption is work that is widely referred to as Consumer Culture Theory (CCT). This theory tries to uncover the *“heterogenous distribution of meanings and the multiplicity of overlapping cultural groupings that exist within the broader socio-historical frame of globalization and market capitalism”* (Arnould & Thompson, 2005, p. 869). It places an emphasis on the **plurality of lifestyles** and the processes of identity formation, showing how consumers use products to further their own goals and projects (ibid). The market offers the consumers a wide variety of resources for seeking out their lifestyle goals and identity projects (Arnould & Thompson, 2005; Holt, 2002; Kozinets, 2001).

Comprehending the contributions of this theory is crucial to understanding the limitations to the aforementioned adoption and diffusion theories. They show that trying to place consumers of a new technology into a cossette of demographic or psychographic characteristics will hinder the understanding of them. Without fully understanding the consumers, it will be harder to engage with them in order to successfully brand a new product or technology. This research project will try to keep an open approach and use theoretical insights from both positivist and interpretivist theories.

Pace (2013) suggests that consumers can be regarded as *rational* and *cultural* agents (compare Illustration 7). The rational agent is convinced of buying a product because of superior technological features and functionality in comparison to competing products. The cultural agent is regarded in a specific cultural setting that influences the need for certain features of a new technology. These features differ depending on the subculture, social practices in place and technology ideology. Social practices are processes of body and mind, for example actions, knowledge and comprehension that are shaped through culture (Reckwitz, 2002). For an innovation to be successful, it needs to tap into



cultural concepts that the consumer finds relevant. Being successful in this context not only affects market growth, market share or sales figures, but also aids the new technology to become a part of the consumer's practices that further shape the innovation (Pace, 2013).

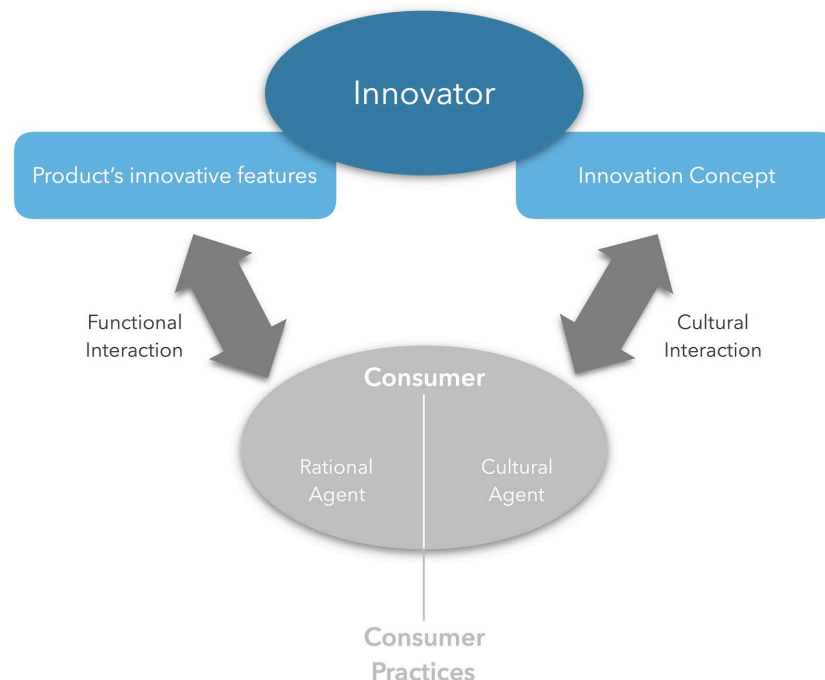


Illustration 7: Own Illustration
Source: Pace, 2013

One study mentions Whatsapp as an example of a successful diffusion of an innovation, which managed to tap into the deeply-rooted social practice of sending SMSs. It developed features to enhance convenience, availability and functionality thereby enriching the SMS messaging practice (compare Pace, 2013, p. 44). Selfie drones might tap into the deeply-rooted social practice of taking selfies and bring new ways of doing so.

Some theories claim that advertising and the fashion system connect the culturally constituted world to a consumer good and **cultural meaning** can thus be transferred to that good (McCracken, 1986). In particular, advertising agencies use easily recognisable elements of the culturally constituted world to depict the consumer good in the specific scene. By seeing the product within this setting, the consumer connects the culturally constituted world and the product and cultural meaning is transferred to the advertised object. To understand how the cultural meaning of the consumer good then becomes part of the consumer's life, McCracken (1986) explains four consumption rituals:



exchange, possession, grooming and divestment rituals. Given the nature of the product, the grooming ritual appears to be the most relevant for the research at hand and thus will be briefly explained. The grooming ritual draws cultural meaning out of a product. The consumer conducts this ritual on a regular basis, because these cultural meanings are of a perishable nature (ibid). The **grooming ritual** is an iterative consumption process that the consumer goes through. The use of the products involved in the grooming ritual “arm” consumers with certain attributes that exist in their “best” products (ibid, p. 79). These “best” products carry attributes such as feelings of luxury, power, being extraordinary or creative, that transfer from the product to the consumer. The question lies in whether selfie drones can also possess these cultural meanings (attributes) that could then be transferred to the consumer.

The cultural meaning that is carried by consumer goods is highly complex and the way it influences the consumer’s life is captivating. This study will explore how selfie drones could play a role in the consumer’s life. This will help connect the technology to the existing culturally constituted world and gain insights to create advertising for selfie drone companies to effectively promote their product to consumers. By investigating consumer expectations and experiences, this study will explore motives and obstacles for selfie drone consumption. In the extended self literature, Belk describes how possessions and experiences can become part of one’s self (1988). This raises the question as to whether the selfie drone might be seen by consumers as enabling them to create experiences that contribute to their notion of self, or if the selfie drone itself becomes part of their **extended self**. Additionally, the selfie drone may differ from the selfie stick in the way it carries meaning to the consumer and how it may provide an extension of themselves.

Besides looking at the specificities of a new technology, one can also make use of general consumer perceptions towards technological advancements. For this reason, general technology ideologies will be reviewed below.

2.3.7 Technology Ideologies

Kozinets (2008) explains how technology ideologies influence consumer thoughts, speech and actions. He differentiates between four ideologies: *Techtopian ideology*, *Green Luddite*, *TechSpresive* and the *Work Machine*. In the Techtopian ideology,



technological advancements are always seen as good and essential to further the overall benefits for society. The Green Luddite ideology stands in opposition to the Techtopian ideology, going against technology which supposedly spoils nature. The TechSpresive ideology sees technologies as tools used for hedonistic purposes and self-expression and the Work Machine ideology focuses on technology as an efficient tool to further economic prosperity (ibid).

With their functionalist industrial logics, both Techtopian and Work Machine ideologies draw on a calculative notion of reason, while the Green Luddite and Techspresive ideologies relate to romantic relations, emotion and passion (fear and pleasure, respectively). The Techtopian and Green Luddite positions seem to be more socially and collectively oriented, whereas the Techspresive and Work Machine models carry more of an individualistic approach (Kozinets, 2008). These four ideologies are not mutually exclusive and can co-exist in the narratives and experiences of one individual consumer (ibid). Technology consumption is thus seen by Kozinets as *“the product of historical ideological elements interpellated into personal relationships with technology that help consumers define themselves as unique individuals pursuing meaningful paths through purposeful lives”* (ibid, p. 43).

Having discussed the different technology ideologies will help this project to interpret different consumer narratives on the use of selfie drones in the discussion section. Here, it will be important to bear in mind the different ideologies that consumers have towards technology in general to then explore consumers' individual thoughts and opinions with regards to the selfie drone. This will further our understanding of possible contradictions in the perception of a new technology.

2.3.8 The Selfie Drone in the context of Technological and Social Change

The selfie drone is a new technology that could be seen as a technological change from either selfie-taking with a smartphone or selfie-taking with a selfie stick, serving a similar or the same purpose as the other two technologies. Here, it is important to note that an object's **function** is always **relative** to the goals and values that the consumers assign to it. A specific function is never intrinsically held by the object (Searle, 1995). Runde et al. (2008) describe several ways of incremental technological change in objects. Firstly, the new object can have the same function but a different form or, on the



contrary, the same form but a different function. The new object could also be a mix of the two change options (Runde et al., 2008). The core functionality of the selfie drone seems similar to the selfie stick, providing the possibility of taking photos of the consumer from new perspectives. However, selfie drones have a specific and very different design to the selfie stick. They are often wirelessly connected to the consumer's smartphone.

Runde et al. (2008) argue that the adoption of innovative technological products will mostly be a **non-linear**, unpredictable process that is tied to routines and rules in our social world. The social interaction that occurs when a new technology emerges can lead to the transformation (*morphogenesis*) of social structures and the reproduction of others (*morphostasis*) (ibid). Runde et al. (2008) identified morphostatic processes that hamper new technology adoption. These morphostatic processes can be connected to the new form of a technological product, meaning that consumers cannot use a product in the same way as before. Moreover, the skills needed to use a device might differ and thus cause adoption problems. A different consumer demographic to the one of the previous technology (i.e. when shifting from analogue to digital cameras, significant shift from female to male consumers) might be another reason for a hampered adoption process (ibid). Runde et al. have also shown how new technologies can be seen in relation to **social practices**. This research aims to discover social practices that will be transformed or reproduced through the use of selfie drones. When looking at the basic functions of selfie devices, e.g. selfie sticks or selfie drones, they are both designed to provide the user with an extended frame for capturing their visual.

After having reviewed the literature concerning the adoption and consumption of technology, this project will now turn towards potential marketing strategies that companies can use for their branding efforts in relation to the new selfie drone technology.

2.4 Marketing Strategies

The different phases of the PLC can be tackled with different marketing strategies that help diffuse the product in the market. A model that comes into mind in this context is the **AIDA model**, which is well recognised and used by marketers for the purpose of attracting more consumers to purchase their product (CommunicationTheory.org). The



model establishes the steps a consumer goes through before buying a product which include *Attention, Interest, Desire* and *Action*. This model can also be applied for online marketing (ibid). This seems particularly valuable for this project as our focus will be on the digital communication efforts of companies that can have a strong impact on consumer preferences (ibid).

The **Rossiter-Percy Grid** explains different advertising strategies based on the involvement level of a product (high/low involvement) and the behavioural motivation (informational/transformational) that are associated with the product category (Percy & Rossiter, 2012). A product is defined as a *high involvement product* when its purchase requires a considerable amount of reflection and thought. In terms of motivation, a product is regarded as transformational when the purchase intention is connected to the three positive motivators comprising *sensory gratification, intellectual stimulation* and *social approval* (ibid). Sensory gratification is related to “*physiological enjoyment*”, intellectual stimulation aims at “*psychological stimulation*” and social approval to “*social rewards*” that the product is thought to provide (ibid, p. 268).

In order to successfully advertise a high-involvement and transformational product, as is assumed to be the case with selfie drones, the advertisement needs to exhibit ***emotional authenticity*** and the target group needs to be able to personally *identify* with it (Percy & Rossiter, 2012). As previously mentioned, in the case of selfie drones, millennials will be the focus of the research. In order to comprehend how marketers can leverage different marketing strategies, it is important to understand this particular consumer group in greater detail.

2.4.1 Marketing to Millennials

Millennials have grown up with smartphones in a constantly-connected world (Goldmansachs.com). Nowadays, millennials are choosing to shop online and they hold a strong consideration for social media as a source of valuable information before making a purchase decision (Hassan et al., 2014). Quality is highly valued by millennials but price is still important, more so than for other generations (Goldmansachs.com). Additionally, according to the Association of National Advertisers, Barkley, SMG, BCG, millennials increasingly rely on their online networks to make purchasing decisions. Over 34% of 18-35 year-olds are said to do so (ibid). The Office for



National Statistics, United Kingdom, also concluded from a recent survey that this generation lives online and therefore also buys online (ibid). These are important considerations to keep in mind when marketing to millennials.

2.4.2 Adoption Facilitation through Influencers/Opinion Leaders

Influence can be defined as the power to affect a person's behaviour and in the context of marketing, the action that could lead to swaying a person into making a purchase decision (Brown and Hayes, 2008). It is plausible, by mere exposure to selfie drones through peers sharing footage from the devices on social media, that people could be inclined to buy one for themselves. To shed light on the process of influence through social media, the use of social media influencers will be reviewed.

Besides classical advertising, new marketing techniques such as ***Influencer Marketing*** work particularly well with millennials (Sammis et al., 2016). Influencers are opinion leaders in online social networks that arguably have great impact on their followers' attitudes and purchase decisions (ibid). The impact is often created because the followers trust the judgement of the influencer (ibid). It thus seems to be beneficial for new product brands, especially those that target millennials, to make use of this marketing technique. Selfie drones have a multitude of applications that could appeal to different consumers. This makes the task of choosing the person with the most potential influence even more difficult and requires insight into the consumer's usage motives and situations.

2.4.2.1 Choice of Influencers

In order to select the right influencers on social media, the 4R model can be used. This model has been found to be particularly applicable to Instagram (Sammis et al., 2016). The parameters of this model are *reach*, *relevance*, *resonance* and *relationship* (ibid). Influencers that have many followers on Instagram provide a wide *reach* for the brand that wants to collaborate. The content that the brands would publish in cooperation with the influencer needs to be *relevant*. This relates to the themes and subjects conveyed by the brand's photo content that must appear relevant to its followers. Also, the content should *resonate* with the consumers which can be assessed through the engagement of followers on the different photo posts (ibid). Lastly, it should be noted how influencers currently *relate* to brands, meaning whether they have already engaged



with sponsors and brands. This information is crucial to assess in order to identify if the sponsored content would feel somewhat forced or artificial (ibid).

There are different **situational factors** that impact the effectiveness of influencer marketing (Brown & Fiorella, 2013). The first one is *personal situation factors*, which take into account the personal life situation of a consumer (ibid). A second set of situational factors to highlight here are the *emotional situational factors*. These factors claim that the emotional state of the consumer has the highest effect on the final decision-making process (ibid). The last factors are concerned with the *life cycle situation*, stressing that it is important to identify in which stage of the purchase lifecycle of the product the consumer is situated (ibid). All three factors influence how receptive the consumers are to the advice of the influencer and thus are important for the marketer to consider.

2.4.2.2 Word of Mouth Marketing and Influencer Narratives

Related to the concept of influencer marketing is online **Word of Mouth Marketing (WOMM)** which provides the possibility of spreading and transforming a brand's communication messages (Bryman & Bell, 2011). Online word-of-mouth can trigger product sales, which then in turn creates more word-of-mouth, thus creating a positive feedback mechanism (compare Duan et al., 2008).

Marketers often use online influencers to place their product or service in a specific online forum or blog. Kozinets (2010) discusses the four "*narrative strategies for the communal reference expressions*", which are *evaluation*, *explanation*, *embracing* and *endorsement*. These narrative strategies explain the different forms that blog posts can take on a commercial product.

The four narratives are organized in a grid along two dimensions comprised of interpersonal orientation of communication (communal/ individualistic) and the commercial-culture tension (implicit/ explicit) (ibid). Influencers with a communal focus see themselves as a member of a group, where the community and its values are central. In the individualistic focus on the other hand, the influencer and his/her needs are central (ibid). The theory suggests that conflicts can arise between the influencers and their followers if they engage in WOMM as it is seen as a commercial endeavour. The implicit and explicit commercial-culture tension arises depending on whether the



influencer openly acknowledges the WOMM (explicit) or tries to hide it (implicit) (ibid).

The *evaluation* narrative has a communal focus and an implicit tension potential. This is due to the fact that the WOMM campaign is concealed, which can lead to conflicts if discovered. The *explanation* narrative also has a communal approach, but explicitly discloses the WOMM. In the *embracing* narrative, the bloggers keep the cultural anxiety implicit (by mentioning the WOMM campaign enthusiastically) and have an individualistic focus, explaining their dual role as consumer and marketer. The last narrative is *endorsement*, where the blogger explicitly acknowledges the commercial-cultural tension and associates herself with the WOMM. These bloggers also try to discharge the claim that the commercial marketers do not have the best interest of the community at heart by formulating “*a justifying argument of need*” (ibid, p. 85). These bloggers are communicating in a more individualistic way, emphasizing their own self-interest. They often do this through a “*communal appeal of assistance*” (ibid, p. 85).

The reviewed literature on WOMM and particularly the different influencer narratives touched upon will aid this study in providing advice on possible marketing strategies. Qualitative research will help to explore consumer thought processes that lead to decision making in the case of selfie drones. The data will be analyzed keeping the theoretical background of this literature review in mind.

3. Methodology

The purpose of the research is to shed light on consumer attitudes towards the introduction of selfie drones to the market by investigating how they perceive the following distinct concepts: selfies, drones and the selfie-drone technology itself. The research was conducted using methods that would help increase the understanding of how these elements are intertwined, what the consumers' relationships are with them and how selfie drones may affect these or be affected by them.

3.1 Scientific Paradigm

The scientific paradigm one uses to conduct research is embedded in the broader philosophy of sciences and is based on observations [data/information] and reasoning [theory] (Blumberg et al., 2008). There is a differentiation in social science between the positivistic and the interpretive paradigm. The interpretive paradigm represents the humanistic school of philosophy, whereas the positivistic paradigm explains traditional, natural science (Gummesson, 2000). Since the goal of this research is to discover the consumers' motives and obstacles to selfie-drone adoption as well as usage behaviour, it seems suitable to use a paradigm that helps understand the consumers in the context of their life projects and cultural settings. The interpretive paradigm enables the immersion of oneself in the consumers' universe and the discovery of meanings and motives (Kvale, 2007). The research emphasises the understanding of social action as opposed to a causal explanation of human behaviour (Blumberg et al., 2008). Different to the positivist paradigm, the interpretive approach believes that social reality does not exist per se, but is created through the actions and interpretations of the consumers (ibid). In other words, *"the social action can only be interpreted by contextualizing it in the cultural system of concepts, rules, conventions and beliefs that give meaning to that action"* (Moisander & Valtonen, 2012, p. 3). The social world is inseparable from the consumer, as described by the epistemological position of qualitative research (Bryman & Bell, 2011). Therefore, it is important throughout the data collection process to comprehend the broader cultural system the consumers are embedded in, in order to fully understand how the system influences their perceptions and behaviours within their social context. Hence, the interpretive paradigm is used as the guiding thread of the research undertaken.



Additionally, it is assumed that the selfie phenomenon can be associated with a specific time and place. In other words, the data collected is embedded in a particular **cultural and societal construct** that consumers are part of. However, it is important to keep in mind that the cultural and social realities are not necessarily frozen and unmalleable. On the contrary, even though certain constructs may dictate and constrain consumers' actions to a certain extent, culture can also be seen as an emergent reality that is constantly being created by people (Becker, 1982). According to the ontological position of constructionism, social interactions are what produce social phenomena; but the latter can also be used to reconstruct it (Bryman & Bell, 2011). When investigating the selfie phenomenon and its implications for selfie drone adoption, it is worth remembering that even though culture may dictate certain behaviours, culture is a construct which is not set in stone; social context and interactions have the power to create a shift in the currently accepted norms.

3.2 Research Design

In order to answer the research question, an inductive research design was developed. The process started with the observation of consumers to discover emerging patterns of themes from the opinions expressed (compare Goddard & Melville, 2004). The theory found on the general subject also helped to re-interpret the observations and discover new patterns that the researchers had not recognized before. This enabled the project in hand to generate new insights about the potential consumers of selfie drones, which then inspired the managerial implications in an attempt to answer the research question.

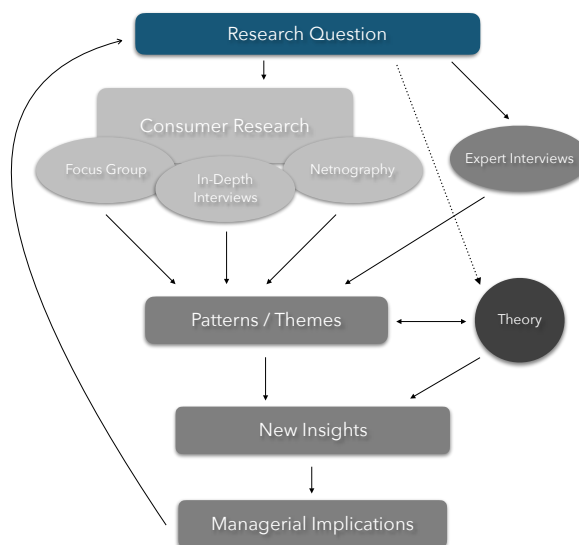


Illustration 8: Research Design, Own Illustration



3.3 Research methods used

3.3.1 Qualitative research methods

Qualitative research was chosen as a means of gathering data on the consumer's life situation and motives with regard to selfie-taking, the use of new technologies and more specifically selfie-drones. Qualitative research was used as it emphasises words over numbers and focuses on depth rather than breadth as opposed to quantitative research. Qualitative research was favoured over quantitative research as the latter fails to capture people's responses in relation to their everyday life (Cicourel, 1982). With the research in hand, this approach seemed more appropriate to touch on fewer people but on a more comprehensive level. This can then generate deeper insights into consumer behaviours within a particular context.

Furthermore, surveys used for the collection of quantitative research often assume that respondents interpret the terms in a similar way (Cicourel, 1964). Given the recent nature of the selfie phenomenon and the selfie drone products, respondents may have understood the terms differently which may have invalidated the responses. For example, fixed-choice answers and the responses from open-ended questions without a moderator to prompt deeper reflexion may not have been sufficient to fully understand the phenomenon (ibid). Therefore, by delving into consumers' worlds through qualitative data collection methods, it is possible to unveil responses that may not have been fully covered through quantitative methods.

3.3.2 Triangulation method

A focus group, in-depth interviews as well as netnography were the three methods used as different sources of data collection. The combination of these methods to research a social phenomenon is called *triangulation* (Bryman & Bell, 2011). This method helps **cross-check** the findings for more reliable results providing valuable insight into consumer perceptions of the topic in hand (ibid). Triangulating the research methods is key to counteract the weaknesses of each one and optimise their validity by combining their respective results (Eriksson & Kovalainen, 2008). This is especially relevant considering the relatively complex social nature of the researched phenomena.



3.3.3 Research participants

The participants chosen for the focus group and in-depth interviews were all millennials. This group was identified as the heaviest selfie-takers and social media users. Thus they are arguably a segment of the population that is more likely to be exposed and receptive to innovative technology related to the topic of selfie drones. As previously discussed, this group is made up of individuals born between 1980 and 2000, **digital natives**, connected to the world via their smartphones. The participants in this particular research were aged between 20 and 29. The gender split was equal as it was deemed that the differences in opinion according to gender were beyond the scope of the research. Each participant differed in nationality as they came from different European countries but were similar in all aspects deemed relevant for the research, namely equal ease of access to technology and internet and medium income with similar educational levels. They all possessed a smartphone and had taken a selfie before. Furthermore, it was also assured prior to the selection of the participants that they were already familiar with the concept of drones. They were deemed the most appropriate segment for our research as they had a prior understanding of the concepts put forward and could share the knowledge they had already acquired from mere exposure and experience (Merton et al., 1956, in Bryman & Bell, 2007, p. 511).

3.3.4 Theoretical sampling and theoretical saturation

The concept of theoretical sampling was applied for the focus group and in-depth interviews, which advocates for smaller sample sizes in order to limit the amount of redundant information collected (Glaser & Strauss, 1967, in Bryman & Bell, 2007, p. 459). The theory thus emerged as an ongoing process from the data collection phases (ibid). Purposive sampling was also used in combination whereby the participants were chosen strategically for their relevance in the research. The sample was deemed stratified enough (Blackburn & Stokes, 2000) whereby the participants engaged in different hobbies and represented different lifestyles that amounted to a sufficient amount of diversity for the scope of the research.

Calder (1977) suggests that a sufficient amount of focus groups should be conducted until the moderator can accurately predict what the next group may say. This was not the case for this research as the focus group setting did not seem appropriate for the topic in hand. As such, it appeared that the participants were reluctant to engage in a discussion on what seemed to be a fairly personal topic. Participants were quite hesitant



to share information on their personal behaviours (Madriz, 2000) with regard to selfie-taking. Therefore, it was deemed that a second focus group would not be necessary and that in-depth interviews should be favoured instead.

Each in-depth interview conducted was based on the initial findings from the focus group. Each participant that was chosen had different interests and hobbies in order to gain a broader understanding of the **different types of appeals** the selfie drone presents. The interview process was stopped once a diverse pool of personalities that fitted in with the Millennial consumer group had been interviewed and similar patterns began to emerge and repeat themselves (Livingstone & Lunt, 1994). Hence, at that point it was assumed that theoretical saturation had been reached to a satisfying extent, given the limited time frame to complete the project (Bryman & Bell, 2011).

3.3.5 Focus Group

The focus group was used for preliminary research as it is less structured and so more useful for exploratory research where the specific direction has yet to be clearly defined (Morgan, 1997). The focus group helped provide valuable insight into the social and cultural meanings of the participants (King & Horrocks, 2010) with regard to their selfie-taking behaviour and their perceptions of selfie drones, within their own environment. The benefits of the focus group are to encourage a relatively free conversation amongst participants, not only to gather their thoughts on the topic but also to understand how their views fit into a wider social context through the interactions with their peers (Bryman & Bell, 2011).

3.3.5.1 Structure

One focus group was conducted with 6 participants and the session lasted just over an hour (See appendix 2 for full transcription). The participants were chosen in order to create a homogeneous group as this arguably enhances a free flow of conversation (Morgan, 1997). To establish an optimal environment to extract authentic data from participants, the social gap between the participants was minimized and homogeneity was achieved in terms of background, as mentioned earlier (ibid). By doing this and still encourage diverse opinions, sample bias can be reduced and generalisability increased. The session was conducted in English as it was the common language for the participants who are used to working and studying in an international environment.



Greenbaum's (1998) insights on focus groups were used to determine the most appropriate questions in order to elicit the most relevant data. The focus group was chosen for its potential to uncover particular consumer behaviours in terms of selfies, social media and drones that could in turn unveil their perceptions of selfie drones. An additional objective was to understand participants' perception of the current position of the different products in the market. Without focusing on one specific brand, the focus was to uncover how selfie drone companies are communicating to their target audience, what the strengths and weaknesses of the products are and how they could be positioned differently to reach their market segment more effectively (ibid). The participants' minimal exposure and use of selfie drones did not justify an in-depth analysis of their usage habits of this product. On the other hand, the intention was to elicit their usage habits when capturing photographic and video footage and possible sharing on social media platforms. This contributed to the researchers' general understanding of the consumers' perceptions towards these activities.

3.3.5.2 Group dynamics

A focus group is considered to be a social experience. This translated into efforts to create a fruitful atmosphere for expression by asking straightforward questions (Krueger, 1998). Through the use of open-ended questions, the participants were prompted to respond, allowing interaction between the individuals to spark spontaneous reactions (Bellinger et al., 1976). The first questions were factual to ease the participants into the session (ie: when they last took a selfie and what it entailed) (Gordon, 1999). The following questions then opened up the discussion on their experiences with selfies in order to establish a firm foundation for their opinions that they could then build on throughout the interactions (Krueger, 1998). The latter were then more specifically oriented around the selfie drone itself in order to gain an initial understanding of the products' stance in the market according to the consumers. These insights could then be used to discuss how companies could leverage this information to improve their position in the market (Jenkins & Harrison, 1990).

The intention was to establish a **psychodynamic group** where the interactions would take place more prominently between the participants rather than unilaterally with the moderator (Gordon, 1999). This was sought by creating a comfortable environment from the offset and was facilitated by the fact that a couple of the participants already



knew each other prior to the focus group (Jenkins & Harrison, 1990). Similarly, the concept of symbolic interactionism came into play as the participants questioned each other's opinions (Bryman & Bell, 2007). This phenomenon enables a better understanding of the exchanges taking place, thus eliciting more accurate perceptions of the topic as the meanings are constructed within a social setting. Questions such as "why" are usually not needed as the point of a focus group is that the participants question each other's opinions, elaborate on them to justify their opinion and add to other people's points of view (Bryman & Bell, 2011). However, the interaction between participants remained somewhat superficial despite efforts to spark direct conversations among them. The dual-moderator system was an effective way to assure that all topics were covered but did not further encourage a more multi-directional conversation.

Furthermore, the topic of selfies, described as a societal phenomenon, was assumed to be of little controversy (Morgan, 1956, in Bryman & Bell, 2007, p. 517). Prompting and probing cues were used to encourage them to elaborate on their contributions in order to elicit deeper insights into their motives for their behaviour (Bryman & Bell, 2011). However, as discussed in the literature review, selfie-taking behaviour has been associated with narcissistic personality traits. Therefore, it is assumed that a slight **social desirability bias** (ibid) may have come into play with the participants who could have altered their responses to not appear to embody these negatively perceived characteristics. It was deemed relevant to favour the in-depth interview method over an additional focus group in order to be able to discuss the most prominent themes more extensively in an individual setting (Morgan, 1956, in Bryman & Bell, 2007, p. 517).

3.3.6 In-depth Interviews

In-depth interviews are generally used to understand individuals in their social context by uncovering their subjective views and interpretations of situations (Bryman & Bell, 2011, Legard et al., 2003). They help evoke important social practices and constructs discovered in the focus group session. The in-depth interviews also help follow the individual thought processes, perceptions and opinions of the consumer in a more personalised manner than is possible in a group setting (Bryman & Bell, 2011). This technique was carried out in order to collect deeper insights into consumer perceptions towards selfies and selfie drones. Six different consumers from the above mentioned



target group, with an equal split between female and male respondents, were interviewed.

Additionally, three in-depth interviews were conducted with professionals from three selfie drone companies including AirSelfie, FotoKite and Staaker. These were designed to understand the characteristics of the consumers targeted from the **companies' perspective** in relation to their marketing communication strategy. Two additional experts in the industry were contacted and information and thoughts were exchanged via e-mail. Difficulties were encountered when attempting to use their time for a more extensive interview. This information was analysed in order to provide relevant input for the possible branding strategies of selfie drone companies in the discussion part of this research project.

3.3.6.1 Structure

When deciding on the way to conduct an in-depth interview, one can choose between an unstructured and a semi-structured approach (Bryman & Bell, 2011). The semi-structured interview type was chosen as it uses a range of different questions and offers a balance between structure and flexibility (compare Legard et al., 2003, p. 141) for a better chance of triggering more elaborate responses. Respondents were encouraged to share their experiences extensively as this helps uncover their most important associations with the topic (Bryman & Bell, 2011). A range of techniques were used to achieve penetration, explanation and exploration, discovering the respondent's underlying opinions, motives and beliefs (ibid), as discussed below.

Many authors acknowledge that there are several steps involved in an in-depth interview (Legard et al., 2003). The use of humour and limited questions regarding their personal background in the arrival stage helped with regard to the more introverted participants to create a lighter mood. This seemingly increased the individuals' comfort in talking about their selfie behaviours, thus uncovering their perceptions towards selfie-taking (compare Legard et al., 2003, p. 143). A time buffer was also accounted for in case respondents came up with new perspectives after the actual interview, to then be able to take these into consideration (compare Legard et al., 2003, p. 146).



During the interviews, the two researchers attempted to understand their respective interviewees' social worlds. As mentioned before, selfies are embedded in a social and cultural structure. It was therefore important to give time to the interviewees to envision different usage situations and ask them questions in context that would help trigger more realistic responses. Respondents were interviewed in different settings. For example, one respondent was interviewed while on a trip to Milan, close to the hustle and bustle of the touristic streets. The intention was not to create a bias but, on the contrary, to put the selfie drone product in context and help visualise its applications to be discussed in the findings. Similarly, the other respondents were interviewed in their own environments, including a small town in the country and capital cities. These created a setting that could be seen as an enabling technique to help the respondents visualise possible applications of selfie drones in different contexts that are relevant to each individual and thus trigger stronger opinions towards them (Bryman & Bell, 2007). The diversity of settings and personality types ranging from the outdoor type, sporty and adventurous to the more urbanite and sedentary type meant that the range of opinions collected were diverse enough to be deemed sufficiently generalisable for the scope of the research in hand (ibid).

A variety of content *mapping* and content *mining* questions were asked, where the former helped discover different main areas that were addressed and the latter to delve deeper into the behaviours, opinions and perceptions expressed (Legard et al., 2003). In general, the questions were designed to be open-ended and as clear as possible. Moreover, the interviewers tried to ask one question at a time to keep it as simple as possible for the participant to build on each answer. Similar to the laddering technique used to elicit the respondent's hidden motives, a less extensive technique was implemented by diving deeper into each answer with probing questions (Christensen & Olson, 2002). Building on these findings, it was also important for the research to include netnography. This method is arguably less prone to social biases as it takes a more observatory stance.

3.3.7 Netnography

The next step in the qualitative research was netnography. Netnography is a sub-method of ethnography (Bryman & Bell, 2011). The latter is considered to be a relatively traditional technique which uses participant observation as a means of studying



cultures (ibid). According to Kozinets (2010), netnography uses ethnographic research techniques to gather data on communities and cultures in the online sphere comprising forums and blogs and social network sites. He states that *“online communities are contexts in which consumers often partake in discussions whose goals include attempts to inform and influence fellow consumers about products and brands”* (2002, p. 61). Often, those involved in the conversations are enthusiasts that can provide valuable insight into the current trends and the meanings they associate with the topic, which may impact other consumers.

Firstly, an online community needs to be chosen where consumers interact with each other about the product and brands (Muniz & O’Guinn, 2001). Netnography can bring further insight into the **cultural meaning** of selfie drones and what interactions exist between those engaged in the online sphere. These meanings are shared and created through the interaction between consumers and offer the possibility to add a dynamic element to the brands in their communication efforts (Heding et al., 2009). Netnography was used as an additional source of data to gain a richer, more holistic picture of the life projects and practices of consumers. The latter are aggregated users on different platforms as opposed to communities per se. Given the omnipresence of selfies, it is assumed that most millennials are part of these users. The aim was to gain insight from social media sites that are related to the use of drones. In particular, interactions on different social media platforms were observed including Facebook and Instagram for their popularity and ubiquity in millennials’ daily lives, based on our observations from the research participants and existing data (Taylor, 2014). Youtube was also thought to be a relevant platform to observe since the participants perceived it as a popular platform that they used regularly.

Before carrying out the netnography, the third step after the focus group and in-depth interviews was to ask four participants, throughout a period of a week, to note down their selfie-taking and selfie-sharing habits and particularly their social media use. They were asked to log when they took photos or videos, for what occasion, whether it was a selfie, as well as their activities on different platforms chosen with regard to image sharing. The aim of this process was to determine in **what context** people take photos, whether they are selfies and whether they are shared on social media (See appendix 1). This technique was particularly useful in collecting information into the way people use



Snapchat as this is an ephemeral photo-sharing platform that is difficult to analyse from a netnographic perspective.

Additionally, social media was observed in the context of selfie drones by focusing on the social media pages of the selfie drone companies themselves. Facebook is arguably a potent platform for brands to connect with their audience by providing content to engage their followers and encourage them to discover their brand's universe. The platform also provides an opportunity for the brands to communicate directly with their potential and current customers. The social media observation process involved two consecutive steps: the first consisted of selecting selfie drone brands including GoPro, DJI, Zero Zero Robotics, AirSelfie as well as FotoKite and analysing their communication methods in the form of "mini cases" to give an industry overview before analysing the consumers' perspective in the Findings section. The aim was to select different brands that either specialise in selfie drones or have extended their product offering, such as GoPro, in order to analyse their communication strategies on Facebook, but also on Instagram and Youtube. The focus was on understanding how they are engaging the customers. These observations were extended to the company's webpages to analyse their approach to their communication strategy and whether consumers are engaging with it. Company websites have become a gateway for communicating with consumers through which they can create a strong brand identity with attractive content and interfaces to market their products (Bryman & Bell, 2011). Therefore it is valuable to consider the drone company websites to understand how they are communicating to consumers.

In the second step, it was analysed how customers are then interacting with the brand as well as between themselves on companies' social media sites. Also, third party websites such as forums were researched to determine whether conversations were taking place amongst consumers with regard to selfie drones to assess what their perceptions and behaviours are in relation to these products. A brief overview of perceptions from news outlets was also considered to complete the online analysis. The aim was to understand what conversations are emerging from these social spheres. This information was then fed into the findings and discussion sections. By combining the analysis of the online world with the offline observations gathered from the interviews and logs, a more comprehensive understanding was obtained of the current situation.

3.3.8 Data Analysis

The initial phase of the analysis consisted of a comprehensive and detailed screening of the findings/data. This led to structuring the data into categories of meaning (Saunders et al., 2009). This method is known as **coding** whereby prominent themes are extracted from data by identifying short portions of the latter that symbolically refer back to the specific themes identified (ibid). It can be defined as “*the process of identifying persistent images, words, phrases, concepts [...] so that the underlying patterns can be identified and analysed*” (Morse & Field, 1995 in Mayan, 2009, p. 94). For this, it is important to transcribe all interviews and scrutinise the data for a more complete and accurate coding process (Mayan, 2009). In the early stages of the data analysis, it is difficult to apprehend the emergent themes. The focus group in particular illustrates the point made by Mayan whereby the data presents “*all its contradictions, messiness, and depth*” (Mayan, 2009, p. 11) that the researcher has to make sense of. Colour coding the emergent themes helped facilitate the coding process. Marshall (1984) highlights the fact that an inductive approach to the interpretation of data is appropriate as it lets the data speak for itself. Rather than force certain themes to emerge by the influence of preconceived ideas, as a researcher, one should allow the data to progressively reveal inherent patterns (ibid). As a side note, in the Findings section of the paper, the consumer reflections are mostly presented in full length citations to ensure the full context of their thoughts are conveyed to maintain a comprehensive understanding of their opinions.

3.3.9 Perceptual map

Starting with the focus group, the essential data should be summarised and used as an initial entry point (Saldana, 2008) into the observable themes that were matched with the in-depth interview information as well as the online narratives. It is important at this point to be able to establish connections with the recurring patterns observed in order to create a comprehensive overview of the findings. A perceptual map was elaborated for this purpose (see Illustration 14). The apparent similarities in perceptions were established by comparing the insights from each interviewee (compare Ringberg & Gupta, 2003). This map helps illustrate the interpretation of the underlying connections with regard to the participant’s beliefs and feelings about the



topic. By aggregating the findings into a visual form, a clearer understanding of how people perceive a topic emerges (Bryman & Bell, 2011).

The structures in the perceptual map show how consumers understand and organize experiences (Ringberg & Gupta, 2003) and how common and overlapping, underlying socio-cultural themes appear (King & Horrocks, 2010). Patterns between each element touched upon can be established. Insights may emerge from the construct systems built around the selfie drone topic allowing the researcher to address the latter's potential opportunities and counter its possible weaknesses. In the analysis of the focus group, it is particularly important to focus on the interactions that take place amongst respondents, as stipulated by Bryman and Bell who suggest that "*action is revealed in talk*" (2011, p. 522).

When analysing the data, the method of alternating between data and theory was applied, whereby both emerge hand in hand throughout the process (Bryman & Bell, 2011). However, considering the recent nature of the product in the market and the more empirical nature of the research, it was deemed too limiting to only emphasise the need to find theory from the data in a linear manner. Therefore, the research approach was of a more flexible nature to allow all aspects to be considered, without systematically categorising elements into specific thematic boxes and referring to existing theories that could restrict the emergent findings.

3.3.10 Research quality assurance

According to Saunders (2009), focus groups in particular are considered a valid source of information due to the extent of the discussion that was deemed to cover the research questions sufficiently. However, the non-standardised nature of the focus group makes its reliability more difficult to assure (ibid). Sanders (2009) argues that focus groups are not meant to be repeatable as they are set in a particular social discourse that is continuously evolving. Therefore, to optimise the **reliability** of the focus group, the findings were compared to those collected from the in-depth interviews and further compared to the netnographic findings to ensure that the data emerging was consistent. Knodel (1993) adds that the presence of a moderator also adds to the reliability of the findings in the focus group and in-depth interviews as the distance is minimized between researcher and subject at the collection phase.



Recognising the impossibility of realising complete objectivity, steps were taken to ensure dependability by recording every process in the data collection phase for ease of access. Efforts were also made to minimise bias from the researchers' personal values (Bryman & Bell, 2011). This was particularly difficult as the researchers are within the target segment, have prior experience with selfie behaviour and have themselves been exposed to the selfie drone products. The excess subjectivity of qualitative research could be countered by considering the data within its context to avoid overestimating the generalisation of the findings. The justification of generalisability, defined as the extent to which it is possible to generalise the data to a broader population and context, (Blanche et al., 2006, p. 91), was based on the assumption that the conclusions derived from the data were assessed with due caution and care (Bryman & Bell, 2011). Moreover, the diversified samples contributed to the assumption that the findings could be applied to a broader population within the chosen target group. This could only be assumed to a certain extent given the dependence of the topic on the social and cultural contexts at the time of research susceptible to evolve with time.

3.3.11 Ethical considerations

Throughout the data collection process, ethical concerns were considered in order to ensure that the data could be exploited to its full potential. Issues such as lack of informed consent (Diener & Crandall, 1978) were countered by establishing from the outset of each interview that the participants input would only be used if they agreed to it and that they would be recorded with their approval. To avoid any issues of invasion of privacy, the observation process was conducted with minimal intrusiveness by allowing the participants to engage in the observation of their own behaviour by logging it themselves. This could arguably bias the outcome of the research. In order to minimize this effect, very little priming was given to them in order to collect the most accurate data possible while avoiding the possibility of deceiving them. Lastly, anonymity was established in order to comply with what Grinyer (2002, in Bryman & Bell, 2011, p. 130) considers to be an "*integral feature of ethical research*". However, the names of certain participants have been kept based on the assumptions that their identity is essential to their contribution to the research, for example the industry experts interviewed.



Lastly, in order to encourage **reciprocity** from those in a position of power, trust was sought by consenting to share any data received as well as the final project (Bryman & Bell, 2011). This proved to be helpful in establishing a more open communication channel with certain more highly-ranked individuals, including the CEO of FotoKite for example. Even though this was clearly communicated to the participants from the initial stage of reaching out to them, it still proved challenging to capture their attention, especially at a crucial and busy time operating in a currently fast-changing and growing market. Overall, ethical considerations were at the forefront of the data collection process to provide a research paper that would adhere to the guidelines and respect established business practices.



4 Industry overview

4.1 Mini Cases

It is important to consider the current marketing strategies of existing selfie drone brands in order to better understand consumers' motives and obstacles towards the adoption of selfie drones, discussed in the findings. Five mini cases regarding GoPro, DJI, Zero Zero Robotics, Air Selfie and FotoKite are presented below comprising the brands' market offering and their different communication touch points, mainly their website and social media channels. The more prominent characteristics of each one have been selected to assess the most representative features of their communication efforts. This will help draw a comprehensive picture of the brands' positioning in the market as well as provide an overview of the current market situation. Arguably, this endeavour can then be used to gain an understanding of how the brands may need to realign their branding efforts in order to potentially improve their stand in the market, in light of the consumer insights.

4.1.1 Karma by GoPro

GoPro markets its product in the following way: *"More than a drone: Karma is an aerial, hand-held and mountable stabilization solution. And yes, it includes a drone! Hollywood in a backpack for \$799"* (Weblink 15). GoPro is trying to appeal to those who are in search of outstanding visual footage by communicating the quality of the photographic technology. The photos and videos on their Youtube channel, promoted via their website, are primarily focused on **extreme sports**. For example, the content includes footage from surfers, skateboarders, moto-crossers and bikers. Other types of content are also promoted including photos and videos labelled as the following: *"Life's moments"* and *"Road trip New Zealand"* showing diverse applications of the selfie drone, appealing not only to more male dominated adrenaline seekers but also to different types of audiences. One of their promotional videos featured on Youtube has the following description (Weblink 16):

"Professional surfer Anthony Walsh takes Karma along for a day with his wife Crystal and their son Damien. Join the Walsh family as they explore their native Hawaii in the air, on land and in the water with the complete Karma stabilization system".



This shows they are attempting to market their product as a family-friendly product that can be used to capture memories in a day-to-day setting.

Additionally, the Karma may benefit from GoPro's existing **large customer base** and strong brand image. Notably, the company's Facebook page has over 10 million followers, which could facilitate the communication efforts for the product. Their website also offers the possibility for customers to "*follow the GoPro Movement*" by receiving updates on the products, tutorials and special deals (Weblink 15).

4.1.2 DJI

DJI is a Chinese company and one of the leaders in the selfie drone market (Weblink 17). The DJI Mavic, one of their main products, is sold for an astonishing \$1,059 (ibid). The Chinese company heavily communicates its technological achievements by providing consumers with access to the positive reviews received from various online magazines in the "*newsroom section*" of its website. It also promotes the opening of its first flagship store in Taiwan. DJI has created an **online forum** to provide users with tips, news, flying techniques and new product features. It also allows its users to upload their own content to share with other users. It thereby encourages people to come together and interact with each other by getting consumers to upload their videos for a chance to be featured on their page. In this way DJI aims to achieve a micro community in their online platforms (Weblink 18). Events are also promoted on their Facebook page (over 3.5 million followers) organised in the form of workshops to make sure consumers know how to use their products in the most optimal way (Weblink 19). This appears to be a chance for DJI to enhance their customer satisfaction by making sure their consumers reap all the benefits from the product.

On Twitter, DJI promotes the use of its drones for travel purposes as seen with the following post: "*Travel light and swift, see and remember your adventures differently. #MyMavic*" (Weblink 20) (Illustration 9).



Illustration 9
Source: Instagram @djiglobal

It also shares consumers' private Youtube vlogs to show what kind of footage an average consumer is capable of capturing with the device and how it is a means of recording memories. The company also shares videos showing how its Phantom 4 can help tackle problems such as shark attacks by surveying crowded beach areas. Other professional uses are also made very prominent on their Youtube channel showcasing the drone and its ability to create outstanding footage for films, for example (Weblink 21).

4.1.3 Hover Camera Passport by Zero Zero Robotics

Hover Camera Passport's communication message centres around the drone's ease of use stating that "*no prior flying experience is needed*".



Illustration 10
Source: Weblink 22

It is labelled as "*Your personal self-flying photographer*". It furthers this stance by describing its product (available for \$599) as a mass consumer type of product used specifically in a travel context (Weblink 23):



“mass-consumer flying camera of its kind that’s easy-to-use, safe, and portable - ideally suited to capture you during your sojourns around the world from breath-taking perspectives”

The website includes a blog that provides guidelines on how to use the product and features a woman using it in a travel setting.

The brand self-proclaims itself as the first “*truly*” **user-friendly** self-flying camera (Weblink 24). Additionally, the company has cooperated with Apple, a universally acclaimed company, for the exclusive distribution of their product on the online Apple Store and for its compatibility with Apple’s software to ease the process of offloading and editing the footage (Goldman, 2017).

A press section collects all articles written in specific tech magazines including TechCrunch, but also more mainstream outlets including Bloomberg. The company also coins the product as being the “*future of personal photography*”, implying that its product will have a major impact in this field (Weblink 25). Tutorials on **how to use** the device are included as well as a guidebook for safety regulations. These do not appear to be the main features of the page, arguably so as not to overwhelm and intimidate potential consumers with excess information. The rules appear in their online guidebook and are mentioned as being specific to each country, making it the consumer’s responsibility to engage in the necessary research.

4.1.4 AirSelfie

The AirSelfie is a small portable device that comes in the format of a phone cover and is available for pre-order at \$271.75. AirSelfie promotes its product as one that can be used on a day-to-day basis in any type of situation such as walking through a park: “*Feeling like a selfie mid-stroll? The AirSelfie is ready anytime you are*” (Weblink 26) (Illustration 11). Their Facebook page includes a video of a customer using the device for the first time in his living room thus furthering AirSelfie’s focus on showcasing its **ease of use**. It interestingly shows a man aged 50+ that would not necessarily be associated with the tech-savvy generations, thereby illustrating their attempt to target a wide audience.



Illustration 11
Source: Weblink 26

AirSelfie used a “*Team Tour*” to promote their product. This means that they travelled the globe for 40 days with a team consisting of the AirSelfie inventor, a photographer and a fashion blogger. Every step of the way they posted footage on social media platforms about their travel experiences with the AirSelfie. These show how the device can be used in various travel situations and how it offers the possibility for consumers to capture outstanding landscapes while being present in the footage (Weblink 27).

AirSelfie heavily promotes the idea of being able to **share stories** directly to social media platforms specifically to attract more likes: “*watch your profile fill with amazing aerial shots, and let the likes roll in*” (Weblink 28). It also emphasises the product’s ability to capture family moments and even named the term “*groufies*” where the photos include the people and the panorama for special occasions such as a birthday or a wedding: “*around a birthday cake or capturing the applause at your wedding*”. It also emphasizes how safe it is to use indoors in all types of situations. Regulations appear not to apply so far due to the lightweight nature and small size of the device: “*shots of special family dinners, cozy evenings cuddled up in front of the television, or the magic of a club night with friends*”. Also, during the time this research project was conducted, AirSelfie added a new page to their website, promoting the commercial use of their product:

“Bring new perspectives to your work life with AirSelfie. Create a time-lapse of company event set ups, fill your marketing messages with click-happy aerial images, show clients photos of your latest construction project, and much more. Whatever field of work you’re in, the possibilities are as boundless as the sky.”



Furthermore, their Facebook page shows a sign prohibiting the use of a selfie stick and the sign “#GetANewPerspective”, implying that the selfie drone is able to add a new perspective to a photo that the selfie stick cannot (Illustration 12). This supposedly indicates that the selfie drone is a superior product and potentially renders the selfie stick obsolete.



Illustration 12: AirSelfie promotion material
Source: Weblink 28

4.1.5 FotoKite

FotoKite has created a drone attached to a cord that the user is able to control from the ground (Illustration 13). It appears to tackle users’ concerns with the lack of control over drones and existing safety regulations. It also addresses users’ desire to capture moments as **spontaneously** as possible to maintain the **moment’s authenticity**: *“It deploys quickly, is controlled easily and packs up fast allowing you to capture the moment before it’s gone”* (Weblink 29).

The company’s endeavour to produce a consumer-friendly drone came about following the high demand from consumers who had been exposed to their professional drone used in broadcast journalists. The project came to fruition thanks to a crowdfunding initiative and was met with success in the market.

Each company analysed includes a press category on their website. Thus news appears to be an important feature for the drone company websites. This allows them to keep their consumers informed on updates in the industry. These are happening fast and may



have a significant impact on their use, especially in relation to the laws and regulations that are regularly being re-assessed.

After having introduced five important selfie drone companies and their branding activities, consumers' perceptions of selfie-taking and selfie drones will further be analyzed in the Findings section.



Illustration 13
Source: Instagram @Fotokite

5 Findings

The data collected from the focus group, in-depth interviews (see Appendix 2) and netnography has been separated into two sections: one relating directly to selfie-taking and the other more specifically to selfie drones.

5.1 Findings on Selfie-Taking

As an introduction to the findings, all participants in the research stated that they captured footage on their smartphones on a regular basis, and focusing on selfie-taking behaviour it was noted that all respondents had taken a selfie within the last few hours or the day before the interview. Having discussed the recent developments of technologies used to take footage of oneself, it is apparent that the digital camera is no longer favoured over the integrated smartphone camera, based on the participants' responses. This supports the apparent popularity of the selfie-taking activity amongst the millennial consumer group.

5.1.1 Contexts and motives

The main suggested situations in which selfies were taken were the following: with friends and family, at the gym, before going out to a party, in a routine activity, on holiday or for a special occasion, as discovered from the logs (see Appendix 1). The participants use their smartphones to capture themselves either alone or with third parties, whether it be a photo or a video. These different usage situations reflect the following motives for taking selfies.

5.1.1.1 Selfies for convenience

One clear motive for taking a selfie is for the convenience it offers. If one does not want the hassle of asking someone to take a photo of them, one can take a selfie to make sure everyone is included. That way, the photo is taken at that very instance to capture a specific moment: *"Some are taken just because the person taking it also wants to be on the photo and it's quicker this way"*. Selfies are images taken off the cuff: *"just a quick moment, I'm not planning it"*. One participant adds: *"I take a picture and I just send it – I am not even checking if I look good in it"*. The purpose is to relay photos right there and then in an authentic and spontaneous manner, as stated by the authors Iqani and Schroeder (2015).



5.1.1.2 Selfies as self-love

One participant shares that she is prone to taking selfies before she goes out. She states that the reason she takes one in this particular context is because she believes that she is looking her best and wants to show this to others:

“Done my hair, done my make up so then I just did a selfie and posted it on Instagram story, SnapChat story so maybe a few love interests can see that I’m looking good, going out on a friday, loving life.”

She adds the following: *“I was thinking “oh this is a good lighting, I’m looking good” and “then I was going to put it on SnapChat. But then I thought it’s just another pouty selfie so then I just deleted it”*. This relates back to the research showing that posting selfies can be associated with **narcissistic characteristics** (Fox & Rooney, 2015). The interviewee’s reflexions on sharing *“another pouty selfie”* show that she is aware that this is common behaviour for her to post this type of content on her social media channels and acknowledges the fact that it is an act of self-love. She says: *“So a bit of self-love is okay but not too much”*. It appears that there is a somewhat negative perception of posting excessive photos of just oneself: *“That’s like getting a bit cocky, like I love myself”*. Another one states: *“I don’t want to be the one, like “Hey! Look at me!” So if it’s more like a personal selfie of myself, I just send them privately”*. There is an apparent stigma that appears to be associated with sharing individual selfies and specifically if done in excess. Some participants noted they would never do it themselves and considered it to be a *“superficial”* endeavour.

5.1.1.3 Selfies as visual communicators

Another recurring aspect of the discussion was the ability to communicate visually through the use of selfies. One participant identifies the activity as one that generates a sense of **“togetherness”** that one wishes to convey to others (Munar 2011) as expressed by the following interviewee:

“(Sending a) selfie to your best friend or to your mum for example so they can see where you are. So they can feel more included. They can kind of visualise it more. It’s more visual. They are happy to see us together. I guess human beings are quite visual. A visual is more emotive maybe. I guess it’s trying to include them in that particular moment”.

Selfies offer the possibility of communicating in a way that is more visual than a written message, as suggested by Katz and Crocker (2015). Through facial expressions, people



are able to convey emotions. Two participants said selfies are: *“more active and interactive”* and *“the message is more personal”*. The participants can include people in their experiences: *“it’s nice to show it to your family and to your friends what you are doing”*. One interviewee says: *“We were just having a conversation about football and then just snapped each other’s faces; facial expressions”*. It suggests that people enjoy sending and receiving photos of each others’ faces almost to feel like they are with that person at a given time, reducing the distance between them. It’s a means of including someone in their daily lives by redefining time and space. The receiver becomes a part of the experience and then connects with the sender (Berry and Schleser, 2014). As opposed to the selfies for self-love, some also like to send selfies to convey humour: *“Not like, oh yeah, I am cool, more like awful selfies of myself to make people laugh...”*. This was also supported by the findings from the logs whereby all participants stated that they uploaded selfies for humorous purposes in everyday situations (compare Appendix 1).

5.1.1.4 Selfies as memories

Another reason for taking selfies relates to their ability to safeguard memories: *“On WhatsApp with my friends and family to keep a souvenir of the moment!”* Another participant states that the last selfie she took was in front of the Milan Cathedral during her weekend away with her friends. It appears that participants also value selfies as a means of saving memories of special occasions with everyone present on the photo to remember the people there that day: *“I think about taking pictures with my friends when I go out, or with my friends to remember a particular moment”*. One participant says she saves her selfies only for rare occasions:

“Say if it’s a trip to Paris or something that I will generally flick through my camera roll and think “such a great time”. To remember it ‘cause otherwise... [...] It’s a memory, something I would look back on in a photo album or something”.

Another interviewee reiterates the idea that it allows everyone to be included and remembered:

“I feel most of the selfies you take are more for your personal memory because you’re there and maybe you don’t have someone to take a picture of you, but you want to remember. You don’t want all your pictures to be with nobody in them”.



5.1.1.5 Selfies as empowerment

What is said to be appreciated in a selfie is the person's ability to control the outcome. It empowers people to govern the rendition of their own image: *"You can get the good angle, you can get the good light, you can take five, you can put a little filter so [you're] guaranteed to look good – [it's a] winner"*. This supports the idea of **empowerment** put forward by Kedzior and Allen (2016). A person may pay more attention on making it just right: *"People spend more time on the latter (taking selfies of just them) making sure it's perfect"*. Thus, the person can manipulate the result and be the master of their online identity (Eagar & Dann, 2016). In other words, they decide what visual content of themselves will be visible to others in the online sphere.

5.1.1.6 Selfies as online identity

Participants conceded that some selfies were posted with the goal of receiving acknowledgement from their peers in the form of likes and comments. When asked about the reasons for uploading a photo to a social media platform it was to: *"Get more likes and get a reaction on what people would think about what you are doing"*. Additionally, it was suggested that when uploaded to social media, the owner of the selfie would only do so if the image rendered an optimal version of themselves:

"If you're going to post it you're not taking one where you look disgusting. So naturally you think you look nice if you're posting it. The picture I took was a bit filtered. I looked more brown than normal."

This contributes to Hjorth and Pink's idea of sharing with others your **desired self** (2014) and the content provided is a reflection of your identity (concept of extended self put forward by Belk, 2013). It thereby explains why participants pay particular attention to the content they choose to share.

As one participant says, similar to the idea put forward by Stoller (2013), selfies help contribute to the creation of your online human brand narrative: *"I mostly do it at the gym and then upload it on Instagram so that they can follow me, like that is kind of how my profile is formed I guess"*. This one particular interviewee is a fitness enthusiast. He enjoys uploading selfies of himself doing a particular work-out at the gym to share with his followers. It's a way of giving his social network advice and showing the activities he performs, thereby contributing to his **online persona** that is created with a particular audience in mind, as suggested by Saltz (2014).



5.1.1.7 Selfies for travel and special occasions

Selfies were mentioned multiple times in the context of travel. The ubiquity of internet has made it possible to share photos in real time with people all over the world: *“now that we can share wherever we want it’s kind of a huge factor for when you are travelling”*. Participants said they can share their location instantly whether it be with close friends or extended social groups through different social media channels. It appears to be important to convey the context of the selfie. Here, mobile technology has helped extend the content to outdoor activities. When travelling, participants suggested they are duplicating their presence in multiple locations in the online sphere, thus creating a hybridity between different realms of reality, as identified by Souza e Silva (2006, in Hess, 2015). What used to be private has now become visible to other individuals and the ubiquity of technology means that our physical presence can be extended to another dimension at all times.

5.1.1.8 Selfies as self-documentation

One participant notes that the footage that he takes is often for his own private use meaning that it is not necessarily to be shared. He enjoys *“just playing with the frames and putting cool music. But just for myself”*. This supports the idea put forward by Rettberg of archiving your experiences (2014) to create compilations of visual images that can be viewed at a later stage as a form of visual diary. The same participant added: *“I like taking photos in a nice setting, then you can take some amazing footage. It’s fun to experiment and see what you can take”*. This suggests that the footage taken has a more **artistic intention**, moving away from the goal of only including yourself in the captions but instead focusing on photographic skills to produce beautiful images, without necessarily including oneself in them.

Overall, Weng’s definition of a selfie takes on its full meaning in light of the observations collected: *“the taker consciously captures a moment intentionally anchored within a specific situation that is shared more or less extensively, creating dynamic interactions”* (2016, p. 1775).

5.1.2 Different channels for different recipients

A very clear consensus emerged with regard to the different channels used to publish selfies and their specific recipients. Unanimously, SnapChat is used by our participants



as a means of sharing instant, raw images with close friends and family. For Instagram, the photos posted have been taken with more care, applying filters for a more polished effect: *“Through Instagram, for example, you would filter more than if you were with SnapChat when you would just send stuff out”*. Furthermore, the recipients differ from one platform to another:

“On SnapChat I only have my closest friends and I like that only a selected group of friends sees those pictures, while on Instagram I also have my friends, but it is a larger circle of people, so I place more attention on what I post there. On Snapchat I put on funny photos, I don’t really pay attention to what I post there”.

However, both offer the opportunity to share videos and photos on the “stories” tool of SnapChat and Instagram whereby users share more day-to-day videos and photos of their activities. Surprisingly, YouTube and Facebook were cited much less by the participants as a possible platform for sharing footage of oneself. However, elements from the netnography showed that Youtube is an extremely popular channel for publishing travel video montages. These comprise video and photo footage including selfies that are then published through Facebook to share with a broader audience. Thus multiple channels exist with differing purposes which provide consumers with varied options for different types of selfies and footage captured.

5.1.3 Limitations of selfies

Selfies are an extremely popular activity and light has been shed on some of the reasons for their widespread use. However, participants also put forward certain drawbacks relating to selfies. For example, one participant said she was unable to capture the background of the photo when she was at the Cathedral in Milan. Only the group she was with was able to fit in the frame. This idea is seconded by another participant who states: *“If there’s this beautiful scenery, why does my big head have to be in it. I’d rather just take a photo of the scenery. Maybe one selfie at a bad angle”*. This statement emphasizes the **limited scope** of a selfie taken from a smartphone and how it fails to render a satisfactory image of the location. It also reiterates the appreciation for authentic and raw, imperfect footage to capture a moment.

Additionally, one participant states that she shared footage of a football game she attended. It was important for her to film her surroundings to show the location as well as convey the atmosphere that she deemed “cool”, as a way to “show off” to her peers on



social media, with the aim of generating **admiration** in a performance-type way (Munar, 2011). The limited scope of the selfie taken at arms length meant that she chose to capture the environment and the atmosphere rather than herself.

From the participants' insights, it is safe to say that selfies are both appreciated and rejected, yet they remain "*the most effective outlets for self-definition*" as stated by Murray (2005, p. 490). Overall, the consumer group regularly captured footage of themselves and this activity is undeniably related to social media as references to the latter occurred throughout the interviews. The aspects discussed may be valuable in assessing if and how selfie drones may become beneficial in enhancing this selected consumer group's selfie- and footage-capturing experiences.

The above findings have provided a better understanding of the diverse set of motives for selfie-taking behaviour and appear to support the idea of a selfies "*as assemblages which connect self, space, technology and social networks*" (Hess, 2015 in Kedzior et al., 2016, p. 1769). After this general analysis of selfie-taking behaviours and perceptions, the attention will now turn to selfie drones in particular. This will help further our understanding of consumers' perceptions towards the technology. Consumption motives and obstacles for selfie drone use will be developed to later suggest ideas for the branding strategies of selfie drone companies.

5.2 Findings on Selfie Drones

As companies are starting to deliver their first selfie drones, the products are entering the introductory phase of the Product Life Cycle (PLC). To invest in the appropriate branding strategies, selfie drone companies need to know what drives their potential customers to purchase a selfie drone and what obstacles they may have towards selfie drone adoption. For this purpose, a summary of the findings of the qualitative studies is presented in the form of a perceptual map. Through the analysis of this map, the main *motives* and *obstacles* for selfie drone use will be formulated.



5.2.1 Perceptual Map

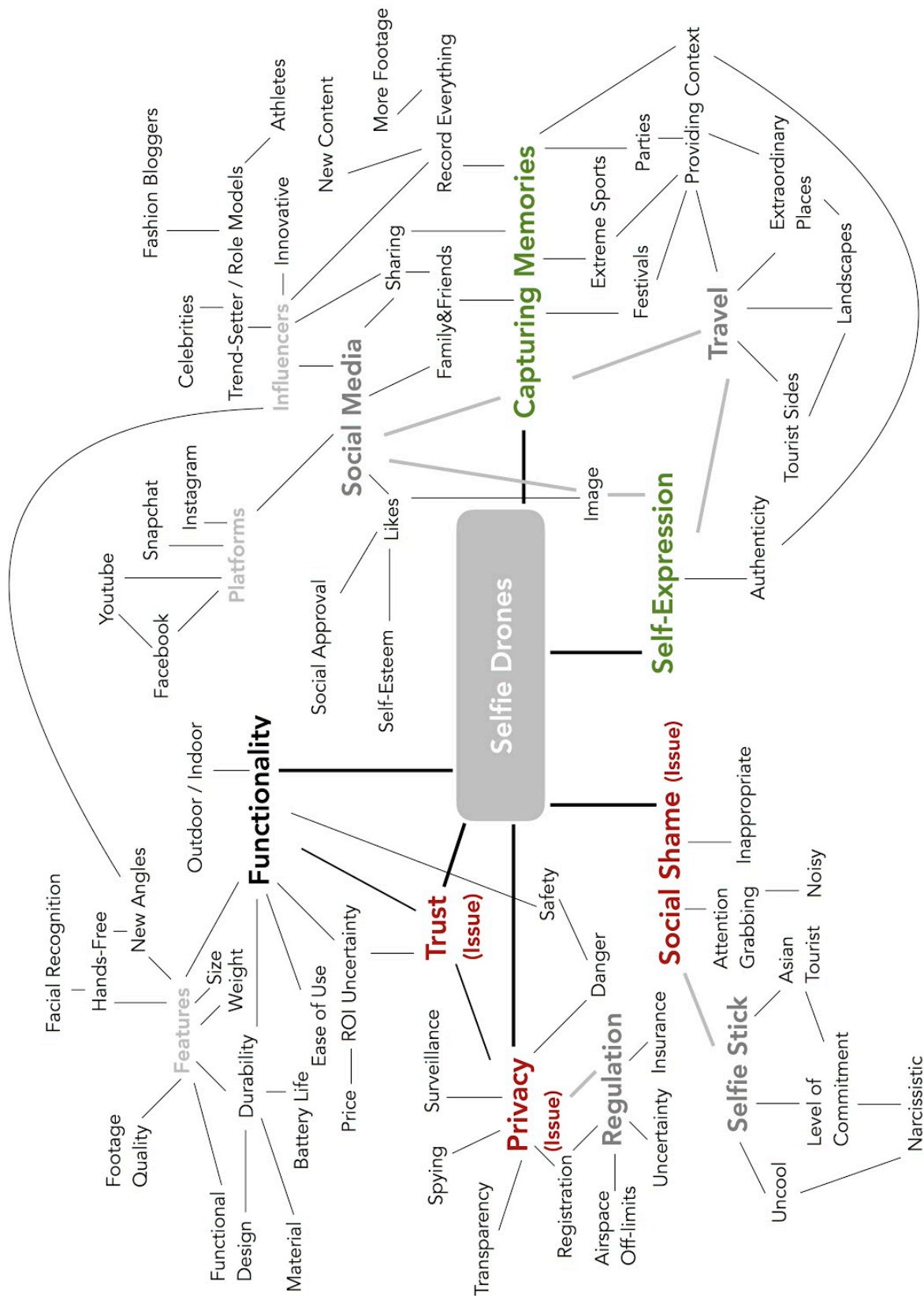


Illustration 14
Source: Own Illustration



During the interviews, concerns and interests related to selfie drone usage were expressed and discussed by the participants in light of their everyday practices. Main themes were identified including *trust*, *social shame*, and *relatability* issues on the negative side and *capturing memories* and *self-expression* on the positive side of selfie drone perceptions. The functionality theme plays into both the **positive** and the **negative perception** of selfie drones as will later be examined. The findings of the qualitative research will be further analysed in terms of usage obstacles and motives, reflecting the negative and positive perceptions conveyed.

5.2.2 Obstacles to Selfie Drone Use

The initial reaction of most interviewed consumers towards selfie drones appeared to be negative, stating that they do not have a need for this kind of product. The initial negative reactions were addressed in the interviews to try and understand the underlying reasons for these perceptions.

5.2.2.1 Trust

The most prominent themes that emerged included concerns regarding trust towards the technology. Trust was related to the functional aspects of selfie drones as well as the technology's link to privacy and regulatory issues. The *functional* aspects deal with the selfie drone as a device that can be analysed with the perceived ease of use and usefulness of the TAM (Davis, 1986). The *privacy & regulation* issues are concerned with how the selfie drones can be (mis)used and thus places the drone use in a wider societal context with collective implications.

Functional Aspects:

Selfie drones need to have certain key features for them to be regarded as useful to the consumers and their selfie-taking practices (compare TAM) as well as trustworthy in terms of **return on investment**. On the functionality level, participants discussed several features of the product including durability, footage quality, design, ease of use and price. On the most part, the consumers are sceptical about the selfie drones' ability to meet their expectations in these areas, thus hindering their receptiveness to the product's purpose.



- Durability

The consumers expressed concerns about the durability of selfie drones, e.g. the material of the drone that needs to be robust. It should also have a functional design that prevents accidents (for example injuries caused by the rotor blades) and increases the lifetime of the product. Consumers are worried that their drone will break as it is perceived to be a fragile technology. One consumer talked about his first-hand experience flying a selfie drone:

"...but the fact is that it broke before I could make it use the camera.

*We were like "Okay, first we have to learn how to use it otherwise if it falls down then the camera is f****, but the drone was broken in a couple of days."*

This unsatisfactory experience with the technology leads the consumer to not want to buy another selfie drone, saying that he wants to wait until the product becomes more robust and easier to use. Similar statements are also found in the netnographic study, for example: *"I love the concept, so hopefully in due time you guys will work out the kinks"*. The consumers are concerned with the malfunctions of the technology, particularly prominent due to the fact that they are new in the market, also a characteristic of the early majority (Moore, 1991). This further underlines the **scepticism** of consumers who would only be willing to buy the product once it has been thoroughly tested by early adopters.

Consumers are even more concerned with the quality of the product regarding its country of origin:

"People say China produces crap, only copy, and real cheap stuff. Little did they know, DJI is a Chinese company based in Shenzhen, China. China is now really going hard in the tech world".

This comment puts light on DJI's challenge to target consumers' negative perception of the quality of Chinese manufactured products. The **battery life** also seems especially important for consumers, who want their drone to follow them around and take longer videos:

"What is with the battery life? If I wanted it to follow me through my shopping day in Milan and it ran out of battery in 10 minutes. That would annoy me."



- Footage Quality

Another factor relating to the selfie drone's features is footage quality. Here, the consumers are concerned that the footage will not be stable enough to take clear images.

"And I don't believe that it is very stable. But this is a prerequisite that it makes pictures, that it is not blurry. Also, it can't be windy, because it would probably be so small that the wind would push it."

This concern can also be supported by the findings of the netnographic research. On a website that appears to be very critical of selfie drones (Levin, 2016), the poor image stabilization in most current models is also heavily criticized:

"It's somewhere between a cheap and middle class phone. Do not expect sharpness or dynamic range."

One trust issue that is specifically related to the advertising of selfie drone companies is the observation regarding the public's desire to see footage shot with the drones themselves rather than professionally-produced footage showing how to use the drones. This decreases the consumer's confidence in the quality of the images the drones are able to produce. As one individual states: *"Why don't you show any footage from the flying GoPro? Is the footage too shaky to impress?"* (Weblink 30) Many voiced their disappointment with the camera quality and stated that they would only buy one once the quality had improved: *"Too bad the camera quality sucks so bad... can't wait until they start selling 1080p HD pocket drones..."*

Certain products do not allow consumers to record the sound, thus limiting the footage they can capture. This may reduce the perceived usefulness in saving family moments for example. The companies fail to communicate the fact that the product does not record sound, as one customer says: *"Does this camera record sound?"* This may inhibit people's ability to record valuable memories to their full extent. This also damages consumer satisfaction which, if communicated to others in the form of complaints online, can have a snowball effect on how it will negatively influence other potential customers' perception of the product.

- Ease of use

In terms of ease of use, many participants were sceptical about how simple the product is to navigate. This may include questions such as how to fly the drone in the air and



stabilize it to take pictures. Also, the question arose regarding how easy it would be to take selfies in situations where the consumer does not have his hands free to control the device with a remote control or smartphone. The following quote conveys the worries of one participant:

"...the difficult thing for me is to go into the app and have the drone in my hand. In a gym situation, that is not possible. I want to limit the time in between sets for example and I only have a minute, so if I would carry that thing and control it. Also, maybe I want a picture of me doing stuff, so I would not have a hand to control it. It is just too much of a hassle."

Here, the consumer thinks about his routines and how a selfie drone might be integrated into these. For this particular consumer, a selfie drone does not seem appealing to help take his gym photos and videos. Another participant also voiced different issues that made her sceptical towards the usage of a drone: *"It needs to be very easy and maybe a software that stabilizes it a bit."*

The interviewees envisioned different situations where they would take a selfie and where a selfie drone could potentially come into use, and identified many specific questions they had and problems they would encounter when using a selfie drone, such as the weather conditions for example.

- Size and weight (design)

The selfie drone was deemed inconvenient by participants. One said: *"I don't know if I would have room for one to carry it around in my bag"* reflecting how cumbersome and impractical it is when a selfie should supposedly be taken spontaneously. He would only maybe carry one when travelling alone.

- Price

The price of the selfie drone is also an obstacle for consumers. Some of the comments observed included: *"cool if you can afford it"* and *"This thing looks beautiful! I wish I had the budget to try one"*. They perceive the products as too expensive and a potentially risky investment given their potential to crash. One person comments on a promotional drone video: *"How many go down in the making of this video?"*. They cannot match the functional capabilities of current selfie drones (especially durability) with their price, causing uncertainty with regards to their potential investment.



C: *"If I buy something and then I am not able to use it, my money is trash basically. Also, the first days will be more difficult to use and then I crash it, and I don't know how much it costs, but if my 200€ are trash that is what worries me."*

Many comments compare price and quality of different products which appear to make the choice for consumers difficult and could thus delay their purchase decision. Many magazines have published comparative articles, describing the differences between each product, further highlighting how many products are now available which could be overwhelming for potential customers.

Additionally, comments were received on various DJI promotional videos stating the following:

"I truly hope you never have to deal with DJI support. I will never buy their products ever again. The way they treat you... Oh boy!"

"Beware, read up more, I'm an owner of one and there are many issues to this product and their customer service response. They are fast on sale but unfortunately not after sales service and many owners have had issues with this as well".

These issues appear to have a serious negative impact on consumers' perception of the product that could inhibit their desire to purchase the selfie drone.

Privacy and Regulation Issues:

Privacy and Regulation issues are two other themes that might inhibit trust in the technology. Emerging topics from consumers included *surveillance*, *spying* and *regulation*. Here, the consumers showed their concerns as to how selfie drone users might abuse the technology and use it inappropriately:

"...if they [selfie drone users] were using it to look into windows I don't know what I would do, probably call the police or something."

"If everyone would have a selfie drone, then I'd be afraid of drones crashing with each other, or into other things."

A major drawback arising from various blogs dedicated to drones and in particular the one from the New York Times (Weblink 31), is the danger associated with the use of selfie drones:



"Letting untrained civilians fly drones in any manner they wish is like giving a monkey a loaded gun. As a GA pilot I would propose a mandatory licensing requirement so that drone pilots are informed about the dangers of flying these aircraft".

Media has relayed accidents that have happened due to product malfunctions thus further contributing to the general public's apprehensions towards the technology: a GoPro Karma crashing into a window in New York City and cases of mid-flight battery shortages have forced the company to recall its product.

Gosden supports this idea, stating in the Telegraph that because of the increasing mass-market appeal of the products, people are increasingly concerned with privacy and safety and cases of accidents appearing in the news can only worsen this feeling (2014). Consumers are concerned for their **safety** and express their desire for steps to be taken to limit the usage of selfie drones. Some participants hope that government regulations would counter these negative behaviours by establishing no-fly zones and providing a regulatory framework. One participant says they should be limited to the following: *"Like helicopters, they should be reserved for the most essential purposes – medical and emergency rescue, fire, anti-poaching of wildlife etc"*. Another considers them to be a *"menace"* and should be controlled before a disaster happens:

"I suppose it will take a disaster before something is done. These things are a menace. I doubt anyone has died by selfie stick....drones will likely be another matter. Whether sucked into a jet's engine or dropping onto someone's head, these toys are a menace if not controlled in some fashion". (Weblink 32)

On the other hand, the netnographic research has shown that a drawback to the product seems to be its legal limitations. One comment to a Financial Times article states the following: *"Drones can be great fun in the right circumstances — but those are increasingly difficult to find."* Another person furthers this opinion by noting that in countries such as Canada, it is almost impossible to find a location where it is legal to fly one: *"Sorry I can't go enjoy it, I'm from Canada where drones are basically illegal now. #hobbyruined"* (Weblink 55). Another individual stated that the limited usage possibilities did not cover the costs of buying one: *"That makes it hard to imagine these are devices that I would use enough to justify the cost"*.



5.2.2.3 Social Shame

Some consumers mentioned that they would feel a form of social shame when using a selfie drone. It was challenging to discover the reasons behind this lack of comfort with the usage of selfie drones in public as the consumers were not able to articulate them when directly addressed about the issue during the interviews. This feeling of social shame appeared to be underlying and was investigated through indirect questions on the subject and related subjects such as the use of selfie sticks.

5.2.2.4 Selfie stick versus selfie drone

Participants were asked what their perceptions were with regards to selfie sticks with the aim of increasing the understanding of how they might be related to the way they perceive selfie drones. To further our understanding of social shame in regards to selfie drones, analogies were drawn from the comparison with selfie sticks. The following rhetoric emerged *“Do people actually carry around a stick?”* Some even went as far as to say they would be embarrassed to use one. All consumers in the focus group as well as in the in-depth interviews had a negative perception of selfie sticks. One said: *“You feel like a huge tourist with a selfie stick.”* They connected it to *“Asian tourists”* and did not consider this reference group to be *“cool”* enough (compare Bettman & Escalas, 2005). It was discovered that most interviewed consumers would be embarrassed to use a selfie stick because they negatively connect the product to this particular **reference group** (ibid). They also believe this reference group shows an excessive commitment to taking a selfie thus associating them with having undesirable narcissistic personality traits. Here, it is important to note that the group of participants was a fairly homogenous group of young Europeans, which may explain their similar perceptions of selfie sticks and their users.

When comparing the selfie drone to the selfie stick, it appears that consumers perceive selfie drones to have a similar function, but a very different form (Runde et al., 2008). The different form is assumingly the reason why the interviewed consumers did not make a direct connection between selfie sticks and selfie drones. If the correlation had been made, this might have led to negative bias towards the new technology. Moreover, the interviewed participants that had not heard of selfie drones before, have not yet necessarily formed a firm opinion of what social group they connect the selfie drone user to.



However, the following comment shows the concern of a consumer to negatively stand out from the crowd, similar to their perceptions of selfie sticks:

"...it just seems weird to have something flying in front of me. If more people would use it, it would seem less weird."

This participant claims that she would feel more comfortable if there were more people using the technology. This illustrates how social norms as well as the selfie drone's current stage of diffusion influence the consumer's consumption behaviour.

5.2.2.5 Public acceptance

Consumers expressed their reluctance to be a public nuisance: *"It's cool right now, but how cool will it be when everyone has them and they're flying all over the place, everywhere you go?"* These comments reflect how consumers are concerned with the intrusiveness of the product. Furthermore, consumers are afraid that selfie drones would be **socially inappropriate**, attracting too much attention publicly, partly because of the loud noise that most selfie drones make. One statement observed in the netnographic research highlighted the aversion towards the noise: *"I can't wait to be walking through an ancient cathedral with the sounds of four or five of these things stirring up the ambiance..."*. The netnographic study also supported this idea as seen in the following comment: *"Even without the legal restrictions, I don't want to be that guy with the drone buzzing over people's heads on a sunny afternoon in the park"*. This clearly shows there is a certain stigma associated with the use of a drone. Assumingly, people are not ready to embrace this role and the "cool" factor is limited to specific scenarios where other people would not be bothered by the device.

The participants were asked who they could imagine using a selfie drone if the technology were to become more widespread. One person made the following statement in the focus group that several participants agreed to: *"Maybe those rich kids wannabe like cool."* Here, the participant speaks about a social group of "rich kids" that are "wannabe cool". This statement towards the group of people who would be associated as the users of the drone technology appears to be of a negative nature. Interpreting the interviewee's wording of "rich kids", he seems to imply that the potential users of selfie drones have above average money to spend and that they would be willing to spend that money to have some novel product to show off with. It also implies that they would not refrain from purchase because of financial repercussions, in case of damage or loss. We



have learned that the group of early adopters is willing to spend more money on new products and that they use these new products in a social context, showing it to their social network (Moore, 1991). The participant's statement appears to negatively portray a hypothetical profile of an early adopter. The selfie drone as a new product starting to be marketed to a mass market by a number of new selfie drone companies is in the entry stage of the *Technology Adoption Cycle* that calls for the involvement of Early Adopters (compare Moore, 1991). It is surprising that the role of early adopters has been portrayed by some as negative. This is another point that has to be taken into consideration when discussing the implications of the brand management of selfie drone companies in the next chapter.

Additionally, consumers are concerned with the image conveyed to their social media sphere since the footage one chooses to publish is seen as a direct reflection of one's social status, further reflecting one's values. This is an idea also put forward by Presi et al. (2016). An interesting comment was received on the DJI website regarding a travel-related video generated from one of the brand's selfie drones: "*Mavic pride!*" This indicates that there are also consumers with a certain amount of **pride** and assumingly publicly-voiced **loyalty** towards the brand. It underlines a contradictory feeling towards selfie drones that not only trigger a sense of social shame but can also generate a feeling of pride, and in particular within the context of travel.

5.2.2.6 Relatability

Some consumers voiced their discontent towards the selfie drone companies' lack of ability to relate to the consumer. GoPro's online audience stated the following: "*Looks awesome... if you live in a tropical locale and are subject to multiple helicopter rides. Way to relate to the common consumer, GoPro*". On one hand it could be an advantage for consumers who are seeking an element of exclusivity in the product, but on the other hand it could hinder GoPro's ability to connect with a broader audience interested in purchasing a Karma for more mundane activities. DJI's audience also illustrates this point as the reactions to a video shot by a family of their everyday moments received very positive comments: "*Oh, yes! And great job! Really nice ad! I'm ready to buy one!*" This shows that DJI is capable of effectively relating to its potential customers and addressing their desired usage situations. This shows the importance for consumers to



feel engaged with the product, and a brand's inability to connect with its customers may negatively impact consumer perceptions.

5.2.2.7 Lack of Awareness

Although most of the participants in the focus group and in-depth interviews have had first-hand experience using a drone, the concept of a selfie drone was new to most of them. This lack of knowledge is a characteristic of the introduction phase of the PLC (Day, 1981). Hence, creating awareness of the product segment among the potential consumers seems particularly important at this stage.

The literature review explicated Rogers's (2003) five different steps in the adoption process, starting with awareness of the innovative product. Although many of the focus group and in-depth interview participants seemed intrigued by this new technology when told about the specific selfie drone products on the market, they pointed out the lack of measures taken to increase awareness of it.

"But also you don't see it. I've never ever been into a shop and seen a selfie drone or never ever seen an ad on the television about a selfie drone"

"Just I don't think you see them anywhere."

These findings are supported by a comment received on the GoPro's website stating that: *"People just buy GoPro because it's GoPro"*. GoPro benefits from an existing fan base that can help in its efforts to increase the product's visibility in the market. Other companies that do not benefit from the same presence in the market cannot leverage their existing notoriety to attract consumers to their product. The lack of awareness appears to be an important point that will be furthered in the discussion section, to determine what selfie drone companies can do to increase their brand visibility among the relevant target group.

5.2.3 Motives for Selfie Drone Use

It is important to note here that most in-depth interviewees shifted to a more positive perception of selfie drones after having been shown some concrete selfie drone examples and selfie drone advertising clips by the interviewers. On the positive perception side, the consumers mainly talked about the themes of *expressing themselves*



and *capturing memories* through the use of a selfie drone. Specific *functional benefits* were also highly regarded.

5.2.3.4 Functional Benefits

As a functional benefit, many participants have given some concrete examples of how a selfie drone would enable them to take more advanced footage than with a regular smartphone camera or a selfie stick.

"And they have also integrated 4k video making now in the drones. So that, yeah, I love drones for that."

"Yeah 'coz it's hands free. You can get more action shots. It's just giving you an extra foot on your arm."

"So, for example a private party, I would use a selfie drone instead of a Polaroid, because it will be easier to fit everyone in the picture."

Providing a bigger frame for the picture due to a greater distance appears to be a clearly recognised **functional value** (as in Sheth et al., 1991). Also, the fact that selfie drones can become hands-free for the user seems to be particularly valued by the consumers. Consumers appreciate being able to take selfies in situations that were not possible before, via facial recognition, a technology that some selfie drone companies already use (i.e. Zero Zero Robotics). In the netnographic study, the comment *"That's a neat little drone-cam to carry in your bag like a notebook"* supports the idea that size and weight is important to some consumers who highly value the ability to carry the device around with them in a convenient and non cumbersome way.

Also, when shown the design of a particular selfie drone, the *Air Selfie*, participants reacted very positively, especially to the fact that it is built into a smartphone cover. As discussed in the literature review, the outer appearance and aesthetics of a product can trigger positive and negative feelings towards the product and thus possibly add **emotional value** (Sheth et al., 1991).

"The Air Selfie actually looks really cool and futuristic."

"Wow I have no words. This is beyond cool. Exactly what we're looking for to take on our hikes. Great design!"

"I want this right now! Such a cool futuristic looking gadget."



The Air Selfie's perceived futuristic design and aesthetics seemed to have fascinated the interviewed consumers and thus also have the potential to create emotional value that should be considered when branding a selfie drone.

5.2.3.5 Capturing Memories

Almost all interviewees agreed that selfie drones are not as practical as just using the smartphone in everyday situations. They would mainly use the selfie drone for **special occasions** such as travelling, vacations or extreme sport situations. When travelling, participants would use a selfie drone to record extraordinary places, such as tourist sites or landscapes.

"I feel like if you're in an amazing location, maybe. I don't think you'd do it just 'coz you went for brunch or something like that."

"But maybe if you did stuff like if you went surfing for the first time or surfers they would want like a drone following them when they're doing that 'coz there is no way you can film or take a selfie picture whilst you're doing those kinds of activities"

This is also related to the theme of sharing memories with family and friends, which seems to be very important to the consumers. In the focus group, the participants discussed how a selfie drone would enable them to share even richer and diverse memories with their loved ones. One participant, for instance, states that selfie drones can enable her to *"share more with friends and family and then you could kind of follow people's lives a bit more and feel like you're more part of their lives.."*

DJI users expressed great enthusiasm towards a travel vlogger post on Instagram, even generating the following statement: *"Going to be looking into getting one of these!"* One participant connected the selfie drone with the theme of a family vacation, where the drone enables the family to record memories that can include every family member on the footage, without needing to exclude the photo-taker.

"We have all seen crappy footage of going camping whatever, and imagine you had 4K video footage from the air of your whole family, because this is the problem with family pictures, you always have one person behind the camera, either the dad or the mom. Then you could have the whole family in the frame at all times. You could use it in places where it is difficult to use a normal camera to record beautiful family memories, so that is the value proposition of that kind of selfie drone."



Here, we can see how consumers intuitively connect the use of selfie drones with pleasant and extraordinary experiences and see it as a tool to capture these memories. This existing connection might provide a chance for selfie drone companies to further enforce these emotional connections.

The new technology appears to contribute to capturing moments important to the consumer's identity and life projects:

"I would think of the day when I was on top of the Rockefeller center. Because everyone is up there with their phones out to take pictures so if I could have a drone to go higher up then I could take the same pictures without all the annoying people around. This really was a great moment up there, I felt so strong and cool, being up there on the skyscraper. With a selfie drone, you can capture the moment in a more authentic way."

Using a selfie drone on the top of the Rockefeller center in New York would have enabled this participant to capture her memory without having strangers in the picture. A selfie drone would enable her to take a picture of the New York City skyline that could also capture herself in it. The functional benefit of flying higher than other people and taking a photo from above is mentally connected by the participant with an **emotional moment** she had when travelling to an exciting destination. This is an interesting insight, showing how selfie drone companies could combine functional and emotional values (compare Sheth et al., 1991) effectively in their marketing efforts.

5.2.3.6 Self-Expression

Creating context

An important theme that consumers articulated was that selfie drones enable them to capture the context in which the selfie has been taken. It is suggested that it allows an increased connectedness to their audience, confirming the idea put forward by Berry and Schleser (2014). This is seen as a factor that positively differentiates it from other selfie-taking devices such as a smartphone or selfie stick.

"I think it would maybe make people feel closer in a way because you would be able to share your experiences maybe more when you're not with someone and they would have a better content of it if you're sharing like a little video going around in Distortion [festival in Copenhagen] and stuff. You'd get a way better idea then."



This also touches upon the idea of enhancing the way people are able to communicate in a more visual way as mentioned by Titcomb (2015). One of the drivers for the usage of a selfie drone can be classified as comprising **epistemic value** (compare Sheth et al., 1991). Even though most of the interviewed consumers have not tried a selfie drone before, the product seems to trigger curiosity and is seen as an enabler of new experiences.

"...and it adds context to where you are so you can show that I'm part of this whole Hurricane [festival in Germany] instead of just three people; you're part of this whole thing and I'm right here in the middle. That's great I think..."

In this respondent's case, the selfie drone would enable him to capture memories of a festival in a more real life manner, adding *context* to the selfie, as he describes it. The concept of *context* appears to be important as this seems to tap into a common theme of young social media users. They share their lives and want their social network to follow them when experiencing special moments in the most authentic fashion. It again supports the idea that consumers can extend their physical presence offline and online, creating a hybridity between the two realms (Souza e Silva, 2006, in Hess, 2015). They are able to connect with those who are not physically present in a very visual and vivid way.

Many participants have described specific situations where a selfie drone would be appropriate for use, e.g. travel vacations or parties/events. Other situations from daily life where they would normally take spontaneous selfies with their smartphone have not been deemed relevant for the use of a selfie drone.

"Instead of having a photographer in the party, a drone would be quite good. But this I would only do if I was the host of the party."

"It could be really fun though to have one at a party and it would elevate the amusement to a new level like people watching the drone and hey, like waving and stuff."

This describes the **conditional value** (compare Sheth et al., 1991), where the selfie drone meets the needs of a specific situation. These examples also relate to the point of *context* previously discussed, where the specific need in the situation is to create *context*. This contributes to the idea that shared images are anchored in a particular time and place, reflecting the term "*diegesis*" put forward by Munar (2011). This can be achieved



by creating a connection to the beautiful landscapes of a vacation trip that consumers want to remember themselves in. It could also be captured as the atmosphere of a huge party, where selfie drone users are celebrating with many other people and want to remember this event with material beyond a normal selfie at arms length.

Participants agreed that selfie drones enable the consumer to create content in an authentic way. This seems to be highly connected to the theme of providing context. The participants also discussed that a selfie drone will help create a specific image of the selfie drone user. Here, the interviewees made a connection to social media, where they would all upload footage they recorded with a selfie drone. The change in social interaction through the emergence of social media that seems to be inherent in today's culture creates the space for new, innovative forms of visual material. This can be related to theories linking changes in social interaction and culture with the emergence of innovation (compare Pace, 2013).

Social Media Enhancement

With regards to social media, important themes were uncovered in the interviews. The first one is the different usage situations for different social media platforms that would influence the use of a selfie drone. Participants, for example, agreed that it would be unlikely for them to use a selfie drone for their posts on SnapChat. This is because Snaps are supposedly more spontaneous and the time taken to set up a selfie drone was deemed too long.

"SnapChat for me has to capture the moment in its friendliness, as it is without thinking too much about it. I take a picture and I only send it – I am not even checking if I look good in it. If I post it on Instagram, I check if I look good in it and check if I can make it better through a filter or something like that. So I think that would be too much effort and time consuming for a picture that you post on SnapChat."

However, due to the visual nature of the selfie drone footage, people emphasized that they would share content taken with a selfie drone on Instagram or YouTube but that the usage situation on the two platforms would somewhat differ. Consumers suggested they would post more personal content on Instagram, as only a close circle of friends has access to these visuals, whereas the content for YouTube could be less personal and shared with a general audience. One in-depth interview participant reflected on the benefits of a selfie drone with regard to his social media profile:



"The main motivator would be if I wanted to have a project for Youtube or my Instagram, like take it to the next level and produce a video."

"I would make videos for Youtube. Things around travelling - make me seem more interesting online. So people could follow me if I visited somewhere. And then take some footage for example of a mountain, river or a canyon. Because then I could see myself in the footage as I did that. So I made small videos that suit Youtube, for example 7-10 minute videos of like small experiences going places. I think this would be really valuable and I actually considered that."

Here, it appears that the selfie drone is seen as an enabler to become more successful on social media, e.g. attracting followers through more elaborate and appealing content, thus enhancing their human brand narrative (Stoller, 2013). Social media and its features are constantly improving, providing users with new ways of engaging with each other. This participant apparently also viewed a selfie drone as an option to start a Youtube channel of his own. The fact that a product can trigger this kind of motivation, or at least reinforce an existing one, shows how it might be a suitable product for tapping into the cultural meanings of selfies and social media.

The following quotes show under which circumstances the interviewed consumers see selfie drones as long-lasting products.

"...it [selfie drone] needs to have some sort of real value. It needs to create an impact, it is not just for fun. It needs to serve a profile - enriching your social media profile for example."

"It adds a filming perspective that you haven't been able to do before."

Here, it becomes clear that the participants expect a selfie drone to be useful (as brought forward in TAM), i.e. create *"some sort of value"*, in order to make a purchase decision and keep using it. For example, the selfie drone might be a tool to enrich the user's social media presence by taking pictures from angles that have not been available to regular smartphone users. Selfies are omnipresent on social media platforms and as discussed in the literature review, most young people take selfies regularly (Taylor, 2014). A selfie drone will enable the consumers to take selfies in different situations, providing a notion of context to the selfie. Selfie drones thus could potentially be used to further the consumer's own lifestyle project to enhance their digital selves (compare Belk, 2013).



As can be seen in the perceptual map, likes gathered through social media are another important theme in relation to selfie drones and social media. According to the discussions analysed, the likes on social media have two underlying sub themes: **social approval** and **self-esteem**. Often, the consumers seem to measure their level of social approval according to the number of likes on their social media profiles. Likes also appear to be a source of self-esteem, as the consumers seem to feel proud when their uploaded content resonates well with other consumers on the social media sites. This has also already been touched upon in the findings on general selfie-taking, where a consumer explained her motives for selfie-posting on social media. An article named *"Forget selfies - how 'dronies' could be the next big photography trend"* featured a quote from Parrot's Chief Executive, Mr Seydoux, supporting the idea that selfie drones tapped into consumers underlying need for approval: *"It turned out that in reality people bought the drones because of narcissism. People want to put pictures on YouTube of them looking strong and talented, and that is why people want the cameras"* (Gosden, 2014). This reflects one unspoken reason why people are buying selfie drones to share footage of themselves to show to others, in a self-centred way.

Role of Bloggers and Vloggers:

The participants identified influencers as early adopters of selfie drones, as these are the innovative forerunners on social media. Bloggers as social media trendsetters seem to particularly qualify in the eyes of our interviewees, as they could benefit from a new tool to enrich their content with extraordinary angles and new perspectives. The majority of participants has especially emphasized the role of bloggers/vloggers in using the technology first and acting as early adopters for this product. Vloggers were described as highly active individuals on social media, especially on Instagram and Youtube.

"...it was another personality in the fitness world. He brings his drone everywhere. He just visited Istanbul and then took the drone with him, so you could see the big cathedral thing. He brought that and made videos and it seemed so easy. These were really cool videos and it seemed effortless, but the value was so great."

This interviewee has learned to appreciate camera/selfie drone technology thanks to an active Youtube user that he follows online. Here, it can be observed how trust in the Youtuber as a role model inspires the participant to consider trying the new product.

"Also, bloggers for example. And models who post a lot of content on social media [...] A selfie drone can help them capture a realistic picture of their outfits."



This participant described how fashion bloggers could use selfie drones to take full-body selfies to present their clothes to the social media audience in new ways. If the audience saw that the selfie was taken with a drone (for example through hashtags or mirror reflections), this would inspire them to also use a selfie drone for their social media activities.

“..., but if a sports star or something like Adidas used a selfie drone I would find it so cool. This would also motivate me to imitate.”

The comment shows how influencers can have a positive effect on the purchase decision process for a selfie drone. In regard to selfie drones, one consumer in an online forum stated *“This [selfie drones] can take vlogging to the next level”*, showing the enthusiasm towards the technology for enabling a change in the way vloggers produce their videos to share online.

The insights from the research conducted have been presented here, revealing perceptions on selfie-taking and selfie drones from the consumers’ perspective. Below, the insights from professionals in the selfie drone industry will be exposed to enlarge our perspective on the market from an insider’s point of view.

5.2.4 Insight from industry experts

The findings generated from the expert interviews, (see appendix 3), will be presented below helping to gain a broader understanding of the selfie drones from the perspective of a drone industry professional as well as from the management of three different selfie drone companies.

Joel Fritz, Independent Aviation & Aerospace Professional, notes in an interview that drones remain a mysterious topic for the general public but that it will be seen as a tool that could become a part of their environment on the same scale as a phone or other communicative devices. According to Fritz, selfie drones **capture people’s imagination**. It is seen as a toy that allows people to reach a slightly higher social step. Being able to dominate this *“third dimension”* is exhilarating for people, even though this may just last until the device breaks. But in the meantime, that person has been able to reach the unreachable. He estimates that this activity involves many thousands of individuals in France as this is the country he is more accustomed to dealing with. He says that people



will be put off buying drones that require administrative steps before use. He goes further by saying that thousands, if not millions, of these “toys” will probably enter the market, but the interest will be short-lived and the product itself will probably also be limited in time. He states that these products cannot be compared to mobile phones that are durable and have become an intimate part of our lives. He estimates that the selfie drone will only have a short life, even though an important market for them may develop in the short term. Unless a real need for it can be found in the “*connected world*” of today, he remains sceptical that the product will become an essential part of our society.

Ole Jørgen Seeland, Founder and CEO of Staaker, producer of a selfie drone with a tracking device, stated the following regarding customers of selfie drones and more specifically the Staaker:

- *Adventurous everyday athletes*
- *90% men*
- *22-45 year-olds with a middle value of approximately 33*
- *Well educated and high income*
- *Not the ones doing quadruple flips sponsored by RedBull*
- *The unifying factor is that the target consumer loves new experiences and loves sharing*
- *The target customer is looking for a tool to add value to the weekend adventures*



Illustration 15
Source: Instagram @Staaker



When asked about more mainstream applications of selfie drones, the response was that these are the directions towards which the company Staaker is heading. He added that they were currently adapting their communication strategy to be more "*down to earth*" and tone down the "*Red Bull helmets and quadcopters*" (Illustration 15). In other words, they are hoping to convey an image that is less oriented towards extreme sports but more targeted at day-to-day uses of selfie drones, thus appealing to a broader audience.

Interestingly, the company changed their name from Cptr, (which could be perceived as holding technical connotations and be difficult to relate to), to Staaker (like stalker) referring to the drone's ability to follow its owner, but it could also trigger negative connotations with regard to spying. The CEO added: "***as a start-up we just throw shit at the wall and see what sticks. Then we double down on the stuff that sticks and make more shit that looks like the shit that stuck***". This sentence reflects the difficulty for selfie drone companies to navigate blindly in a market that is uncertain, constantly evolving and perceived very differently from one person to the next, with multiple stakeholders involved. Thus each company is attempting to capture its share by addressing different needs and trying to identify the future trends and possibilities of this technology, in a difficult environment.

Despite the relatively positive feedback received following the product's launch, the CEO of FotoKite, Chris McCall, explains in an interview that he feels the market potential for drones lies in their commercial applications:

"We are moving away from the selfie-focused products ourselves. That said, we do believe in the potential for drones to serve a specific emphasis on sharing footage on social media- our focus will be to provide that footage in livestream form for sports/events where there is increasingly larger consumption (both in traditional sports broadcasting viewership, and livestream digestion)".

Specific applications such as live stream sport offer the potential for wide public adoption, used by amateur sports' teams to cover matches and share with friends on social media.

FotoKite is a prime example of how its commercial product used for journalistic purposes attracted attention and led to the consumer desire to possess one for personal use. Chris McCall even said that for every broadcast customer they had, one hundred



consumers would come up to them to inquire about the product. Furthermore, he adds that most of their customers are from the US and Europe from a **diverse demographic background** which supports his idea that the product can be far-reaching and even be used by children in parks for example.

Even though their selfie drone may be seen as an improvement to the selfie stick, their approach to the market is more about what the technology enables. The market is leaning towards more purpose-built solutions. They want to offer people a product that can easily fit into their backpack that they can use on the go with a simple button to deploy the technology. Their approach to marketing is to grow their product organically by talking to the right people that have an influence on the audience they are trying to reach:

“So focusing on talking to the right people that we respected and knew their reviews on similar technology. And had the reach that we wanted to target. Those were key figures in getting the word out to our key target”.

Another strategy that proved to be successful consisted in establishing partnerships:

“the smartest thing that we ended up doing was putting it in the hands of some key partners, and really developing some strong relationships as much as possible. Those relationships really ended up paying off for us in terms of the feedback we received and the success in the market”.

As a final remark he noted that laws and regulations have not impeded their growth thus far, but says the following:

“What it does do though is that it definitely gives from the very first day every drone manufacturer a set of considerations to take when deciding to make something that is safe and usable in the public sphere or not.”

The interview with AirSelfie co-founder, Edoardo Stroppiana, revealed the company's views on the market and their product. This brand is particularly interesting considering the positive feedback the product received when introduced to the interviewed participants. According to its management, AirSelfie targets affluent consumers (both male and female) with a “lifestyle” device that exhibits the “cool” factor of a “high end tech gadget”. The brand works with on- and offline media to promote its product and uses an external agency to create organic visibility on social media. Influencers have also



been used by the brand to promote its products online. Supposedly already 80 million people have seen their product video on social media and they have registered over 50 million online interactions. In order to push the product out in the market, AirSelfie claims to be in contract talks with distributors and retailers for a widespread roll-out when launched this year.

What appears particularly interesting is that AirSelfie's management team believes that for a selfie drone to succeed in the mainstream market, it needs to be perceived as a **smartphone gadget** rather than a "*drone*". This indicates that AirSelfie wants to move away from the arguably very technical perception of a drone to a more playful and intuitive smartphone gadget. This shift in focus also plays into the idea of *perceived playfulness* that was brought forward as an aspect of *perceived usefulness* and thus part of the TAM. By making the AirSelfie a playful gadget, it positively correlates to perceived playfulness and thus to perceived usefulness.

Also, it was highlighted from AirSelfie that the *ease of use* appears to be one of the crucial aspects for consumers which is why they are continually trying to improve this. Lastly, an article from Forbes, promoted via AirSelfie's Facebook page, described the device as "*The Drone Your Narcissism Has Been Waiting For*", showing that the company is embracing this narcissistic appeal and further focusing on the product as a toy for anyone to play around with that will be: "*one of the hottest holiday gifts for anyone who loves their face being the center of all their photo*" (Silver, 2017). This supports what Edoardo Stroppiana, founder of AirSelfie, expressed in the interview.

The online version of Elle Magazine dedicated a post, on its Facebook page, to the AirSelfie asking whether it had the potential to be the new necessary device for selfie lovers. The comments received (see below) corroborate to a certain degree the views put forward by Edoardo Stroppiana regarding the positioning of AirSelfie in the market, but also show its potential shortcomings (Weblink 33):

"you'll never have to ask another person to take your picture"

"Humans will lose all communication skills soon !!!"

"Finally we can take family selfies easily "

"April Fool's?"

"I think we'd have a lot of fun with this"

"Taking selfies to the next level"



"Who needs a selfie stick when you can have a drone"

"For your wedding / Bach party"

"I wonder if the pics would be clear and not blurry?"

"Awesome! Great idea.. This will be a hit"

Certain comments reflect consumer scepticism with regard to the idea, seen as somewhat gimmicky and even joke-worthy. Others are in admiration of the invention and would like to buy one immediately, seeing it as useful for special occasions such as weddings and redefining the way selfies can be taken, envisioning the technology as a potential *"hit"*. Others go further with previous concerns regarding quality levels and its effect on human interaction. From a managerial perspective, these are elements that AirSelfie are said to be addressing in order to launch an optimal version of the product that best meets consumer desires.

Overall, this study found a diverse set of positive and negative perceptions of selfie-taking as well as selfie drones. These findings will be used below to discuss possibilities for selfie drone companies to leverage these consumer insights into valuable managerial implications.



6. Discussion

The aim of this section is to assess the findings from the previous section and discuss appropriate recommendations for selfie drone companies to be able to exploit their full potential in the market. The specific motives for adopting selfie drones will be considered while simultaneously assessing the specific obstacles to purchasing them. This will lead to a better understanding of how companies can tackle these issues in their communication efforts. It also appears valuable to harness the findings on selfie-taking behaviour in order to understand how these could be taken into consideration in the way marketers promote their selfie drone products. This will in turn offer the potential to influence consumer perceptions of the products that could eventually lead to purchase. The possible influence of selfie drones on selfie taking behaviour will also be discussed. Specific marketing strategies will be suggested in light of the findings.

6.1 Consumer insights

Consumers expressed their thoughts in regards to selfie-taking behaviour as well as their perceptions of selfie drones. Certain selfie drone features and usage situations were favourably perceived by consumers whereas other features and situations were ill-received. The following points assess the findings and how these could be used by companies to optimise the selfie drones' value in the mind of the consumer.

6.1.2 Product applications & Target groups

As observed, the research participants expressed their selfie-taking activities as a means to communicate with their peers and family in a more visual manner. This reflects the consumer's need to communicate their *"togetherness"* and share memories with one another via social media platforms (Munar, 2011). Participants expressed an interest in purchasing a selfie drone for these specific applications. The findings suggest consumers highly value a selfie drone for its use for special occasions such as family events and travel and appreciated the possibility of sharing their experiences online as a means of communication. AirSelfie has addressed this by emphasising the use of its device at weddings and indoors at parties (settings that appear to be particularly relevant to the target group). FotoKite put forward the idea of expanding its application to sporting activities, combining it with the increased popularity of live video streams on Facebook for example, which could further increase the appeal of selfie drones. It is important to



keep in mind that regulations here would play an important role in determining the feasibility of these applications, a pivotal element that should be considered by companies.

Based on the mini cases, many selfie drone companies are currently focusing their marketing efforts on activities such as extreme sports where only one person is involved. In order to enhance their appeal, companies could accentuate the fact that the selfie drone could be used in friendly family settings, for example. As stated by the CEO of Staaker, their aim is to steer away from these extreme sport applications in order to tap into the more mainstream consumer needs. The individuals used in their promotional videos are mainly men in sporting attire specific to each activity. It was found that the online interactions with platforms related to selfie drones were male dominated. Some drone companies have tackled this aspect by featuring families including male and female members of different ages, arguably to broaden the target group. AirSelfie and GoPro have specifically addressed this aspect by extensively featuring different target groups. By doing so, this opens the possibility for millennials to visualise different usage situations that may appeal to them more than extreme sport scenarios that may not particularly resonate with them. However, it appears important for the companies not to neglect their current target audience that may be particularly interested in the extreme sports applications of the devices. Therefore, it is the company's responsibility to find the appropriate balance between broadening the spectrum of usage situations promoted while maintaining their initial appeal.

Dronies, as they have been labelled, are perceived to lose the moment's authenticity and spontaneity that consumers can communicate to others through selfies due to a longer set-up period. This surprised the researchers, as a selfie drone brand like AirSelfie appears to stress the possibility of taking spontaneous pictures with the device. On the other hand, selfie drones enable a different communicative form whereby consumers are able to capture their entire surroundings. Consumers highly valued their ability to place the individual within a particular context, thus being able to share and save more vivid memories with close friends and family. The footage can also be saved as a form of visual diary. Consumers are then able to share exciting footage to their online sphere beyond the previous limitations of a smartphone device. It appears that dronies thus lose their spontaneity to the benefit of a broader visual background and **context**.



Selfie drones were valued for their different application in different contexts but also for their connectedness to social media. Selfie drones tap into the millennials' desire to contribute to their **online human brand narrative** (compare Stoller, 2013), a highly valued aspect of selfie drones, according to the findings. It appeals to the consumer as a cultural agent born in the digital era, embedded in its societal environment (Pace, 2013). This should be anticipated when designing the key attributes for possible marketing communication plans.

Also, the *perceived playfulness*, an aspect that influences the *perceived usefulness* in the TAM, comes into play, emphasizing the hedonic value of navigating the selfie drone in the process of taking a selfie. This was particularly emphasized by both AirSelfie and Joel Fritz who noted that a core value of selfie drones is the “toy” aspect of the device which offered a widespread appeal.

6.1.3 Product features

When considering the three levels of a product, the *core*, *actual* and *augmented* product, the findings suggest there are different elements of the *actual* product that consumers currently consider as a cause for concern. The *actual* product corresponds to the features and the quality level, for example (Claessens, 2015). These elements can arguably hinder consumer desire to purchase the product. In terms of practicality, they are perceived as a tool that would only be carried around for special occasions and special trips due to the product's cumbersome nature. On the other hand, the findings suggest that consumers were particularly drawn to selfies for their instantaneousness. In order for selfie drone companies to tap into the consumer desire to capture moments spontaneously and instantly, it is their mission to show their audience that these devices can be manipulated with ease and rapidity. The company should show that they are not inconvenient but, on the contrary, that they can be used intuitively so as not to lose the moment to be captured. AirSelfie is an example of a selfie drone that has the advantage of being small and manageable, which makes it stand out from others. One of the company's promotional videos shows how they focus on showcasing its ease of use, a strategy that could be used by other drone companies as well. FotoKite also emphasizes its product's ability to be used on the go. Other organisations could also emphasize the fact that the quality of the images counters the inconvenience of their device, as quality



is also highly regarded. AirSelfie lacks the quality sought after by many consumers, which could hinder its performance in the market.

Other identified flaws related to **hygiene factors** included size, weight, noise and sound recording. Consumers felt particularly strongly about these issues as they were seen as factors that diminished their ability to trust the quality and durability of the companies' products. Chinese manufacturer DJI faced difficulties regarding decreased trust due to consumers' preconceived notion of questionable Chinese manufacturing quality. Marketers could consider partnerships with well-established and reputable companies to help counter these negative perceptions related to the product company's origin, much like Zero Zero Robotics's partnership with Apple. The Chinese DJI appears to already be tackling this perception issue by proving itself through the outstanding technological capabilities depicted by the press and presented on their website. By tackling these hygiene factors that are highly regarded by consumers, this could help increase consumer interest, thereby playing on the consumer's "*rational agent*" side (Pace, 2013) discussed further below.

Beyond the *actual* product elements, consumers highly regarded the product's *augmented* elements such as warranties, after sales and add-ons (Claessens, 2015). The ones mentioned were mainly after sales services. Given the extensive concerns expressed regarding **trust** that stemmed from uncertain market regulations and product-related incidents, these elements may be pivotal for the consumer during the decision-making process. After sales were mentioned as lacking quality for certain brands including DJI. Actively addressing these complaints may help counter the trust issues expressed. By assuring their consumers that they will be taken care of throughout the entire process from purchase to use, these concerns may be alleviated.

In the mini-cases, it has been found that the press-sections on the selfie drone company websites have a high importance, especially in terms of updates in the industry and change of regulations. It is safe to assume that press articles are a highly regarded source of information for users who make use of third party outlets to gather information regarding the products. Publications regarding selfie drones in mainstream news articles could have a significant impact on selfie drone perception and could also help counter current trust issues. Organically promoting its brand through news articles



from reliable sources is a strategy that is highly valued by FotoKite for example, as mentioned by Chris McCall. This outcome could be achieved through Word of Mouth which will be discussed later.

Consumers also expressed their reservations in terms of the high price tags attached to these devices. It appears that regardless of the broad range of prices for selfie drones, most consumers were more receptive to higher end quality levels even though they explicitly stated they thought it was too expensive. The price is therefore a major obstacle for purchase, which characterises the introductory phase where the prices are too high for early majority consumers. Also, studies in general have identified that price is a major concern for millennials, furthering it as a major obstacle for the purchase of selfie drones thus far (GoldmanSachs.com). Consumers expressed their desire to purchase such a product only once the price decreases. It appears likely that when more competitors enter the market, prices will decrease and arguably more consumers may be willing to purchase a selfie drone.

The question of trust was also recurrent in terms of the privacy and regulatory issues related to selfie drones. Consumers were concerned with the uncertain regulations and invasion of privacy that appeared to seriously decrease their desire to purchase a selfie drone. Companies would need to effectively communicate the legal situation in the industry to reassure consumers on their ability to use the product at their leisure without putting themselves or others in danger and without violating any laws. This could help resolve consumer trust issues. Certain governmental bodies as well as selfie drone companies themselves have elaborated phone applications that allow consumers to gain a better understanding of the flight restrictions associated with the devices. These apps could be more heavily promoted on company websites to reassure the consumer.

6.1.4 The consumer as a rational and cultural agent

When investigating the topic of selfie drones and possible adoption behaviour of the participants, motives and obstacles have been very diverse. As explained in the findings, many participants, when first introduced to the concept of a selfie drone, were quite negative about the technology and hinted to many potential shortcomings relating to the drone's functionality. These participants approach the new technology from a rational



perspective, evaluating certain features and potential problems. They exhibit the features of a rational agent according to Pace's (2013) framework discussed in the literature review. It is important to discover the **rational needs** of the consumers in order to address them with suitable elements in the branding strategy. It appears valuable to understand the consumer as a complex being, who acts as both a rational and a cultural agent. When thinking of the consumer as **cultural agent**, the selfie drone might tap into cultural concepts that consumers find relevant (compare Pace, 2013). Here, the concept of **travelling** seems particularly interesting, as it seems to connect the use of a selfie drone device with the cultural theme of travelling and discovering new places.

6.1.5 Impact of Terminology

Surprisingly, when consumers were asked about the associations they had with regard to the word "*drone*", the military application of drones, their original purpose, was not mentioned. This shows that military drones are not uppermost in the minds of the consumers that are in the focus of this research project. Instead, the more modern application of drones, such as delivery drones that have attracted recent media attention, are the ones that the consumers are more aware of. This is interesting to consider as this indicates that selfie drone companies do not have to tackle this issue by trying to change the way consumers see drones, shifting from military to consumer use. Also, it appears that the term "*drone*" triggered mixed feelings, as some participants were intrigued and excited by the device, whereas others were intimidated and embarrassed by the idea due to regulations and recurring incidents in the media. Some companies have therefore chosen to reject the term "*drone*" in their marketing such as AirSelfie that sees its product as a smartphone gadget. In this way it is hoping to gain a broader appeal. On the other hand, other companies have embraced the term "*drone*", banking on the positive feelings triggered by the term.

Additionally, consumer aversion to selfie-taking behaviour related to narcissistic traits suggested a negative effect in the way they perceive selfie drones based on the use of the word "*selfie*". Many companies have chosen to brand their products without referring to selfie-taking devices but rather as a "*personal photographer*". Also, the brand name itself seems to be important. The expert interviews revealed that, for example, Staaker appeared to be more positively perceived by the consumers when changing their name



from Cptr. These are important considerations as terminology affects perception (Grewal et al., 1998), which can be rapidly transmitted through word of mouth in particular.

6.1.6 Selfie drones for social media use

Selfie-related findings suggested consumers are highly focused on the creation of their online human narrative. They expressed an appreciation for the ability to control their image and being masters of the contributions to their online spheres. Through this, they feel a sense of **empowerment**. Selfie drone companies should harness these findings by focusing on the facial recognition element of the selfie drones offering the users an easy-to-use tool to better control the image taken of themselves. This shows that selfie drones can still appeal to those who seek control over the images of themselves.

The platforms often used to share selfies would arguably not be identical to the ones used with new selfie drone footage. Humorous and spontaneous selfies posted on SnapChat, for example, no longer seemed relevant when considering selfie drones. Other platforms such as Instagram, Facebook and Youtube were preferred. This coincides with the application of selfie drones for more **special occasions**. Consumers were enticed by the idea of capturing impressive footage that could have an impact on their online image. This is furthered by consumers' attraction to the "*cool factor*" of the devices. They are able to express themselves through photography, using the footage captured as a form of art. This may attract creative people who are in search of a new form of expression. It also suggests that these uses appeal to the narratives of the TechSpresive ideology, considered to be withheld by the research participants (Kozinets, 2008). This proposes that the consumer vision of technology as a tool used for **self expression** and **hedonistic purposes** is addressed with selfie drones. Therefore, this ideology could come into play and frame their thoughts, thus encouraging consumers to consider selfie drones as fitting to this vision (compare *ibid*). This could be a powerful factor in influencing the early majority to follow the actions of the innovators and early adopters.

The findings suggest that consumers choose social media platforms to share their thoughts and opinions with others. It was also found to be the chosen mode of communication by the selfie drone industry professionals to interact with their customers. Experts note that social media can be a competitive tool in terms of



communication strategies (Hassan et al., 2014). According to Woodcock and Green (2010), friends and contacts in social media tend to be trusted more than a business organisation's advertisements. Therefore, selfie drone companies can tackle the issues raised on social media channels by responding to their comments directly. This can in turn alter the consumer perception of the product to the company's benefit (Mangold & Faulds, 2009 in Hassan et al, 2014). The above-mentioned consumer insights are pivotal for companies to address in order to positively influence the decision-making process. They can enable the companies to differentiate themselves and have a clear position in the increasingly competitive market. This can help create interest, an essential step leading towards action in the AIDA model (compare Hassan et al., 2014).

6.1.7 Selfie drones and selfie behaviour

This part will attempt to provide insights with regards to how selfie drones could influence selfie-taking, as formulated in one of the sub questions of the research.

Based on the above discussion, it appears that selfie drones offer the potential to redefine the selfie-related behaviour in certain situations, but not necessarily in everyday practices. Selfie drones may change the way people capture moments and save memories for special occasions where the context is important to them, such as travel. Consumer use of selfies for humorous, spontaneous and instant moments to share with close family and friends may not be altered as yet. This is mainly due to the lack of perceived usefulness and the perceived ease of use of the technology as brought forward in the TAM model (compare Davis, 1986). The consumers do not see the benefit to use a drone for quick, humorous face selfies (usefulness) and also believe that the set-up time of such a device is too long for this purpose (ease of use). However, the announcement of the introduction of a potential SnapChat drone could counter this perception and shape a new way of taking these spontaneous "Snaps". Also, the AirSelfie already seems to be more "*on-the-go*" by being attached to the smartphone cover. Contrary to the opinion that selfie drones could change daily consumer practices, industry expert Joel Fritz does not believe that the technology will considerably change the current social landscape concerning ways of selfie-taking.

Edoardo Stroppiana, co-founder of AirSelfie, claims that AirSelfie stands out from selfie drones as a smartphone gadget able to create a buzz and appeal to the mass market. He is confident in saying the product will become a trend, thus changing selfie behaviour



extensively. If the quality issues brought forward by consumers are addressed, AirSelfie does indeed show potential in the market. However, considering the fact that the product is in the pre-launch stage, it is difficult to confidently predict its impact on consumers. As previously stated by Parrot's CEO, the selfie drones tap into consumer's narcissistic desire of uploading flattering images of themselves. Selfie drones offer the potential to address this desire to present the most impressive image of oneself online with more sophisticated devices. Instagram, Facebook and Youtube offer platforms where consumers are able to do so, where the selfie drone footage can have an impact on others.

6.1.8 Selfie Drone as Part of the Extended Self

Selfie drone companies can tap into the cultural theme of travel, branding the selfie drone as a travel companion. The device would act as an enabler to record memories, which would then be shared with the social group, for example through social media. By using the selfie drone on a regular basis, e.g. vacation or weekend trips/events, the consumer would engage in **continual meaning transfer** to the selfie drone. By using the selfie drone to record experiences from a high-end vacation, for example, or out-of-the ordinary events and then sharing that footage online, the consumer creates a connection between wealth and power symbols from the tangible world to the virtual world. According to Belk (2013), these digital possessions (photos and videos) are almost as valuable to the building of self than their "*tangible counterparts*". The aforementioned regular use of the device for special occasions like vacations or events could be seen as grooming rituals that "*supercharge*" the device with new mental associations and might make it more valuable to the owner (compare McCracken, 1986). If the product is used regularly and becomes essential to the consumers, it can become part of their extended self (Belk, 1988). Once a product becomes part of the consumer's extended self, it will have a high personal value to them and it will be harder to exclude the product from their life thereafter (Belk, 2014).

The smartphone is already an important and inherent device for many consumers. It is therefore often regarded as part of the consumers' extended self (Belk, 2014). Integrated in the cover of a smartphone, the AirSelfie particularly appears to have the potential to profit from a similar status to the smartphone whereby it could become a part of the consumer's extended self. This appears to be the ultimate marketing goal for



selfie drone companies, as the consumer will arguably engage in repurchase of the product (if broken or lost) and be receptive to potential add-ons.

6.2 Managerial implications and marketing strategies

6.2.1 PLC-related strategy

Considering the Product Life Cycle, it appears that consumers have expressed a lack of awareness towards selfie drones, specific to the introductory stage. Based on the findings, companies are faced with the difficulties associated with entering a new market, which include the lack of brand awareness. At this moment in time, the main customers interested are innovators and early adopters, whereas the consumers interviewed appeared to be within the early majority in terms of Rogers's Diffusion Theory (Rogers, 1995).

In the introductory phase, it is crucial for companies to focus on building brand awareness by informing new customers about the existence of their product (Kotler & Armstrong, 2012). This can be achieved by using intensive advertising activities, for example through the preferred social media platforms: Instagram, Youtube and Facebook. This might entice trial of the product, thus leading the first customers to influence other customers to use the product. AirSelfie is an example that has extensively engaged with potential consumers through their social media activities. Other brands have been operating in the market for a few years and are currently in the growth stage, thus attempting to tap into the mass market (Kotler & Armstrong, 2012).

In the interviews conducted, participants voiced the idea that opinion leaders should start using the new technology first. As noted previously, these first consumers would most likely have an innovative mindset and convince other users of the product's appeal as well as make the use of the technology more socially acceptable. This would assumingly then encourage the remaining consumers to use selfie drones (compare Moore, 1991) and could therefore shift the diffusion of the product from the early adopters to the early majority. To push it into the early majority phase, companies should tackle issues pointed out by those who already have a selfie drone to show they now have an optimised version and the kinks have been addressed and eliminated. Distribution should become more and more widespread as an increasingly growing portion of the population starts purchasing selfie drones. AirSelfie is currently



contracting mainstream suppliers to allow for a widespread distribution that could help increase the brand's visibility. GoPro users are already aware of the product and might therefore be exposed to its Karma product that would help increase the product's brand awareness. Additionally, Zero Zero Robotics' partnership with Apple is arguably a means of **increasing awareness**. Other drone companies could use partnerships to leverage their notoriety and thus increase brand awareness and favourability (compare Musante, 2000).

6.2.2 From Commercial to Private Use

It appears that consumer perceptions were positively influenced when exposed to drones in a commercial context. This shows that the professional use of selfie drones can be appealing to consumers who want professional quality for themselves. This also appears to tap into the Work Machine ideology whereby consumers envision technology as a tool that can help enhance economic prosperity (Kozinets, 2008). FotoKite used its commercial appeal to enter its consumer endeavour and AirSelfie and DJI promoted the professional applications of its device to attract more consumers. These efforts could be used to enhance consumer awareness of the brand and raise interest towards it.

6.2.3 Advertising Strategy Implications

Through the qualitative research, it became apparent that the purchase of a selfie drone involves a *high-involvement* decision process (Percy & Rossiter, 1992). Some consumers in the focus group and in-depth interviews discussed Return on Investment uncertainties related to the drones. Other consumers, on the Facebook pages and on online forums, asked complex questions concerning the product and its usage. Its purchase thus visibly requires a considerable amount of reflection and thought until the purchase decision is made. Beyond high and low involvement classification, it can be valuable to analyse whether the product in hand should be classified as informational or transformational (ibid).

The selfie drone can be regarded as *transformational*, meaning the purchase motivation is connected to the three positive motivators - *sensory gratification*, *intellectual stimulation* and *social approval* (compare Percy & Rossiter, 1992). Sensory gratification has been identified to be the least important for the interviewed consumers, as they mentioned that an attractive design of the product is less important to them:



functionality seems to be more highly valued. Here, it might be critically added that the consumers were concerned that the technology is still error-prone as it is in its infancy stage. This might have led them to underestimate the importance of the physiological gratification aspect.

Intellectual stimulation clearly appears to be an important driver. The new footage that the selfie drone enables them to capture is highly appreciated by the consumers and thus provides psychological pleasure, linked to the concept of intellectual stimulation. The process of letting the drone fly as well as obtaining the captured memories in the form of photos and videos create a psychological stimulation.

The most important motivational driver has been identified to be social approval. The consumers see the clear opportunity to receive a social reward by using a selfie drone by sharing the footage on their social media sites. This will provide them with likes, which for them is a sign of social approval from their peers.

As a high-involvement and transformational product, companies need to show situations that illustrate the motives identified through the qualitative study of this research project to create **emotional authenticity** (compare Percy & Rossiter, 1992). Using a travel theme, the audience could identify with a millennial shown using a selfie drone to capture the specific moment and sharing it with his/her social network. Here, it appears to be valuable to use culturally connected symbols, such as the Golden Gate Bridge or the Eiffel Tower. These cultural symbols and the notion of travelling might then, through the advertising, be transferred to the product (compare McCracken, 1986).

Besides the positive drivers that were connected to the selfie drone, advertizing should also address negative perceptions with specific solutions. Companies could counter the social shame related to the use of such a device by showing how “normal” its use can be in everyday settings. Also, it makes sense to openly discuss the risks of the possible widespread use of selfie drones particularly in light of the discussed positivity bias of technology (Fournier & Mick, 1998). This is with the assumption that technological advancement is always beneficial. When facing the risk of having a selfie drone dropping on someone’s head or damaging other objects, the selfie drone as a new technology



might be seen as more harmful than beneficial. Here, it appears to be good to also sensitise selfie drone producers to develop solutions for those negative side effects.

When the selfie drone companies manage to successfully create *emotional authenticity*, this will capture the interest of the consumers as it taps into their life projects and desires. GoPro, in its advertising efforts, chose a wealthy family to promote its selfie drone, which consumers expressed a dislike towards. DJI, on the contrary, chose one that its audience voiced a positive feeling towards. Thus it appears important for marketers to consider the appropriate players in advertising content who can convey the authenticity that consumers can identify with. By considering these elements, companies can help create desire, according to the AIDA model.

6.2.4 Influencer Marketing

In order to tackle the observed lack of awareness, the AIDA model can be considered a valuable tool. Influencer marketing can be used as a means of gaining attention, which can then generate interest and desire in the product. In the interviews, it was discovered that the participants do not consider themselves first adopters, as they do not seem prepared to take the initiative to introduce the product into their everyday practices. One obstacle that potential selfie drone customers saw was the **social barrier** of doing something novel that stands out and does not have social approval. Many of the comments indicated that the respondents would use a selfie drone if an **opinion leader** they admired used one.

Besides direct advertising through sponsored ads, selfie drone companies should thus also consider new marketing techniques such as influencer marketing. The importance of influencers also became very apparent throughout the interviews where consumers mentioned bloggers and vloggers as a source of inspiration and opinion. Instagram plays a particularly important role as many millennials frequently use the platform and selfie drones were highly connected to images shared on Instagram by the interviewed consumers. Practitioners have also identified Instagram as a unique platform for visual storytelling (ibid, p. 89).

In the case of selfie drones, consumers might follow a popular lifestyle blogger who is especially interested in travel activities or sports (suggested as a possible usage interest



by FotoKite), thus enabling the consumer to identify with their personal situation factors (compare Brown & Fiorella, 2013). This could increase the effectiveness of the influencer marketing (ibid). In order to more precisely target these consumers, the brand manager of the selfie drone company should choose those influencers that already have established thought leadership in the area of travel themes, which would in turn increase their relevance according to the 4R model (compare Sammis et al., 2016). This will firstly help to create *emotional authenticity*, e.g. consumers perceive the information on the selfie drone as authentic when presented by the particular influencer. Secondly, the reach of relevant customers might be higher, as the influencer's followers are more likely to be consumers who are interested in travel-related content. Consumers expressed their discontent with GoPro for failing to select an identifiable figure in their promotional videos. This shows how much consumers value a company's ability to understand their values in order to create an authentic emotional connection with them.

In our research case, the consumers are in the awareness and need formulation stage, making it pivotal for the influencer marketing to show the product in use, thus creating a positive image of the technology. In the findings, consumers identified themselves with specific influencers and thus were receptive to their opinions. These consumers saw those influencers as part of their reference in-group or aspiring out-group (Arnould et al., 2005). When an **in-group member** uses a brand or product, it is also more likely that the consumer will build a connection to the brand or product, as discussed by Bettman & Escalas (2013).

As previously mentioned, the **social value** (compare Sheth et al., 1991) can have a very important impact on the purchase decision. This means that the consumer connects the product to a specific group of people. Thus, using these reference group influencers appears to provide the selfie drone companies with a valuable opportunity. For selfie drones to become popular among consumers with similar mindsets and thoughts as the interviewees of this research project, a reference group similar to the one associated with the use of selfie sticks should be avoided. Appropriate influencer marketing can help normalise the product and reduce **social shame**, an identified obstacle to selfie drone use. It can attract attention, build brand awareness but also create an interest and desire to buy the product.



6.2.5 Word of Mouth (WOM)

The findings of the research project have shown that the lack of awareness for selfie drones as well as the fear of social shame when using such a device are major drawbacks in forming positive perceptions towards the product. The use of influencers to create awareness and **favourability** towards the product has previously been discussed and can be further examined in the light of WOM Marketing (WOMM).

The selfie drone company AirSelfie already makes use of a blogger, who promotes the product through the brand's social media sites and in particular Instagram. The blogger seems to clearly use an **endorsement** narrative (compare Kozinets, 2010), as the WOMM campaign explicitly promotes her involvement as a blogger and a highly professional promotional marketing language is used. It seems unusual that the blogger's personal profile is not linked in any way to the brand's websites and she does not post AirSelfie related content on her personal Instagram profile. This poses a problem, because the blogger has a wide **reach** with her personal social media account that the brand cannot benefit from. Also, when consumers first notice the heavy commitment of the blogger in the company context and then discover a complete absence of the topic on her personal Instagram profile, the consumers might not trust the blogger to be a truthful opinion leader due to the lack of correlation with her personal narrative. All this shows that the usefulness of influencers has been recognized by at least one selfie drone company, but has not been applied in practice as effectively as it could be.

By interacting directly with the customer, companies can form relationships with their consumers that can lead to positive WOM amongst their peers on- and offline. This can be achieved through the previously discussed measure of using influencers in social media, but also through offline events and physical stores. Here, the selfie drone brand team could go to festivals, parties, etc. to show the product in its **contexts** and let consumers try the product. DJI has opened a flagship store in Taiwan which could be an effective way of increasing the visibility of their products and encourage consumers to try them. Sneath et al. (2005, in Wood, 2009) argue that the usage of experiential events not only leaves a short-term impact, but also helps to create long-term changes in attitudes and beliefs. Also, being at specific events and talking to brand representatives can create individual experiences and an intense life interaction with the brand (Wood,



2009). This would also tackle the trust issue as the consumer can actually test the product himself. The use of WOM could also further attract media attention that could enhance a brand's visibility given the noted importance shown for news articles as a source of reliable information.

By addressing the specific motives and obstacles towards the purchase of selfie drones elicited from the findings, marketers stand a better chance of increasing their brand awareness and improving their perceptions. Specific marketing strategies were suggested to optimise consumer attention and thus create interest that could eventually lead to purchase.



7. Conclusion

In recent years, selfies have become an integral part of individual life practices, propulsing the activity to a ubiquitous phenomenon. Related to this phenomenon is the emergence of selfie drones, a new technology that has only recently become available on the consumer market. Given the recent nature of the product's existence, this research study has been interested in understanding the current market situation of the technology. In particular, the aim of the research was to gain an understanding of consumer perceptions of the product and how selfie drone companies can consider these to adapt their current branding strategies to effectively anticipate the development of the market.

The first step of the research, which consisted in understanding the significance of selfie-taking practices amongst millennials through a focus group and in-depth interviews, revealed a high engagement in selfie-taking activities. This was linked to the selfies' ability to improve consumers' means of communication by sharing spontaneous moments with others, conveniently and instantly at the click of a finger on their connected smartphone devices. The selfies were also used for saving memories and as a means of contributing to the enhancement of their personal online realms, via social networks. On the other hand, they were disliked for the limited scope of the photos that reduced a person's ability to capture and convey the context of the situation.

To respond to the first sub question of the research, these findings were then expanded on to understand how selfie-taking behaviour may have an affect on consumer perceptions of selfie drones. This was carried out in order to understand how the product may enhance consumer experience regarding the activity and how selfie drone companies could leverage this correlation. Consumers voiced both positive and negative perceptions towards selfie drones and attributed beneficial uses of the product as well as clear obstacles, inhibiting their desire to purchase one. Consumers were uncertain about their ability to **trust** the concept due to regulatory and privacy issues. They were also held back by the social shame they associated with the use of selfie drones, currently seen as too novel. They also showed scepticism regarding certain features including price, quality and durability. On the other hand, they expressed great interest in certain aspects of selfie drones that offered the possibility of **enhancing their presence in the online sphere** and tapped into their desire for **self-expression**. Also,



the ability for the devices to capture the **context** of special moments with friends and family to be shared with others and saved for memories was of particular interest. These specific usage cases of a selfie drone revealed how this new technology can potentially influence selfie-taking behaviours and the notion of selfie. Additionally, a **perceived lack of awareness** towards the product category was observed overall.

These findings, supported by the netnographic analysis, were combined with an overview of the current branding efforts of selfie drone companies. The analysis of their online customer touch points, including their websites and social media channels, showed that each company focused on their online presence as a platform for communication. It was also observed that each company benefitted from a high level of interactivity with their consumers and potential consumers with whom they communicate directly with regard to the features of their respective products.

How can selfie drone companies leverage consumer insights to effectively adapt their branding strategies to the market?

In answer to the research question, selfie drone companies should leverage the findings by emphasizing the positive aspects appreciated from the products and addressing the negative aspects voiced by consumers in their communication efforts. Selfie drone brands should actively address safety, flying difficulties and regulations as well as affordability as a means of unleashing their potential in the market. Additionally, companies can leverage some of the selfie-taking preferences expressed by prioritising these benefits in their communication efforts to show how selfie drones address these particular interests. These included memory saving, convenience, spontaneity, online profile enhancement and communication. By emphasizing these benefits through their online channels and direct communication with their followers, brands can enhance their appeal and thus increase their brand visibility to a larger portion of the population.

The branding strategies that appear to answer this objective and that present the most relevance to achieve this were **influencer marketing** and **word of mouth**. Tapping into the consumers' expressed interests in specific online personalities can help reduce the **social shame** associated with using selfie drones and alleviate other negative perceptions. This can in turn help promote the positive aspects of selfie drone use, and



how it can be enjoyed in specific situations. In line with the product's current diffusion status as a new technology and new product on the market and in light of its current position in the young stages of its life cycle, these marketing efforts should be made. It will mean an increase in **brand awareness** and create interest and desire, which could eventually lead to the purchase of the high involvement product.

Overall, it appears that the researched target market has been receptive to selfie drones and reveals an optimistic future for the adoption of this technology. Thus, it is key for companies to understand the perceptions towards selfie-taking as well as focus on the positive and negative perceptions associated with selfie drones in order to secure a comprehensive and appropriate approach to the market. By attempting to harness consumer insights, companies can ensure they are in touch with consumer needs and thrive in the market.



7.1 Limitations and future research

As for any research project, there are also limitations that must be considered.

The topic of selfie drones is extremely fast-moving. During the research period, new products and features were introduced by several start-ups and multinational corporations. As the research project aimed to provide an understanding of the current moment and its significance for future developments in the market, it is important to consider the findings within this particular context and time. This should be borne in mind when consulting this research for future reference on the topic.

The focus of the research was placed on millennials for the aforementioned reasons. Although recruiting participants from this specific target segment for the focus group and in-depth interviews did not pose any problems, this selection was difficult to control during the netnography data collection. The identity of social media users taking part in the interactions observed were difficult to identify. Even though it was assumed that millennials are actively taking part in these online conversations, it was not possible to guarantee that the quotes used in our analysis were specifically from millennials.

One topic that seemed particularly important to the interviewed participants was the element of social shame related to the use of a selfie drone. Here, it should be noted that this observation could be influenced by two factors. Firstly, the interviewed participants were millennials, where social conformity and the “cool” factor may have an impact on their contributions. Secondly, the interviewed participants considered themselves to be in the early majority stage of technology adoption, a consumer group that arguably is less inclined to stand out from the crowd with new innovative products. In order to counter these inhibitions during the focus group, prompting cues were employed to obtain more elaborate answers and encourage group interaction. This may have influenced their answers, leading to more biased opinions that could have been less accurate (Bryman and Bell, 2011). It might have been valuable to use a photo elicitation technique with regards to the perceptions as well as emotions that consumers associate with selfie-taking behaviours. It could have moved the conversation from more concrete to more socially abstract responses (Harper, 1986 in Bryman and Bell, 2011).



In terms of generalisability, organising only one focus group with 6 participants could appear limiting. Regardless of the widespread aspect of the selfie phenomenon, the topic did not lend itself to an animated debate within a focus group setting (Morgan, 1956). A different approach to the topic, focusing less on the “selfie” aspect could have been valuable in generating a less biased approach. Given the fact that the selfie drone industry is in its infancy, the aim was to gain deeper insights from fewer consumers. Therefore, the decision to conduct one focus group was justified, but the generalisability of the findings could have been increased from a second focus group that could have been corroborated by a quantitative survey (Bryman & Bell, 2011).

Regarding demographics, the millennial age group chosen as the focus of the research could have been expanded to a broader age range. As noted by one industry expert, their target group reached consumers up to 45 years old. Enlarging the age group that has arguably different needs and desires could have given our research a broader understanding of the entirety of the potential market for selfie drones. These may have also included consumers from the innovator segment, who could have added another dimension to the research. However, in practical terms, it appeared difficult to encounter early adopters to be interviewed.

Concerning geographical location, the research focused on Western cultures as more data was available. Other locations, including Asia for example, could have been assessed to gain a more comprehensive understanding of the variety of consumer perspectives on the topic. Also, in terms of social media, a completely different picture would have assumingly presented itself. In China for example, Facebook, Instagram and Youtube are blocked by the government, thus alternative platforms with different functions (such as WeChat or Weibo) would influence the local selfie-taking practices and consequently the use of a selfie drone. Lastly, a gender differentiation was briefly acknowledged in the research. However, potential insightful distinctions between gender were not touched upon due to lack of time and the delimited scope of the research at hand.

As regards future research, it would appear useful to assess whether with time, consumer perceptions of selfie drones will have evolved and assess the progression of the technology in the market. To gain an even more complete understanding of the



current situation, it would appear valuable to delve deeper into the gender differences as well as the distinctions within different demographic and geographic segments and how this may affect consumer perceptions of the technology.

Given the fast-moving nature of the industry, it is assumed that the current market situation will most likely evolve, thus providing extensive opportunities for future research.



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Appendices

Appendix 1: Selfie-Taking Logs

Name	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Sarah	Snapchat in the metro on way to work "tired face" - sent it to my sister and boyfriend, met with a friend for a cup of tea after work and took a photo of the amazing coffee table and us to post on Instagram. At night, Snap to some friends while watching TV.	Several snaps at work as it was a dull day (yet again), sharing my pain with some friends and my boyfriend. At night, met some friends and posted a group selfie on Facebook (I was tagged in someone else's post)	No selfies	Took a couple of snaps, one in the gym all red during my Zumba class (obviously this was not shared anywhere else)	Was at a birthday party and we took many selfies that night. Only some were selected the next day to share on Instagram. During the night, many snaps to all sorts of friends, who have sent some to me.	Took a couple of snaps while being out shopping with my sister in the afternoon	Took a breakfast selfie with my boyfriend, because we tried this new bakery. Shared a collage of pictures on Instagram.
Marius	Took a snap when cooking with my friends at night.	Met some friends in an outside café in the city center and enjoyed the weather. Took a selfie for Instagram and Facebook.	A couple of snaps during the day, mostly responding to snaps I received from my friends.	No selfies	No selfies	Day trip to the sea and took some selfies there. Two went on Instagram and Facebook, one I sent via email to some family members and many snaps throughout the day	No selfies
Linn	Went for a run today and sent a sporty Snap to my friends, also took two photos for Instagram when walking around the city.	Trying to take a selfie while biking, because the sun was finally out after a raining week. Didn't go that well, almost fell off the bike.. Made a funny snap story out of this.	We had great lunch at work today, so I snapped that with some selfies and send it to my whole Snapchat list	Took a snap when running (again, haha) and later during the day a selfie with some colleagues that we shared with the rest of the department via our internal communication tool (hipchat).	We were out for a work dinner, but it was really boring. Took some snaps on the toilet to send my friends and complain about me sitting with those people in a restaurant talking about work on a Friday night.	Went for a brunch with my boyfriend and took a selfie in the café. We walked through the city and took another selfie in front of a nice, blossoming tree (but didn't post it anywhere)	Took a selfie with my grandma after lunch at her place, but have not shared it anywhere. Also send some snaps of me and my family to a couple of friends.
Rasmus	Several Snaps during the day (when eating, in the car) and two posts for Instagram while working out in the gym	Funny work snaps during the day (3-4 snaps) and sharing a photo of me and my colleagues at a company event through Facebook.	no selfies	No selfies	Took a video in the gym about my practice, posted it on Instagram and Facebook.	Went out with some of my fitness friends, inbetween the clubs we took some snaps and one photo for Instagram.	No selfies



Appendix 2: Transcripts of Consumer Interviews

Focus Group

- Cec.: Welcome everyone to the focus group. It should last no more than an hour and a half. Everyone's opinions are welcome so feel free to share whatever you want to share and we're going to talk about selfies and new technology and more specifically drones, but we're going to enter that afterwards. To start things off just to start with an easy question maybe when was the last time you took a selfie? If you'd like to share and we could go around the room; just say where, why, who you sent it to; that kind of thing. Just whatever you did when you took that selfie.
- S.: Yesterday with my sister. Oh yeah. We were having a cup of tea in the evening and we took a selfie and sent it to our mom and the friend we were supposed to meet never came so we were like "Well, who cares."
- Cec.: What platform did you share it on?
- S.: I actually put it on Instagram and Facebook. That was where it looked good. Ah yeah. How about you?
- M.: It was also yesterday. I actually sent a snap to my girlfriend yesterday.
- Cec.: Oh yeah?
- Matt.: In the morning I think or else it was the day before yesterday. At work in the 5 minutes of break and I was sitting there.
- Cec.: Was there a particular reason for it or are you communicating something in particular?
- S.: Probably not.
- M.: No, not really. I was being sweet and saying something sweet.
- Cec.: Would you rather say that you'd take a selfie on a Snap Chat or would you also for Instagram?
- M.: I take mostly for Snap chat only. I'm not a big selfie guy.
- Cec.: Do you ever post a selfie of yourself on a more permanent platform?
- M.: I have done on Facebook. I have done... one of my profile pictures have been one and yeah I have posted a few pictures on Instagram as well with segments. Well, I've just posted one on Instagram and so, but I don't post that many pictures. I only use it... I like Snap Chat; it just disappears on the Internet.
- Cec.: Oh okay. How about you?
- R.: Yesterday evening on Snap Chat to my best friend. We were just having a conversation about football and then just snapped each other's faces; facial expressions. So that was yesterday.
- Cec.: And that was on Snap Chat?
- R.: Yeah.
- Cec.: Was it for a specific kind of reason. Is there an emotion behind it or is it just...
- R.: I think it's just like funnier to have the Snap Chat picture like being stupid. At the same time a got a reply to some kind of message, but no specific reason. I could just as well have taken a picture of the wall or something.
- Cec.: How about you?
- Marie: It was a few days ago; I can't remember when, but it was also a snap for my sister. I think I took it because I think its fun, but I usually do take selfies. I never post them on Facebook, just Snap Chat.
- Cec.: Is there a reason why it's only SnapChat when taking a selfie?
- Marie: When I take a selfie...it sounds stupid, but I think it's not being self-confident, but self-centered. I only send them to my boyfriend or sister; nobody else.
- Cec.: How about you?
- Matt.: I think it was yesterday. I was cycling and thus it was a dynamic selfie. I was cycling in Superkilen or you know there are those like games where you can like climb and stuff and like last week some friends from Italy came and we were like doing a competition and just took a selfie with myself and things in the background and I was just like memories "Hey guys, I'm here. Missing you"
- A.: So did you also take the selfie with you and people behind you?
- Matt.: No, it was only me and the rings where you can, you know - in that park.
- Cec.: So did you share it only with your friends?
- Matt.: Yeah and it was on Whatsapp. Like Whatsap. I don't really use SnapChat. I used to use it like when I just came to Denmark, but it's not really a thing like I mean, it's kind of a thing, but Whatsapp is more used.
- Cec.: Okay.
- Matt.: I don't like the fact that you can't see the picture again. Yeah. I like keeping it.
- Cec.: What would you say in general that you use a selfie for? I mean obviously you've all said the last time you used the selfie, but in general why do you think people send each other selfies? What's the purpose behind it? The floor is open to anyone.



- Matt.: For fun mainly (Other participant: Yeah) Not like, oh yeah, I am cool, more like awful selfies of myself to make people laugh...
- R.: Makes the message more personal for me at least having a face rather than a text message.
- S.: When you're like "Hey, how's it going today?" You can send that with Whatsapp or Snap Chat with a picture.
- Cec.: Why do you feel the need to add a photo? What do you add to your conversation?
- S.: They're more active and interactive. More personal
- Cec.: Is there like a specific context where you have...where you take a selfie; is there one where you'd say "When I am doing this I usually take a selfie."
- Matt.: Chilling. Having fun.
- M.: Like when you are experiencing something funny? Taking a selfie and it's something funny when someone is suddenly behind you? I've done that a few times; of something funny or of someone funny. Doing something funny.
- A.: Can you give an example on that?
- M.: I think... I can't remember an explicit example, but a situation would be of course if somebody is drunk behind you was falling or something or did something funny while behind you. I would say that's a potential situation.
- R.: So when you're experiencing for instance events or going on holiday and stuff like that? I often use it. If you're going to the beach or something, you can take a selfie with your girlfriend or something like that or going out watching football, or I don't know going to the theater and put it on facebook saying "We are here".
- A.: have any of you taken selfies while you were here and put it on Facebook or whatever?
- Cec.: And would you agree with that?
- M.: Yes.
- Cec.: Activities: are there certain activities where you'd take a selfie more than others or well you mentioned sports for example; would you say sports is one of them that you would use or any specific activity or?
- S.: I get a lot of gym selfies on SnapChat, all red and disgusting. I got a lot of those.
- A.: But would you if you see that in the old kind of platforms or is there a particular?
- S.: Well, SnapChat.
- Cec.: Are there any moments where you share a selfie in a more serious context? So not because you said funny situations or like funny faces, red and sweaty; are you inclined to take a photo when you think you look good for example something like that?
- S.: If you're going to post it you're not taking one where you look disgusting.
- M.: That's true.
- S.: So naturally you think you look nice if you're posting it.
- A.: So you would filter it through Instagram for example you would filter more than if you were with a Snap Chat you would just send stuff out.
- M.: The picture I took was a bit filtered. I looked more brown than normal.
- R.: I also think the media know this: if you look at the filters that are on Instagram and you compare it to the one on Snap Chat; Snap Chat is dark faces and strange things happening to your face and Instagram is more of grey colouring and stuff like that. I think they also knew that if you use them in different ways.
- Cec.: When you upload a photo so the ones that you actually share with the people; who are you aiming it at? What is the point of the uploading? What are you trying to get out on there?
- S.: Show people what you do?
- Cec.: Anything else? To get more likes you know, that type of thing?
- M.: Get more likes and get a reaction on what people would think about what you are doing. I think I know I am one of the people that post most kind of activities or when I am doing something, but it's nice to show it to your family and to your friends what you are doing; that you're now up in here or this activity or if it's something cool to show it's always nice to share.
- Cec.: So if you were to say that there are different types of selfies. So you said that there's more funny ones than a not permanent that you would just send that Snapchat to your friends that don't last long and then the ones that are more 'I look good and I'll put it on Facebook and Instagram and put other people to share uh, to see. Would you agree that there are those two types of selfies?
- Matt.: It also depends like if you are alone or in a group.
- S.: Yeah - a huge difference.
- Matt.: I personally never post like a selfie of just myself, but maybe like a group selfie.
- Cec.: Yeah.



- Matt: I don't want to be the one, like Hey. Look at me. So if it's more like a personal selfie of myself; I just send them privately.
- Cec.: Would you agree with that; that they'd do the same? I wanted to ask something, but I forgot. It was a good question.
- R.: But I also think it is very depending on age. My girlfriend's little sister she posts a lot of pictures only of herself, which is super strange to me, but apparently everyone in her generation does it.
- M.: It also depends on the culture like in China or Japan you always see people just taking a picture of themselves. And it is not funny, they only try to look good on the picture.
- Cec.: What do you usually think of people when they just they upload a photo of themselves or when you see one that appears?
- S.: A bit cringe.
- A.: Do you kind of judge that person?
- S.: I mean I feel that you could have... potentially there could be a setting whether it's a selfie of yourself or you take... I think a lot of the time you think, urg superficial
- A.: So it's more a thing of like I'd never do that or it's a stupid thing to be caught in?
- S.: I don't think I would ever do it.
- R.: Maybe also I thought maybe it's an interesting point in how that changes because I feel for myself selfie use really is enabled by technology and it's more a thing that comes up with social media. Do you think that's an enabler? Or would you also I mean before there were cameras on your cell phone because you can just take them on your own like I mean if we think 10 years ago; was that a thing for you maybe or?
- S.: I feel most of the selfies you take is more for your personal memory because you're there and maybe you don't have someone to take a picture of you, but you want to remember. You don't want all your pictures to be with nobody in them.
- A.: So it's not necessarily that you can share through social media that you're taking selfies, but you would also just take it for your own memory.
- S.: Yeah I take most of them for that purpose.
- M.: It was nice to note that you would share them and if you think about it now when you're on holiday you would be able to share such things you then have social media to show your family or to somebody else what you want to show them. So actually yes. I think that's a huge factor when you are travelling or somewhere even outside with having Internet everywhere when we go with the phone. If you thought anything about it; 10 years ago you kind of have to be home to be able to share anything. So, now that we can share wherever we want it's kind of a huge factor for when you are travelling.
- Cec.: So you mean keeping your family up to date with what's going on?
- M.: Or friends.
- Cec.: Yeah. Okay.
- S.: I mean selfies are put to good use while we are on holiday. You never see people walk around in their everyday lives with a selfie stick.
- A.: How are you towards a selfie stick?
- S.: I've used them in my life.
- M.: Creative invention
- Cec.: Is there a reason behind it? Like why would you use it?
- S.: When we went to Pisa. That's the only time I used it. But you feel like a huge tourist with a selfie stick. And I feel that everyone was a huge tourist so it doesn't really matter. And Who cares?
- A.: So you would... that would be a touristic place where there is like no shame.
- S.: Yeah. It was a bit like that.
- Cec.: Have you used them before?
- Matt.: A few years ago. I was living in Rome I remember I was using it a lot
- Cec.: What were you using it for?
- Matt.: I think it wasn't because of Rome itself like it was super cool city, so I wanted to take everything on pictures.
- S.: But you see people using selfie sticks, but not for selfies. A lot of them just taking pictures.
- Marie: Yeah, it's faster.
- R.: We had a canoe trip so it was easier to get everyone in the picture. Instead of one guy going in front and then in the end falling in the water.
- Cec.: Did it enable you to get a photo where more people could be in it?
- R.: Yeah, exactly. But not on a regular street.
- A.: So it's either the functional benefit of having a new angle or something? Or it's like I'm in a super touristic place anyway so everyone does it. What would you say in a daily life situation? Because



- whenever you see people taking a snap on the street and it's super normal. With a selfie stick it would be something different.
- S.: Nope I wouldn't. I feel like that there's more commitment to a selfie that's really like "I've got my stick with me today." (Everyone chuckling in agreement)
- Matt: I usually use GoPro. That's why I don't really use the phone because I have a stick and the GoPro. I like taking photos in a nice setting, then you can take some amazing footage. It's fun to experiment and see what you can take.
- Cec.: When do you use it?
- Matt.: Mainly on vacation.
- Cec.: Okay.
- Matt.: But sometimes also for myself when I bike and stuff like that I do but that's just like my personal thing. It's not really for selfie purpose.
- Cec.: And you share that footage with other people?
- Matt.: No, no, no.
- Cec.: What do you do with it?
- Matt.: Just playing with the frames and putting cool music. But just for myself.
- Cec.: For memories?
- Matt.: Yeah.
- Cec.: Okay. So I'm moving off on selfies. Now we're going to look at drones. When you hear the word 'drone' what comes to mind? Like what things do you associate with 'drone'? Is it something positive? Is it negative? Like what are the first things that come to mind when you think of drones?
- Matt.: Future.
- Cec.: Future?
- Matt.: Super cool.
- M.: Something fun.
- Cec.: Super cool in what way?
- Matt.: You can do so many things like from just standing in front. When you were a kid you were using like a car like the automatic now you use a drone. So just like for fun purposes.
- Cec.: Yeah okay. Anyone else? Have you used one before? I mean, what do you associate with it?
- S.: At the moment we're watching a series where they filmed the whole stuff; the whole thing with a drone 'coz I like it is on a desert island. They have no people on the island with them. They've only got drones filming them and drones dropping off packages for them and stuff. That's what I would think of it now 'coz that's what I'm watching.
- M.: It's a huge innovation for supplying stuff as well and other companies are looking into investigating into drones and Dominoes are looking into it as well; delivering pizza's with a drone and Amazon; if you're within I can't remember if it was 40 kilometres or something then one of their hubs they could do a 3 hour delivery from your purchase. So stuff like that. So it's an innovative thing for beings and how we're going to get stuff supplied.
- S.: But you also think maybe military would also come to mind.
- M.: Yeah.
- Cec.: What specifically?
- R.: When you go somewhere to see how it's set up or something. You would send men and you
- Marie: Spy?
- S.: Yeah. You won't send men in. You would send drones to that location to see entries, exits. Even have a bird's eye view of the plans that you might have just like a clearer view than just satellites and stuff.
- M.: They have advantages for the attack. You know if you know where all the enemies are.
- A.: So this is also very positive?
- S.: It also can be scary maybe. Don't you think that it's...
- Matt.: It's more of a Big Brother kind of mix up.
- S.: Yeah. 'Coz it's positive if it's the good side using it, but not the other side around.
- Cec.: Have you used one before?
- Matt.: Yes.
- Cec.: Tell us about it.
- Matt.: It was a gift that I super like. Every time I was going into an electronic shop I like Elgiganten that's super cool. I want a drone, I want a drone. I received a drone and it's actually pretty difficult like to use it. I was just like "Yeah I'm just gonna do it." At the beginning I was just like with my flatmate last year using it at home and we were doing like let's see who lasts longer without hitting something in the room. And it also had a camera, but the fact is that it broke before I could make it to use the camera. We were like "Okay, first we have to learn how to use it otherwise if it falls down then the camera is fucked, but the drone was broken in a couple of days.



Cec: So what did you do after that? You just left it? Did it turn you off from using one again?

Matt.: No I mean it's just like it's not easy I think to use it. So now I get why people have to get a license. It was like a big drone.

A.: So what was the hard part of using it? Like why was it hard?

Matt.: It's not stable. You really have to control it like and be super careful.

Cec.: You only use it inside?

Matt.: Once outside, but I was also told that I couldn't use it outside without a license. When I was in Copenhagen I was like "Okay." Not in Italy. In Italy people don't even know what's a drone. They're like "Wow, is that a bird?" So policemen will not even know this, but in Copenhagen..

Cec.: Do you associate drones with more developed countries in that sense?

Matt.: Not drones. Italy is like very traditional. Any innovation comes maybe two years after because in the meantime it's like. I really enjoyed it for that little bit of time it was super cool and positive.

Cec.: And who bought the present? Who bought it?

Matt.: That's the wrong question. My ex-girlfriend.

A.: How do you control that kind of drone? The controller is like when we were small with those little cars?

Matt.: Exactly the same so it has these two levers and the one is like for rotating and one is like for going forward and backward.

A.: Oh wow, okay. That might also be a reason why it's hard, right? Because you have to kind of figure out both of them at the same time.

M.: Yeah, to keep both stable.

Cec.: Rasmus, you said you used one? What happened there?

R.: The first one I flew into a table and it broke. 4 minutes. And the second one was just like in a grass area and we just flew it around. I tried it for 4 minutes and it was fun; super fun just to fly it over things.

Cec.: And then what kind of drone was it?

R.: It was big with 4 propellers and we just flew it around and it was in grass fields so nothing could really happen - it was fun.

A.: Was it both quite recently? You said you were in Copenhagen so sometime last year?

R.: Yeah in May.

Cec.: And for those who haven't used it before is it something you would want to do or want to try out in the future?

M.: Yeah.

Cec.: Why is that? What do you find appealing?

M.: I find it appealing to first of all just see if you can fly it because I've heard it's quite important to fly it. Second I would like to actually experience one of the drones that actually follow you; the self-flying drones. I think that will be very cool. I saw a video on Instagram of a guy skiing and it was following him and it's very interesting.

Cec.: What would you use it for?

M.: I'd probably use it for more fun like try and fly it and maybe... I could imagine my small brother getting one and then he's in sports and is responsible and he's in some competitions and it will be quite fun to see if I could have a drone up there filming him while he was doing something on a bike. I think having a bird view on that would be very cool.

Cec.: Would that be something that you would share on social media?

M.: Oh yeah. That's something yeah, definitely.

Cec.: What would you use one for? You said you wanted to try it, but I feel like I just want to try it; to try and fly it. How about you?

Marie: Yeah. I already used one, but it was one of the first ones. Probably about 2 years ago. It was a gift from my father 'coz he used to fly and I tried it, but yeah it wasn't really stable seeing that I was a bit scared. You could get really hurt, but I think I'd like to use one of the new ones just to see if it changes in stability; if it's easier and also the quality of it.

Cec.: So you would use it to film things then?

Marie: Yeah.

Cec.: Anything in particular?

Marie: I think when you go travelling take photos of Iceland and nice and beautiful landscapes; nice and beautiful with the sky. From what you see in videos..

Cec.: Would that also be something that you would share?

Marie: Yeah.



- Cec.: So moving on. That's a good transition because now we can talk about selfie drones. When you hear the word 'selfie drones' what do you think? What comes to mind? What do you think it would be?
- S.: A smallish sized drone that would take pictures.
- M.: One of these that follow you around. I would see one of these. Yeah.
- Cec.: Same for you guys?
- M.: Yeah.
- Cec.: Is it something that you think you would use?
- R.: I like the skiing or football selfie so if you do sport that's where I'd see the real potential and if I'm just walking down the street and I probably would have a drone find me.
- A.: Why is this or why do you think that?
- M.: Imagine you could make it follow a football. It's a totally different view of watching football. Think about it; it's what? 3 billion people in the world watching football and if you can make it follow the football and you see from the top instead of seeing from the side as you can do today; that would be incredible.
- R.: Then you can get a sky cam for each stadium; and for normal matches, amateurs and stuff like that. But why? I think because sporting events are things that you want to share, but that's an experience that you have and you want to share that just having your everyday life maybe I don't think people should...I don't think they are interested. If they see our everyday lives from a selfie drone, but yeah.
- Cec.: But you would be interested in seeing yourself?
- R.: What I do in the normal day or?
- Cec.: Something yourself, but not necessarily sharing it.
- R.: Not for personal use, I don't think so. I was a football ref once and we filmed our self to running patterns; there the view is really useful. We didn't use drones we just used regular cameras. They are very useful, but then it's also for a purpose not just to see myself playing the game I just played 2 hours ago. I wouldn't watch it again, no.
- Cec.: So you would film your training for example?
- R.: Yeah when I was a football ref; if I had something I would work on, but that's also more professional in a way when it's now right now and football is just for fun so I wouldn't use it, but back then we used it because we wanted to see if we were in the right place at the right time. There was bird view was very useful.
- Cec.: And do you think that's something that you would share for example like you could live stream the event for example or if you are at a game or something.
- R.: Yeah, that would be nice, for some people on Facebook. Just to see me play the lowest series in Denmark, haha.
- S.: But maybe if you did stuff like if you went surfing for the first time or surfers they would want like a drone following them when they're doing that 'coz there is no way you can film or take a selfie picture whilst you're doing those kinds of activities;
- Cec.: So more extreme sport type context.
- S.: Something just a bit more interesting than ordinary stuff that you do all the time, I feel.
- Cec.: Would you take it to take a selfie I mean would you use it to take a selfie of yourself and share it like you use a camera or a selfie stick?
- S.: I feel like if you're in an amazing location, maybe. I don't think you'd do it just 'coz you went for brunch or something like that.
- M.: Probably on vacation, holidays something like that.
- A.: Why is that? Why would you not use it in a non-normal context?
- S.: Maybe a hundred years down the line, but I feel like first of all not a lot of people have drones right now so I don't think you'd buy a drone just to take pictures a little bit higher up than the angle that you can take them right now. I'd maybe save it for something a bit more special.
- A.: Okay.
- Cec.: So would you as it is now would you see yourself buying a selfie drone? What we qualify as a selfie drone is the smallest sized drones generally that have an inbuilt camera that you can use more easily I think than a normal, big sized drone.
- A.: Just to give you an example there's this company called Air Selfie and they have this little selfie drone that is integrated to your Smartphone cover so you can slide it out of the cover and you can let it fly and it's like this size and it has facial recognition so it kind of like follows you around and friends.
- S.: So you don't have to stare at yourself?
- A.: No it doesn't. It has facial recognition, but it has to be also the app on the smartphone so it's all kind of in your pocket. It's not a big deal to take it with you.



- S.: In that case I feel like it could be more widespread if it's got it there any way you can quickly whip it out and. Otherwise, I don't know if I would have room for one to carry it around in my bag.
- A.: So it's a functional thing like you don't have to take an extra bag or something. If you had it with you, you would also use it?
- S.: Yeah.
- Matt.: Yeah I would use it. I actually know the product.
- Cec.: And that's something that you've considered buying then?
- Matt.: Not in the super near future, but one day.
- Cec.: What's stopping you from buying it now?
- M.: Just I don't think you see them anywhere.
- Matt.: They're quite expensive.
- S.: Yeah, expensive.
- R.: It's kind of a nice to have like you already have a phone so you could take a selfie. It's more like I don't want to pay extra and I have this drone so I've really got the need for it right now.
- Marie: Also, it is fragile. It's expensive for only using it once... it's too much money.
- Cec.: Do you think it has the potential of becoming popular?
- Marie: Yeah.
- Matt./R: Absolutely.
- Cec.: Why do you think that because you were all saying right now that you wouldn't want one or you don't feel the need? Why do you think that it could be popular? Why do you think... why does it appeal to people?
- Matt.: It has to become a trend. It has to be picked up by early adopters. I would not be the first one you see on the street with that, but if it starts to become normal so I don't look like the first weird person or a weird person doing that; then.
- Cec.: It's kind of more of a sense of embarrassment in a way?
- Matt.: Probably. I would say that.
- M.: It has to become a company trend first. Now I see a company called Beautiful Destinations; they use drones to take all their pictures and they have on Instagram so it gives you a new perspective and I would say woh, I haven't seen that yet from a different angle making it even more beautiful so a lot of companies I think now is going to use it for taking beautiful pictures and then when people see that you can actually take very beautiful pictures with it and then people start buying it and they can take pictures of themselves in these moments; travelling moments when they are out.
- S.: Stuff like distortion (music festival); I think like that it would be perfect. You can ask people to use it for concerts.
- Cec.: So what do you think it adds?
- M.: It adds a filming perspective that you haven't been able to do before. If you think about it in moments where you have not been possible if you're on a desert island they'd have a camera 20, 30 metres up in there taking a video of you on the beach or if you would have a camera in the middle of a festival taking a picture.
- S.: You want to be able to go up above everyone to take a picture. You can include more in your picture.
- R.: Exactly and it adds context to where you are so you can show that I'm part of this whole extortion instead of just three people; you're part of this whole thing and I'm right here in the middle. That's great I think, but I think it's too expensive right now for people to buy it, since it is only a nice to have. I think it needs to lower in price and then I think people will adopt it more.
- Marie: I think if it gets more affordable and also if it's easier to repair people will buy it.
- S.: If you're still in a setting where I think well what if it drops 5 metres down there; if it's walked on I'll never find it again. People might be a bit more reluctant to use it in crowds or in places that could be core to use it.
- Cec.: But for example you said you use a go pro and that's worth quite a lot.. these are probably they are a similar price to the go pro so why would you choose a go pro over a selfie drone? What's stopping you from...yeah.
- M.: You can drop it and it won't break. It's made for extreme situations where I don't think a drone is made for that yet.
- S.: But also you don't see it. I've never ever been into a shop and seen a selfie drone or never ever seen an ad on the television about a selfie drone.
- Cec.: But have you seen the media adverts for Gopros?
- S.: Yeah, definitely. I also see people posting videos with their Go Pro's all the time as well.
- A.: So that kind of inclines you as well to use it if you didn't have influences or whatever?



- Matt. I think it's the same thing like what happened with the Gopro. Like 5 years ago and stuff like that people are using like very few like it was very niche. Now like people doing sports and extreme stuff. Now, even tourists have a go pro just because it's cool.
- S.: Yeah.
- M.: It's small. It's easy to use.
- Matt.: You see the same thing basically now there are drones that are used for more like professional things, but step by step it's becoming also something for everyone so Air selfie drones like.
- Cec.: What would be features that you would most be interested in if you were to buy one in the near future as you said. What is the main thing; the key point in the air selfie that you would look at? I mean an air selfie drone.
- R.: Quality of pictures first of all and then fact that I don't want to fly it myself. I think it's funny that if you can from your phone it will be nice, but not all the time. That would be annoying. It would be nice if you could just throw it up and then it starts flying around I don't know if it can find your phone or if it can find you, but that doesn't matter.
- S.: It needs to be easy to control.
- Cec.: But there are some like our bracelet for example and it flies you around. So that would be something that you would be more inclined to go for perhaps or not?
- S.: Yeah.
- Cec.: And you mentioned price as one of them and ease of use.
- S.: It can't be too big. It needs to be quite small and compact.
- Cec.: So something that you can take around with you easily.
- M.: Yeah.
- A.: And would it just be the practicability of it? Or are there any other factors?
- S.: No I think like a phone and you want to put it in your pocket.
- M.: And batteries also? Yeah quite a huge thing. If you know it can only last for an hour then it's not really that usable when you're going on vacation and also you might be out all day where you won't be able to charge it.
- A.: I know we've talked about the selfie stick before. Maybe we can try and bring them into context like selfie sticks are used to capture better angles and kind of take pictures of good memories and vacation spots or something. The difference of a selfie drone and a selfie stick
- S.: Yeah 'coz it's hands free. You can get more actions shots and get more dynamic with them to start angling a selfie stick. It's just giving you an extra foot on your arm.
- Cec.: So freedom of movement and being able to like still do your activities?
- A.: From the psychological barrier that you had like you wouldn't use a selfie stick in public. I feel you would be a bit cringe. Do you have similar feelings towards selfie drones?
- S.: No, I feel like a selfie drone would be a bit more cooler.
- R.: Like you said if you had distortion and you had those I think everyone around you would find it super cool. I don't think they would find a selfie stick cool at all.
- S.: No, definitely not!
- Cec.: But you said that you would be a bit embarrassed to be using it in the street and stuff. How would you go from being embarrassed to it being super cool? Is there a different context that you would use it in or?
- S.: Maybe do it by yourself. If you take a picture with your drone people might think "What you doing?" Like posing on a bridge or something.
- Cec.: So it would be more for like events like specific events that would require something from a higher view. If you were to describe right now who you'd think would buy a selfie drone how would you describe them? Like as a profile of someone that you think would definitely buy a selfie drone? Is there like certain elements that you would associate with that person?
- S.: In their 20s I would say.
- M.: Or a person who is active in a sport or goes to a lot of different events.
- R.: Probably also someone who's doing a sport that's maybe not that regular or a more extreme sport, I see people running marathons or people skiing or something like that who would do it or mountain biking for instance; that would be.. I don't see people doing for instance football. It would be fun to have it, but I can't really see it. Having a drone three meters after you in a football match, doesn't really appeal to me.
- S.: Yeah.
- Marie: Oh so someone can afford it? In their 20's? Still with a lot of pocket money? Good job.
- Matt.: I agree. Maybe those rich kids wannabe like cool. Look at this like I mean that's something.
- Cec.: Yeah. Do you see it maybe replacing a Gopro in the future? What do you think the potential is for the selfie drone and how do you think it would maybe changes people's behaviour?



- M.: This is where the Gopro is smart. They're going to fit it 'coz it's not able to be on a drone, but that's adding a feature to Gopro for saying that you can buy a drone with it so it can be selfie drone as well.
- Matt.: Yeah I think it already exists, right? GoPro also has the Karma.
- Marie: But I think it wouldn't replace it because the Gopro is really close to you and maybe with a drone you can't still like it can't be so close to you like if you're in a forest or something.
- S.: What would be the difference between a GoPro drone and a normal selfie drone?
- A.: This one is sort of a brand that has a selfie drone.
- R.: But if you go to the regular GoPro camera with your cell phone and you compare those two I think they have two different purposes. The GoPro is for me at least from your own view; you have it in here or here or something like that then you see it happening from your point of view. Whereas the selfie drone is for everyone to see what's happening; what you're doing, where you are bla, bla, bla.
- Matt.: It's more social probably. So Go Pro is for yourself like if you want to remember what you did like if you were skiing or diving or whatever. With a drone, I would use it more in a social setting like not me taking a selfie of myself. That would be really sad. I would rather use my GoPro when I'm on my own.
- Cec.: Yeah okay. What would you be willing to pay for that kind of device? You said they're very expensive at the moment, but what would be your kind of price threshold? Threshold, is that the word?
- S.: Difficult to say.
- Matt.: 50 Euros? Not more.
- Marie: 100 Euros.
- S.: I was thinking 100 Euros as well.
- A.: That would be like what kind of size? The pocket one that was attached to your cell phone case or what were you thinking when you set the price?
- Matt.: If I want to buy something expensive I would rather buy something like super high quality like Go Pro camera or like a Go Pro drone that I can also use for other purposes like taking selfies. A selfie drone is just for fun so if I had to bring it to a party or at a festival or something like a social setting I don't want it to be so expensive that if it falls out because someone threw his beer bottle on it so I just want to add like from drunk I just throw "Hey guys let's have a selfie!" Like something more like this. I don't see it like Rasmus said for sport and stuff like that because for that I think you have to have something more high quality like the Go Pro.
- S.: Does the selfie drone necessarily mean not high quality?
- A.: It can also be very durable. I mean also those where they rotate inside a box so that you can't hurt yourself because we read this article about Ricky Martin, because he was catching a drone at a concert and needed to be flown to a hospital so other drones they have like a super durable and safe design - kind of like that box to protect the user and to kind of... it's not breaking that much because normally the blades are normally the parts that break quickly so that kind of makes it more durable.
- Matt.: What's the difference between a... I still don't get the difference between a drone and a self drone and like a drone is just like an extra feature.
- Cec.: A drone is usually just what you say; a drone is just the actual machine thingy without the camera.
- Matt.: So a camera drone?
- Cec.: Yeah, but one, but you have camera drones that are for like commercial use, but this selfie drone is for personal use. Commercial use would be for companies to use it for like specific contexts.
- Matt.: It's just because I know this air selfie that you mentioned. Like there I see a difference between and the air like selfie drone; camera drone like very small, just for yourself like a drone; camera drone? It's more high quality. I don't know. That's just like my perception.
- Cec.: Yeah, they would be more the professional drones.
- Matt.: Like the GoPro is a professional camera drone.
- S.: It's a selfie drone. The GoPro I am not sure.
- A.: I think there is both. First, there's the high quality camera in there because the camera GoPro drone would also be classified as a selfie drone.
- Matt.: Okay then I would rather invest in something like that. So how much is that?
- Cec.: Like 400, 500 dollars and then there are actually some that are the market for what you were saying more on the \$50 spectrum for the smaller ones.
- Matt.: Yeah so I would rather like go with a very, very cheap one or a very, very expensive one.
- Cec.: No in between.
- A.: And then adapt your usage situation as well?
- Matt.: I wouldn't take the expensive one where it could be broken by others. The high quality drone, I would more use for holidays and safe places. And the cheaper one more for parties and more social experience so that I don't fear it being broken.



- S.: Yeah I would agree.
- Cec.: And if you went to a party and you took your selfie drone with you would it be.. what would you do with it? Would you share the content that you take; the footage. Would you go there with the 'wow' factor like "I'm going to impress my friends." What would be your reasoning behind it? Does that make sense?
- S.: I think you could if you got some good footage, share it. I wouldn't share the whole thing, but I've got some good moments.
- Cec.: 'Coz you can take videos and photos as well so would you be inclined to share either or both?
- S.: I mean when you're in a concert and you're taking a video and you've got the people's heads it's not very good, if you had the drone you'd be higher and you'd have a way better view probably you in it. It would be way better to share. A couple of seconds of that rather than half the stage/head mix up.
- Cec.: Are there any obstacles that you see in your mind and I think we said you know there's some licences and regulation and things like that. Does that ever come to mind when you think of selfie drones or like using a drone?
- R.: For me, if it's a selfie drone it should be solo. In the air it should be like 50 metre or so that it shouldn't have any regulation really. The only problem I see if let's say it becomes a trend and you go for distortion and hundred people have these flying drones and everyone throws them up in the air and you just have this whole layer of drones would be really annoying. I can't really see that.
- Marie: I think it's also for security. If you have a hundred drones and like one if it's really close to you and if there's a technical problem or something and falling down on you.
- A.: Or a Terrorist attack.
- S.: Maybe look into people's apartments. You can't see so you'd have to get a ladder which no one would do, but you could easily just fly your drone over, have a quick look or even just out of curiosity.
- Matt.: That's kind of a scary part. It can really go too far.
- Cec.: So if you saw someone in the street using a drone what would your immediate reaction be?
- R.: I would be like "What the.." and I'll go in a big circle around them and then I'll tell you what: if they were using it to look into windows I don't know what I did, probably calling the police or sth.
- Cec.: Would you guys feel the same like?
- S.: if you saw people skateboarding or see them on cars trying to do tricks and stuff and someone filming themselves with a selfie drone thing; it's pretty cool. And you'd stop to look and see, maybe.
- M.: So that depends on the scenery. Okay, fine. but in other contexts.
- Cec.: So how would it feel differ in different contexts? How would you feel differently in different contexts? You said in the street you would run away.
- M.: I'd find it really weird if I run down the street if somebody just came walking and he had this drone following him or something.
- S.: But, I think right now you'll probably think "Oh what a vain guy." You'd just think he's testing it out or something. I don't think anyone would be like "Oh that's so lame. Oh wow, he's got a drone. What was he doing?" You'd be intrigued like what was he using it for and what's he going to do?
- R.: I would also say, but still I'd think it was... context is very important. If it's at Nyhavn I'd be like "Okay it's nice." But if it's down here I'd think.
- Cec.: Do you think it offers the potential to change the way people communicate with each other? You said you were sharing selfies to express your emotions or do you think it offers that potential in terms of communication side of things?
- Marie: I don't think so. I think it just changes the perspective and not the landscape or anything about the way we communicate.
- R.: I think the examples we have here; I would use it exactly the same. That's when I'd put it on Facebook and Instagram so I don't think it would change. It just gives a cooler context.
- Cec.: Okay.
- S.: I think it would maybe make people feel closer in a way because you would be able to share your experiences maybe more when you're not with someone and they would have a better content of it if you're sharing like a little video going around in distortion and stuff. You'd get a way better idea then.
- A.: Would you also then share more?
- S.: Yeah probably. Not necessarily share more on social media, but share more with friends and family and then you could kind of follow people's lives a bit more and feel like you're more part of their lives even if you're not necessarily there.
- Matt.: Another thing would also be at the very beginning they could share more because it's something new or something cool like as before with SnapChat for example I was using it a lot and then it became kind of okay there's one new filter? And I just got bored with it so I think there's going to be a lot of hype once it becomes kind of... when everyone is like thinking that that is a normal and cool thing;



then we will just become like old fashioned. Like selfie sticks now like they were super okay years ago now I think apart from nothing against them; I'm talking about Chinese people going everywhere and taking a selfie stick. I don't see that many people using... like two years ago for example.

S.: I don't think it would maybe necessarily lose interest, like a selfie stick.

M.: Yeah me too. It will be more long-lasting.

S.: I think it would increase more and more and more with it being easier to use, quality, it's cheaper.

A.: What would be the extreme for you? Where would the trend go like

S.: I think if you were mentioning it like everyone's throwing their selfie drones up in the air like you've got loads of them above your head and loads of them flying around constantly you would be like Wuuh.

Matt.: It will depend on which kind of regulation that would be on it like I think. If I'm the mayor of a city I would be kind of annoyed if everyone's just like all the time.

R.: But it also depends on the commercial that the business uses. For instance Dominoes starts doing all this pizza and you're used to all these drones flying above you then I don't think people would really care that much because then you just get used to it.

S.: Yeah, it's the same like with cars.

R.: If you asked someone in Copenhagen. If you see scooters driving around with Dominoes or you want the drones you would probably pick drones because it's easier for everyone else.

S.: I don't know how noisy they are. I like noisy because you've got like 4 drones and they're like flying in front of your window. It probably would cover the music.

Matt.: Yeah just imagine if every delivery place like used to drones to deliver stuff like that's wow! It's like colour coding; oh it's the green drone.

Cec.: Just to wrap it up if you were a selfie drone company; selfie drone company what do you think would be...how would you communicate to people? What do you think? What would your like slogan be if you had to qualify what a selfie drone is and how you had to sell it to people; if you could all like...what are the main key elements that stand out for you to sell it to the public?

A.: You can also just throw in words. What should be in there? What's crucial?

Matt.: 'Capture the moments' or something.

M.: Unique views. Don't limit yourself to the ground.

R.: And we'll promote it like saying not at the social event, showing people using this drone probably do that.

Marie: Is it easy to use?

A.: This one company is called Stalker. Not sure that is a great name, haha.

Cec.: Are there any like particular like celebrity status people that you would associate with a drone that would be good people to sell a selfie drone to?

S.: Yeah reality stars.

M.: Especially English reality people.

S.: They're constantly posting selfies everywhere to promote everything and then just have a drone following them.

M.: It's better than having a camera man.

Cec.: Would that be something that would make you consider buying one? Would it help on your journey to purchasing it seeing like extreme sport and reality?

R.: Every single one of them in the world at this point especially bloggers; they just promote it and also write about it so they promote everything to them, but if a sports star or something like Adidas used a drone I would find it so cool. This would also motivate me to imitate.

Cec.: I think to summarise and tell me if you disagree or if you want to add anything, but I think we've kind of concluded that selfie drones offer potential to the market, but is still at an early stage where it's too early for people that are not maybe early adopters to buy it right now, but you would have to wait for it to become more main stream and seeing it in different uses then you would maybe consider buying one especially if the prices came down. Is there anything that you want to add or do you agree with that?

S.: As you said the same pattern as GoPro has followed.

M.: I think in the next generation it would be good. Actually this is an introduction phase. They will come with generation two and generation 3 would be the same as Go Pro having the first generation. A little bit like not that much battery on it as well as in generation 3, but 4K video and so on so I think the next generation would be very good.

A.: To make sure of technical features like battery and being not too pricey and social features; actually seeing it on the street and not being the first one out there.

S.: Yeah I feel like people would want to wait and see if it's good. See if other people are using it before testing because it's quite expensive.



- R.: And the law.
- Cec.: What would you say specifically like you don't know what the regulations will be in the future?
- R.: No I don't. For me I don't know anything about the regulations. If you're going to sell it you probably should tell people like it can go 100 metres up in the air and take a picture and stuff like that.
- R.: There's a lot of places in Europe for instance and you don't know enough about them to say it's a no flight zone somewhere and that's maybe a bit of a problem.
- Cec.: So you would feel more comfortable if you knew what the regulations were and then you'd maybe consider buying one? You think it's too unclear.
- R.: Or an automatic stop that you cannot fly over a certain limit through geo fencing.
- Matt.: Yeah that is important and to when they promote it like for stages first. That complies with law and regulations. I would say that. It will be just like okay.
- Cec.: One last question that I wanted to ask earlier would you consider buying one as a gift for someone?
- Matt.: Yeah I would.
- S.: Right now I'd consider more to buy it as a gift and not myself.
- R.: The selfie drone or drones in general?
- S.: Maybe like a special gift for someone that feel that they might need it, but you don't think yourself yet.
- Cec.: You said you would also maybe buy it.
- Matt.: I don't really have a specific person in my life either. I would not buy it for myself now.
- Cec.: So maybe someone who's more than an early adopter profile.
- S.: I feel that they could be and they probably wouldn't have bought it for themselves either, but as a present.
- Cec.: And for the same reasons?
- S.: Yeah, I would think so.
- Cec.: Okay. If there is something else you want to add feel free. I feel that we have covered most things like more of this kind of topic. Anything that you're dying to share?
- S.: Nothing that I can think of.
- A.: Well, thank you so much.
- Cec.: Thank you for coming.
- S.: You're welcome.
- M.: You're welcome.
- A.: So just to let you know what we will be doing with this interview data. We will try to analyze possible motives and obstacles for people to use selfie drones and what we'd use it for and then when we identify it at some point it's going to go into an in depth interview thing and it will go deeper into like specific concerns that you mentioned or specific situations where you would use it. I think it was really valuable. Thank you very much.

Interview with Marion

- Q: When did you last take a selfie?
- A: 2 days ago!
- Q: Did you share it with anyone? Where? For what reasons?
- A: Yes with my families and friends as they were on the photo as well.
- Q: What do you use the selfie for? (share and communicate with friends, privately with close friends and family, "show-off", get recognition and likes, record moments for personal use).
- A: On What's app with my friends and family to keep a souvenir of the moment!
- Q: Would you say there are different types of selfies? What context? What use? Yes depending on the use of selfies.
- A: Some are taken just because the person taking it also wants to be on the photo and it's quicker this way. Others (usually the ones when there is only 1 person in it) are specifically used to show you, only you ☺. People spend more time on the latter, making sure it's perfect, than the 1st one.
- Q: Different social media for different types of selfies?
- A: No I would not say so, both types of selfies are shared on different social media which are often the same (what's app, Snapchat, Facebook, Instagram).
- Q: Have you used a selfie stick before? Why? Why not? In what context? What do you think of them?
- A: No, it's quite annoying to hold and selfies taken with my phone and without stick are fine.
- Q: When the word drone is mentioned: what immediately comes to mind? (ask for key words).
- A: Parrot, future, exciting, air
- Q: What was your last encounter with a drone? (media, real life?) What were your impressions?



- A: Media: Saw a video from one friend of his holidays in Iceland taken with a DJI drone. Real life: Last August with my Parrot in the countryside – I made it fly with my friends and family.
- Q: Have you already used a drone? If yes, what kind? What context?
- A: Yes, a Parrot one, I had it fly in my garden in the countryside and I used it to take photos (selfies) and photos of landscapes.
- Q: What was your experience with it? How did you feel when you were using it? Is it something that you have considered buying? Why? Why not?
- A: I loved it, it's exciting to see your drones fly quite far away, going fast and then come back with photos. It's quite hard to use it at the beginning so you have to practice.
- Q: What comes to your mind when you hear the words selfie drone? Have you heard of the concept?
- A: Yes, I think of road trip.
- Q: Do you think it is a product that you would be interested in? Would you use a selfie drone? If yes, for what purpose? If no, what are the reasons? (product drawbacks)
- A: Yes I would use it if it's easy to use and if the drone is flying itself (no need to have a control), the drone would rise, identify where the people to take the photo from are, take the picture, and come back on the ground.
- Q: Where do you see it in a few years? Do you think it will be popular? How do you think it will change people's behaviour? What would be the drawbacks?
- A: I am not sure it will be used a lot to take pictures of people since drones are quite niche and specific in terms of use and adoption. However, drones used to take photos of buildings, natural disaster, etc... (business use) will not stop growing I think.
- Q: What features are the most valuable to you?
- A: Easiness of use, safety, light device.
- Q: If price is an issue, what would you be willing to pay for such a device? For a selfie drone?
- A: I would be ready to pay 250 euros maximum.
- Q: What would you use it for? In what context? (Sports, travel)
- A: When I go on long road trips with my friends and only in natural environments, I would not use it in a city. I feel it would be too dangerous.
- Q: Would you buy one? For yourself? Why? Why not? The laws and regulations, are you aware of them? is that an obstacle?
- A: Yes I would buy one but I feel I would use it only for exception occasions like long holidays which happen once a year. If I buy one, I will use it in natural public environments where there are not a lot of people (mountains for example) so it's not dangerous. I am not really aware of regulations, I just know you can't have drones fly in public environments like parks in cities, etc...
- Q: Would you upload the footage to social media? What type of social media would you use?
- A: Yes, if there are nice videos and photos taken, I would post them on facebook and Instagram.
- Q: AirSelfie, a type of selfie drone that comes in the shape of an iphone case (small and compact). What do you think of the product? Would you buy one? Why? Why not? What advantages do you think it offers? How would you use it? Is it something that seems easy to use?
- A: Yes I would buy one since it would be small in that case, could be easy to use and it should be light to carry. I would use it more than just for long holidays then but take it in week-ends for example.
- Q: Could you describe, according to you, what the profile of a selfie drone consumer would be?
- A: Someone who already takes a lot of photos on his phone and could people not just taking selfies.
- Q: Would you feel more inclined to buy one if your friends had one? Would you feel part of a community?
- A: Yes why not, if I find the photos taken are really different than the ones taken with your photo.
- Q: Would you be more inclined to buy one if a celebrity used one or promoted one? Why? Why not? What kind of celebrity? Any specific examples?
- A: No
- Q: What do you think it offers the market potential is for selfie drones? What are your reasons for this?
- A: The market could be huge if the device was really easy to use, light and cheap. The current drones are difficult to control.

Interview with Anja (original in German)

- I: Wann hast Du das letzte Mal ein Selfie gemacht?
- A: Gestern.
- I: Und was hast Du damit gemacht?
- A: Ich bin auf Urlaub – also haben wir ein Selfie vor nettem Hintergrund gemacht. Das war vor dem Mailänder Dom. Da machen ja ziemlich viele Menschen Selfies, aber wenigstens hat Und wir haben noch nichts damit gemacht.
- I: Gabs Probleme das Selfie zu machen?



- A: Ja, der Hintergrund hat nicht drauf gepasst – also die Mailänder Kathedrale. Und das Licht war leider Gottes auch falsch.
- I: Und was hätte da geholfen?
- A: Wahrscheinlich ein Selfie Stick.
- I: Hast Du einen?
- A: Nein
- I: Warum?
- A: Weil es peinlich ist. Ich will keinen verletzen, aber es schaut komisch an. Die Perception von Leuten, die die benutzen, ist ziemlich schlecht. Ich würde sagen, hauptsächlich Asiaten benutzen Selfie Sticks.
- I: Woran denkst Du bei dem Wort Drohne.
- A: Post. Drohnen können Post von einem Ort zum anderen bringen, aber die Technologie ist ja nicht in Verwendung hätte ich jetzt gesagt. Oder zum Liefern von Essen könnte ich es mir auch vorstellen. Oder sie machen Satelliten Fotos mit einer Drohung zu Aufklärungszwecken.
- I: Und was würdest Du von Selfie Dronen denken? Also das Konzept von einem Selfie verbinden mit Dronen Technologie?
- A: Kommt auf die Größe an.
- I: Es kommt ganz drauf an – es gibt ganz kleine, die z.B. in deine Handyhülle passen, aber es gibt auch größere.
- A: Ich glaube ich würde es mir nicht kaufen, weil man komisch auffallen würden. Wenn es in der Gegend rumfliegt – also die Größe spielt eine Rolle. Wenn sie zu groß ist, dann fällt es anderen Leuten auf und ich komme mir komisch vor. Es können ja auch nicht Tausend Dronen rumfliegen. Aber vermutlich ist das auch nur, weil wir es nicht kennen.
- I: Was könnten noch andere Probleme sein?
- A: Vielleicht verliert das Handy Verbindung und fliegt wo anders hin. Außerdem ist der Winkel auch wichtig, also wie ist der beste Winkel für mich am Besten. Also ich brauche dann schon das Gefühl, dass ich es gut kontrollieren kann. Aber die Größe ist das Wichtigste. Wenn es relativ groß ist, habe ich Angst, dass es auf meinen Kopf stürzt, oder in irgendwen auf der Straße.
- I: Wo würdest du eine Selfie Drohne benutzen?
- A: Da wo ich auch Selfies machen würde, also z.B. auf Urlaub. Oder auch auf Feiern, wenn man gerade ein Foto machen will, das kann ja auch ein Foto von oben. Also um nur mich zu fotografieren, würde ich es nicht verwenden.
- I: Und wie würdest Du das dann verwenden?
- A: Also ich bin auf Facebook, Instagram und Snapchat aktiv. Da man auf Instagram nur Fotos postet, würde ich die Technologie vermutlich dafür verwenden. Und auf Facebook poste ich eigentlich nichts mehr. Aber die Bilder wären mir vermutlich zu wertvoll um sie auf Snapchat zu benutzen. Es scheint einfach noch zu viel Aufwand für Snapchat zu sein. Weil die Bilder sind nach ein paar Sekunden ja wieder weg.
- I: Und von der Art der Fotos, gibts da ein Unterschied zwischen Snapchat und Instagram?
- A: Ja – es sind halt bei Snapchat so scheiß Fotos manchmal. Also ich überlege nicht so lange, ob ich da irgendwas hinmache.
- I: Und wenn Du halt einfach irgendwas machst. Würdest Du das dann mit der Selfie drone machen
- A: Ja, theoretisch schon wenn es nicht viel Aufwand ist, aber manchmal muss man auch einfach schnell ein Foto machen, sonst ist die Situation weg. Und da glaube ich, dass das Handy die beste Möglichkeit ist.
- I: Das heißt Du würdest es eher für Instagram benutzen?
- A: Ja, voll. Außer es geht super schnell und die Drohne fliegt mehr eh schon nach. Dann wäre es auch möglich für Snapchat.
- I: Wäre das für Dich denn ne Möglichkeit, dass Dir die Drohne nachfliegt?
- A: Nein, das fände ich nicht gut. Aber es gibt schon Potential für die Technologie für noch jüngere Menschen, die social media benutzen. Gerade wenn es dann ein Trend Ding ist. Aber das funktioniert nur wenn die Leute wissen, dass es das gibt. Wenn ein paar coole Blogger das verwenden, dann könnte es ein Trend werden. Das werden dann social media affine Konsumenten, die viele Selfies machen, nachahmen. Es können auch Modeblogger machen, die Ganzkörperfotos von sich machen wollen. Oder Kinder in der Pubertät, weil es cool ist.
- I: Hast Du das Gefühl, dass das ein Trend werden kann, der lange da sein könnte?
- A: Ja, sicher. Ich glaube es kann lange bleiben, wenn es gut funktioniert. Der Selfie Stick hat nicht gut funktioniert, weil der ist so lang und hmm.. Einfach umständlich. Deshalb benutzen den auch kaum Leute in Europa mehr. Man könnte die Selfie Drohne immer kleiner machen, oder die Software optimieren, aber der Selfie Stick ist einfach komisch und bleibt immer das Gleiche. Die Selfie Drohne kann hochwertiger aussehen.
- I: Wie würdest Du denn reagieren, wenn jemand auf der Straße eine Selfie Drohne mit ungefähr der Größe eines iPhones, rausholt und dann Fotos macht?



- A: Komisch, schätze ich mal, weil es keiner kennt. Aber wenn es normal wird, dann denkt man sich nichts mehr dabei und es ist akzeptiert. Also man muss es erst mal bekannt machen und die Leute probieren lassen, damit es angefangen wird zu benutzen. Ich würde es mir nur kaufen, wenn es mir einen Mehrwert auf Dauer bringt. Es muss also schönere Fotos machen, als ohne Selfie Drohne. Und ich müsste es mehr als nur einmal benutzen. Für Snapchat glaube ich echt, dass es zu viel Aufwand ist.

Interview Carla

- I: What do you think about when you hear selfie?
- C: I think about taking pictures with my friends when I go out, or with my friends to remember a particular moment.
- I: And how would you share these selfies?
- C: Mainly Snapchat and if it is good, on Whatsapp, if it is really good on Whatsapp and if it is really really good then on Facebook.
- I: So you kind of have a different usage case of the pics on the different social media?
- C: Yeah. On Snapchat I only have my closest friends and I like that only a selected group of friends sees those pictures, while on Instagram I also have my friends, but it is a larger circle of people, so I place more attention on what I post there. On Snapchat I put on funny photos, I don't really pay attention on what I post there. Also, because the pictures on Snapchat disappear after a while. I think it is really about the user base, so on Snapchat it is my best friends. Instagram I like, because it is very photo based and I can modify the pictures more than on Facebook.
- I: And what do you think about when you hear the word drone?
- C: Drone? Flying object, with no particular usage. Or a new technology that guys use for fun and that are more and more used for many purposes, for example there are tests on using drones for delivery or taking videos of bigger events.
- I: With "guys", do you mean that in terms of "male" or just people in general?
- C: Yeah, I mean male users. I don't think that most girls are into something as techy, at least I am not, haha.
- I: Okay, that might be interesting if we now lead over to selfie drones, which are drones that have a camera hooked to them and controlled through your smartphone to take selfies. What do you think of that idea?
- C: I find it interesting, but then I also find it difficult to imagine. If everyone would have a selfie drone, then I'd be afraid of drones crashing with each other, or into other things. Also, the size would be important, as it would need to fit into my bag so that I could take it everywhere. If I was a guy, what am I doing with it, holding it in my hand the whole day? Also, if I wouldn't use it, it would be in my bag – it doesn't really seem practical. What is with the battery life? If I wanted it to follow me through my shopping day in Milan and it ran out of battery in 10 minutes. That would be annoying me.
- I: There is this new selfie drone company "Airsselfie". It has integrated a selfie drone into the cover a smartphone. It is also charged through the smartphone. If you want to use it, you only slide it out of your case.
- C: But how heavy and big is it?
- I: It is quite thin, maybe 1-2cm. And the weight I am not sure, around 100 grams maybe.
- C: Okay, that wouldn't be in an issue for me as I would put it in my bag, but I don't know, the thing about selfies is that, I don't even like selfie sticks. The thing I like about selfies is that it is instant, on the go with your smartphone.
- I: Now you have brought up selfie sticks. Could you explain a bit more your feelings towards that?
- C: I don't know. Chinese tourists, haha. When I see people with a selfie stick, they mostly look stupid, you see the stick in the picture, so if you see the arm or the stick in the picture, doesn't really matter. So if you want a nicely taken picture, you should ask someone to take it for you. I think it will always look better, otherwise it is not a selfie anymore. Only, if you are travelling and sightseeing a lot, it is annoying asking people all the time to take a picture of you.
- I: So you would say in those kind of cases it would be practical to use a selfie stick?
- C: Yes, or also the selfie drone if it really works. But then, I would really take it for that reason and not for something random.
- I: Okay, so what would be a specific example where you would use a selfie drone or a stick, do you see a difference between the two?
- C: Maybe a selfie stick is easier to use. I don't know. It depends on the technology, if it is really good, it might be better. But then, asking someone else to take a picture is an option. Hm, now that I think of it, most people don't make good pictures when you ask them, because they don't pay attention to how well they are doing it. A selfie drone should also be really easy to use. Because I think about a classmate of me, who used a drone in an innovation class once and he dropped it, because he didn't know how to make it fly.
- I: So you would be scared of failure?



- C: Yeah, kind of. If I buy something and then I am not able to use it, my money is trash basically. Also, the first days will be more difficult to use and then I crash it, and I don't know how much it costs, but if my 200€ are trash that is what worries me. And I don't believe that it is very stable. But this is a prerequisite that it makes pictures that it is not blurry. Also, it can't be windy, because it would probably be so small that the wind would push it.
- I: So it is also about the environment you use it?
- C: Yeah, and also if I am the only one, it just seems weird to have something flying in front of me. If more people would use it, it would seem less weird. But more importantly, I am afraid that I couldn't use it.
- I: So it would help you to test fly it?
- C: Yes, that would definitely help me.
- I: So imagine you test flown it and it is really easy to use. And adds value, because you can take pictures from angles you haven't used before. What would be the process from there?
- C: Definitely the cost would be a factor. If I only use it once or twice a year, I wouldn't need to buy it for a lot of money. I like nice pictures, but I am not the kind of person who would spend 600€ for a reflex, because I like taking pictures with my phone. I know they are nice, but most important is the possibility to remember a moment. It is not that much more about the quality of the picture.
- I: And you talked about social media. How would that be in context?
- C: I wouldn't use it for Snapchat, that's for sure. On Snapchat, the weirdest the pictures, the better they are. I would probably post on Instagram if they are really good and on Facebook if they are really really good. That wouldn't change my usage of social media overall. It would maybe only create interesting content that I could use for my channels. I usually only post something if I do something very cool, if I don't do something cool, I probably wouldn't use my selfie drone. I don't think it would not impact my use of social media.
- I: Maybe staying with Snapchat. You said you wouldn't use a selfie drone with Snapchat. Why is that?
- C: Because for me, a photo on Snapchat doesn't have to be perfect. I don't put any effort at all into those photos, they are very genuine. And I feel that a picture taken by a selfie drone would not be genuine, but more elaborate. So it wouldn't fit my use of Snapchat.
- I: What do you mean with elaborate?
- C: I don't know – Snapchat for me has to capture the moment in its friendliness, as it is without thinking too much about it. I take a picture and I only send it – I am not even checking if I look good in it. If I post it on Instagram, I check if I look good in it and check if I can make it better through a filter or something like that. So I think that would be too much effort and time consuming for a picture that you post on Snapchat.
- I: Okay, so you would use it more for Facebook and Instagram.
- C: Yeah, for photos that should look at least a bit more professional. And it for sure would take some more time to take out a selfie drone and let it fly to take pictures. It also depends on how it would work – do you need to hold your smartphone?
- I: You have an app on your phone where you see the picture that the drone captures right now and change angles, zoom, etc.
- C: Yeah, that would also make it different to a GoPro where you would take hundreds of pictures and then select afterwards.
- I: That's why it is also called selfie, because you can see and control it from your phone.
- C: So I could also use it for other things than a selfie? Like at a concert go higher up and take a picture of the scene in general for example.
- I: Sure, that's like with a selfie stick. It is designed to take selfies, but it can also be put to other use.
- C: I think if I use it, I would use it for something else than taking selfies. I would rather use it to take panorama pictures. Somewhere, I would not reach with my arms only.
- I: Okay, and would be an example?
- C: Does it record or only pictures?
- I: Also videos.
- C: I don't know. Even though, I would be scared of using it in that height. I would think of the day when I was on top of the Rockefeller center. Because everyone is up there with their phones out to take pictures so if I could have a drone to go higher up then I could take the same pictures without all the annoying people around. This really was a great moment up there, I felt so strong and cool, being up there on the skyscraper. Or maybe at a party, where you could take a picture from above. Or also at a festival – but if there are too many people with a drone that would be stupid. I mean at some concerts there already are drones, but they are coordinated by the organizers. If we all came with our own drones, this would be much more difficult.
- I: So, if you were at a concert, you would have reservations to take it out?



- C: Yeah, definitely. I wouldn't film either with my iPad as some people do, because that would annoy the other people. If you think of it, a 100 drones flying around the concert area, that would already be annoying. Also, I would also be scared of losing it or someone stealing it. I would be scared of it.
- I: So you talk about 1. Annoying people, and 2. Losing your investment. Would that always be when you are in public?
- C: I think if you have really crowded places and you don't have control over the area, then you always have these problems. If you for example go to the duomo (Milano cathedral), then you could do it or if you only walk around in Milan. But I would not feel comfortable close to the water, because I would worry that it falls down in the water and be gone.
- I: Who do you think would be a suitable target group?
- C: People, who need everything documented. Also, bloggers for example. And models who post a lot of content on social media, and they want everyone to know what they are doing at every point in time. A selfie drone can help them capture a realistic picture of their outfits. This ties also in with the quality or innovativeness of these pictures. You could also use them to make a travel diary or people who now use GoPros a lot, they are going on Skiing holidays now on their helmet, they would use this. But the users of Go pros use it more for extreme sports I would say. So, if you go with a Parachute, you couldn't use it.
- I: If you think about branding. How do you think a selfie drone company should brand itself?
- C: They should definitely brand themselves as a camera company. It is something more like Go Pro and make sure your consumers know what they can use the product for. It is also maybe more in the Polaroid category. Even though you could take better quality pictures with other camera, it could be a trend and a special way of capturing your memories.
- I: Polaroid also just announced that they will release two selfie drones.
- C: Okay, so this is kind of similar. I see users of Polaroid seeing selfie drones. This is because Polaroids are often used to take selfies, so the quality is not that good. So, for example a private party, I would use a selfie drone instead of a Polaroid, because it will be easier to fit everyone in the picture. Also, with a Polaroid you need to wait and then people take pictures of the Polaroid pictures to post it online, which is quite annoying. Instead of having a photographer in the party, a drone would be quite good. But this I would only do if I was the host of the party.

Interview with Rasmus

- I: This will be a little talk about selfies and new technologies and specifically about drones. This interview should last for around 30 minutes and I hope it's alright if I audio record this interview.
- R: Yes, that's okay.
- I: Let's maybe start to talk about selfies, because this might be something you are more familiar with than for example drones.
- R: Yeah, definitely.
- I: So when did you last take a selfie?
- R: Today actually, I took 3-4 selfies. I mostly do it at the gym and then upload it on Instagram so that they can follow me, like that is kind of how my profile is formed I guess.
- I: Who are they?
- R: It is this fitness page, so usually fitness stuff, it can also be food. I actually took one food selfie and then probably three gym selfies. And just now, I took a picture of a coffee.
- I: The next question kind of aims in a similar direction. Have you shared the selfies with anyone and where, for what reasons?
- R: It is kind of an open deal on Instagram. I don't share selfies with single people, I use some snapchatting, but I just upload it to my story and then everyone can follow it. It's about, I think I get about a 100-110 views per picture I upload.
- I: And that is for what purpose?
- R: People, so they keep their interest in my profile and stick to it, keep following it and also just to show my daily life in fitness. And if I have some advice, they can follow my workouts and like go crazy, random stuff.
- I: You go crazy, or they go crazy? Or both? haha
- R: Yeah, if I want to go crazy I take a selfie doing an exercise, showing how to do the exercise, try this for dinner type stuff.
- I: So it is mainly for fun and sharing for experience
- R: Yeah. It is mostly fun.
- I: Cool, and you said you use Instagram and Snapchat. Is there any difference for you, what kind of selfies you take and who you are sharing it with?
- R: Yeah, well. I feel Snapchat is way more personal than selfies over Instagram, because I upload the pictures on Instagram over an open form, it is just publicly available and then you need to be somewhat



careful on what you upload. You can delete them right away, but still. I feel like Snapchat, you can take a very personal Snap of something like if you have some interpersonal relationship with the other person and then you snap them something then send it directly to them. Whereas in Snapchat I send selfies to 5-10 different people at the most, but on Instagram it is more of a daily life kind of story where a lot more people will see it. If I send a picture to you and I am thinking of you, I would send it through Snapchat, because I would do some food stuff or if we have some internal joke that is going on then this is more personal.

- I: Okay, so in terms of the kind of the selfie and the situation, this would also be different then?
- R: Yeah, Snapchat would be more personal situations. And it is easier to use the open-form stuff, because you take a picture and then upload. Because then you have immediately a 100 that see that. I only use Snapchat if I have something I really want to send to someone. And it is good for sex things, visual sex things. Well, I think a lot of people use it for an evolved thing of a sex thing, just don't do it with texts, but do it with pictures that disappear. Just don't show your face in that picture - plausible deniability.
- I: Have you used a selfie stick before?
- R: Maybe once, but then I was asked to do it for someone, like someone had it and I should try it.
- I: So it also was curiosity on your side?
- R: Yeah, mainly because there are a lot of memes going on on Facebook and social media so it is kind of a gimmick to me.
- I: What do you mean?
- R: Well, online I have seen a lot of pictures of like star wars character with a light sword and they just swapped the sword with a selfie stick and that is pretty funny. And it is kind of like an Asian tendency to have a selfie stick.
- I: In what sense do you find it funny?
- R: I find it funny, because it is just different. It is kind of a way to completely exclude other people to exclude other people for taking a picture of you. In the old days, you would have to ask someone you didn't know to take a picture of you, or your group of friends and then you would have that personal brief interaction. But just like "Hey, could you maybe take a picture of us?". Now, you kind of don't have that anymore and that eliminates the personal contact. So if you have the selfie stick, it says to me that you need to be a very introvert person who is afraid of asking someone. You don't know about stuff. And I am a very extrovert person and that is why I find it funny. So I would not invest my money in something when I could just ask someone to take a picture of me.
- I: So that is also a reason why you would not buy a selfie stick?
- R: Exactly. Maybe I could use it when I would need to travel a lot. If I was backpacking in a rain forest, I know there would not be that many people so maybe I would carry it in my back. And it is also not handy, if you go in the city center. Then, I wouldn't have the space for it, I wouldn't carry it around.
- I: Okay, makes sense. Now, maybe coming to the topic of drones. When the word drones is mentioned what immediately comes to mind.
- R: Well, I think it has two sides to it. You hear so much on the media about the Middle Eastern war and the drone attacks and you have like the connection as an unmanned airplane that kills people. And then out of the blue. And then you have the commercial side of it - creating great footage over a city, fields, planes. I think the level of documentaries made with the use of drones has increased a lot. And they have also integrated 4k video making now in the drones. So that, yeah, I love drones for that.
- I: So, when have you last encountered a drone. In media, or in real life.
- R: Actually, I watched a youtube video of someone who was recording stuff around the environment and how you grow crops so they had a huge drone in their car. And they edited an intro to that documentary, and when they flew the damn thing they could fly it miles away. So that was the last encounter and a very productive way of producing video content.
- I: And drones in general . is it something you would consider buying?
- R: Yeah, I love what drones enable people to do. But I don't feel I have the need for one right now. I think if I lived in a house, I would probably buy one and try it out. But here (in the city) it would mean so much effort. I would be so nervous about power lines and other people. If I crashed somewhere, it would be in a car or someone on a bicycle. So I don't have the need for a drone at the moment.
- I: So what would be the main motivation if you would buy a drone?
- R: The main motivator would be if I wanted to have a project for Youtube or my Instagram, like take it to the next level and produce a video. Then i would consider buying one. Because the video ability, that is the valuable thing. A drone in itself is not useful at all to me. It's gotta have this - you cannot do heights if you video record, so that would be it.
- I: That's a really good transition to the next topic we want to explore and that is selfie drones. So if you hear selfie drone, what do you think about this?



- R: It is quite difficult to wrap my head around this. A selfie drone - because I think of drones as these big machines. And a selfie is what you take so quickly, so you are in the gym, you are in the coffee shop. Just like, ahhh Selfie, but using a drone for a selfie, that is just, ah, no.
- I: Why?
- R: Because it takes up so much space. Imagine in a coffee shop, or food instagramming, or whatever, you would have to get this thing into the air, you couldn't do it in a restaurant. You have selfie and drone connected and this is kind of weird, like a selfie you want to take a picture of yourself. Then why not using your phone? I can't see how that would help. You know, like wings on it.
- I: So it wouldn't serve those situations where you usually take a selfie.
- R: Yeah, it is kind of conflicting. I think. A drone and a selfie makes it so much more difficult to take a selfie. Maybe if I am going to a beach or somewhere outdoors, like, maybe, I would do a drone that could take me on cam, but I don't really see the purpose, no.
- I: Maybe I gonna tell you a bit about one selfie drone company. It is called Airselfie and they have developed a drone it is approximately the size of your smartphone and is attachable to a smartphone cover. So you can always have it with you and you slide it out to use it to take selfies. So you can control it through an app and navigate it. Apparently, it can also be used inside. What do you think about this drone?
- R: No, I don't think this would be interesting to me. Ahm, I could imagine a drone having this size, it would have a very limited battery life.
- I: It would be charged through the smartphone as well and has a couple of minutes battery.
- R: Okay, well that is quite good if you want to take one picture. But I just think it is like an external gadget. It is like buying an external flash for your camera, or you know it is kind of an addition for something. Like a headset came as an addition to a phone, making the experience more broader. I just can't really see the purpose for it, no.
- I: So is this also because when you are at the gym taking selfies, you would ask someone to help you take it?
- R: Yeah, I think there is also a social barrier to using drones. If there were a lot of people who buy them and it would be common to have one, then I think it would be normal to be in the gym, deplore your drone and take a couple of pictures. But as of now, if it is really new, it is just socially unacceptable to do. You would feel weird using it. It is the same with the selfie stick. In the beginning, people were hating on it, saying it was only an asian thing. They always use gadgets as the first people, but then it caught everyone's attention and Europeans used it as well. So there is a barrier and it takes time to come into the market.
- I: That is interesting to talk about this obstacle of not feeling comfortable using it as the first person. When would you start using it? When would you feel comfortable.
- R: Well, I don't think I would use one. I really can't see what I would use it for. It could be really fun though to have one at a party and it would elevate the amusement to a new level like people watching the drone and hey like waving and stuff. Like use it in a fun context, but I consider my hobby fitness, going to the gym as almost a job so it is way more serious than to use it there. But in a fun context, I would maybe if I had a kid who went to soccer, I would use it. Just for recreational stuff, then I would use it.
- I: You mentioned going to the gym and you also mentioned that you take selfies for Instagram there. What if selfie drones bring in a new perspective to it, enhancing social media profiles? Would it then become an option.
- R: It would definitely be an option. And it will definitely bring better footage and angles to it, but I think that the difficult thing for me is to go into the app and have the drone in my hand. In a gym situation, that is not possible. I want to limit the time in between sets for example and I only have a minute, so if I would carry that thing and control it. Also, maybe I want a picture of me doing stuff, so I would not have a hand to control it. It is just too much of a hassle.
- I: So you need something hands free and at the moment, it is just easier to ask someone.
- R: Yeah, like not before drones become completely autonomous. Like if they could follow your voice and keep an eye on obstacles and take pictures as you go and you don't have to control it, then yeah. Then I would use it. But I think that is a couple of years ahead.
- I: There is also this selfie drone from Hoover. And they have facial recognition so they can follow you around. So where do you see it in a few years?
- R: I think that the market has already shown an interest for the product. First with the bigger drones and then with smaller drones. Trying to make it applicable to phones, smaller more convenient and I think it will just evolve. And people will use it more, but the real difference is the added value to the creative society. So making documentaries for example. In every semi professional media stuff we see now has drone footage in it, because it is so easy and beautiful. Like you can go over roofs, it has been made so easy. So in video creation, there we see the biggest difference.



- I: How do you think it will change consumer behaviour?
- R: I don't know. Maybe, we will see groups of people going to the parks. We already have competitions for drone flying, where you have to complete a track fastest and then you get a prize. I would see that as e-gaming has been on the rise. I think drone flying will be a new competition, a new sport.
- I: And in terms of selfie drones?
- R: I would see a use for it in sports. When people go to soccer games they can record themselves to see how they perform and stuff. But in their own time, if they are not youtubeing or being on Instagram, it needs to have some sort of real value. It needs to create an impact, it is not just for fun. It needs to serve a profile - enriching your social media profile for example.
- I: Doesn't this also relate to selfie drones then?
- R: Yes, I think it will become a huge thing among bloggers and youtubers. Especially youtubers, because it is a video platform, nothing else. And as we see a lot more regular people on Youtube having a theme, it could be fashion, sexuality, politics, whatever. As those people become more and more, we see more selfie drones for semi professional use.
- I: What would be the drawbacks?
- R: People being more distant from real life, the same thing with computers and very elaborate gaming, the esports kind of things. As you are shaping your social media profile, it is inherently individual. It is on you, I have never seen a group youtube channel. It is always one youtuber who visits a place or people, using a drone. So a drawback could be that they lose the social interaction with their surrounding, because they are too focused on their online presence and they lose their connection to reality. So that could be a long-term drawback.
- I: So selfie drones might push social media presence which might push social isolation.
- R: Yeah, in the long run we will definitely see more social isolation and I think it is exactly the same as addiction to computers. In the U.S. you now have rehab centers for people who are addicted to gaming and computers. Usually they develop a porn addiction on top of that and they become those very distant people living in some forest without no access to internet and they need to talk to each other - that is the task. And I think that is completely frightening. Not for our generation, but the younger people who cannot even talk to each other anymore.
- I: So what features of a selfie drone might be most valuable to you?
- R: It needs to be compact, so size and the ease of use. It needs to be very easy and maybe a software that stabilizes it a bit. So you don't have to be skilled and just push some button and then it auto corrects in the air. I once tried to fly a really small drone and it was very sensitive to what I pushed on the remote control so I just gave this up. You just crash a couple of times and then you think, okay this is too hard.
- I: If price is an issue, what would you be willing to pay?
- R: Well, it depends. So if I wanted to use a drone for my social media stuff and I want to be outside then I would invest in a real drone. Like a big drone and then I would only settle with best quality and long distance, so probably between 3000-5000 DKK, if I would take my Youtubeing seriously.
- I: What would you use it for, in what context?
- R: I would make videos for Youtube. Things around travelling - make me seem more interesting online. So people could follow me if I visited somewhere. And then take some footage for example of a mountain, river or a canyon. Because then I could see myself in the footage as I did that. So I made small videos that suit youtube, for example 7-10 minute videos of like small experiences going places. I think this would be really valuable and I actually considered that.
- I: Can you tell me a bit more on when you considered that?
- R: Ahm, it was another personality in the fitness world. He brings his drone everywhere. He just visited Istanbul and then took the drone with it, so you could see the big cathedral thing. He brought that and made videos and it seemed so easy. These were really cool videos and it seemed effortless, but the value was so great.
- I: Do you remember the drone?
- R: Yeah, a bigger white one that needed to hang from a backpack. I think he attached his Gopro to it.
- I: So for that reason you would consider buying it?
- R: Yeah, and if I had an established family with kids and everything, I would have the family drone. As you have the family camera, every family has one, spend a bit more money on that, I would just have the drone. Of course I would have a camera, but a bigger drone, bring it in the car and use it for family footage. I just think it creates a lot of value to a family. We have all seen crappy footage of going camping whatever, and imagine you had 4K video footage from the air of your whole family, because this is the problem with family pictures, you always have one person behind the camera, either the dad or the mom. Then you could have the whole family in the frame at all time. You could use it in places where it is difficult to use a normal camera to record beautiful family memories, so that is the value proposition of that kind of selfie drone.



- I: Cool - would you upload selfies from the drone?
- R: First, I would upload it to Youtube and then from share it on other profiles, LinkedIn or Facebook. Besides Youtube, if we talk family footage, I would keep it on my hard-drive, just to keep it and not share it. So some videos you kind of feel like you can share but then really intimate family settings that might only be for you, These don't have commercial value.
- I: So what is a typical consumer profile of a selfie drone user?
- R: Definitely young, I would say under 25, 20-25 not younger because if you want a proper drone you need some more money. And also, they know more about tech than older people. And I feel that when those people grow up, they would still have that tech knowledge, but be the das taking the family footage. And, yeah, bloggers, people that have a genuine you know stake in social media profiling. Those would be the ones to target.
- I: Would you feel more inclined if your friends had a selfie drone and would you feel part of a community?
- R: Yeah, I would. Then I could fly my friends drone and if it crashed, haha.
- I: Would you feel more inclined if a celebrity used it?
- R: Yeah, but it needed to be a celebrity that I can relate to. I am in the fitness industry, so I have this one that I follow and he has a drone. That is where I gained the interest and also the insights on how to use one. So yeah, definitely. But another very important topic on drones, when you will have so many drones flying around is problems. You need to be reliable if there are problems. In the U.S. you need to register your drone and you are responsible. Of course, in every technological newty, there are legal drawbacks and people will exploit those opportunities. Tech registration around drones needs to be enforced, I would say with all sizes of drones. If it is not regulated, you would have a roll-out of let us say 1 million drones that are being used and you can't make the producers responsible.
- I: So maybe coming back to the celebrity you follow. What was his name?
- R: He is Steve Cook from the States. He turned 30 lately and he hired a guy taking care of his social media. And this guy is very tech savvy and has a drone to shoot.
- I: What do you think selfie drones offer? What is the market potential?
- R: The potential is enormous. It is not a toy that came out and being developed over time. Let us take the smartphone. It is not real innovation every time you see a new phone. It is just like, added camera quality. But with the drone, it is something different. That came out as the first phone, it is the same as a product coming out for the first time. In the example of the phone, from the phone you pick up with a cord to the cell phone. It is a completely new thing, a blue ocean thing. It has a huge potential as not a lot of people own it yet.
- I: So coming back to the obstacles one last time. We have heard about drones for years now but we haven't reached the point where you see them in the street.
- R: I think this might be for the financial repercussions of flying a drone in someone's face and then having a claim made and being sued. I think that is the biggest issue at the moment, but we will see drones in the suburban areas where you have a yard - more space. As you have more space, the possibility of using a drone would be bigger.
- I: If you were a selfie drone company, what is important to communicate?
- R: You always need to have a good catch phrase, like "Take your social media to new heights.." with, you know using the physical appearance and nature of the product. I don't know, it needs to be directed towards established social media profiles with a lot of followers, because others using it inspires yourself. Me for instance, seeing my idol using one, I think maybe I should start a youtube channel and then I need a drone, if I want to make it. And then it depends on the type of product. Smaller selfie drones would be more personal use, but bigger selfie drones that can do long term would be for the creative industry.

Interview with Sarah

- Q: When did you last take a selfie?
- A: I did a selfie in the car today. Not when I was driving. Basically I was in London and I was waiting in my car parked while my colleague was meeting a client. And I was thinking, "oh this is a good lighting, I'm looking good". And then I was going to put it on Snapchat. But then I thought it's just another pouty selfie so then I just deleted it. Quite a shame cause I did look good.
- Q: What do you like about selfies?
- A: The great thing about a selfie is that you are in control. So basically, if someone else takes a photo of you and you look bad and they post it. You don't really want to and you're like "damn" I look bad, I didn't really want you to post it. But you, oh no, you can get the good angle, you can get the good light, you can take five, you can put a little filter so guaranteed to look good - winner.



Q: Did you share it with anyone? Where? For what reasons? What do you use the selfie for? (share and communicate with friends, privately with close friends and family, “show-off”, get recognition and likes, record moments for personal use).

A: For example on Friday night I was going on a date so I was getting ready at my brother's and the lighting was quite nice in the mirror. Done my hair, done my make up so then I just did a selfie and posted it on Instagram story, Snapchat story so maybe a few love interests can see that I'm looking good, going out on a Friday, loving life. That kind of thing. I didn't post it on the actual Instagram. It's different, on your story, everyone is always posting selfies. On Instagram I would post a selfie a bit more rarely cause it's a bit “I love myself”. So a bit of self love is okay but not too much. I think there are different selfies aimed at different people. Snapchat I would probably do a selfie if I'm disgusting at the gym and I would probably send it to a select few people like my friend but never a boy. Whereas if it's a selfie where I'm looking good then I'll post it on my snapchat story so everyone can see it and I don't mind. One at the gym would be like - A: probably to make you laugh if I'm there sweating but also to feel a sense of togetherness. If I know that my friends also go to the gym it's like “oh go us, we can do this”. But there are definitely different types of selfies. Say if I'm with my brother Ollie and my mum isn't there. I know she likes us being together, so we'll take a selfie and send it to her. Almost to try and include her in that moment. So I guess it's kind of the same as when I send a photo of me at the gym. Lucky you you get to be part of that moment. So I guess it can be to share moments in your life. Whereas if it's just a posy before a night one it's literally “look at me I look good” basically. Basically, I think it's okay to post a self loving photo once in awhile. Self confidence and all that. But I was looking at my Instagram the other day and I had a lot of similar selfies, just a different outfit, different hairstyle. So people are probably bored of this. I don't love myself that much so at the end of the day maybe stop with those selfies unless I've got a new haircut or it's my birthday. But not too many of the same thing. That's like getting a bit cocky, like I love myself.

Q: Do you post videos?

A: Videos I would never really post a selfie video. Video I post quite rarely. It's a video of where I am. The most recent one is probably at a football match. It's not a video of me. It's a video of where I am. It's quite a cool thing. People love it. So I guess it's to show off. Look at me, I'm here. It's really cool. Or like when I went to Paris for my birthday and I was at the club with all my friends having a great time. A bit more of special moment, something you want to remember. A bit different from the day to day. Whereas a Snapchat story could literally be my day to day life a bit more. But maybe it's a bit more my actual life. If I'm listening to music in the car, like “great tune”. Or Monday morning, the sun is shining. It's people that interested to flick through but it's not something spectacular. It's just boring details of my day to day life that I feel like putting on snapchat.

Q: Why do you send a selfie over text? Selfie on snapchat or Instagram.

A: If it's a selfie just on snapchat or Instagram. They are not people that I would usually write to or something even ever. It's more people that are kind of acquaintances. Whereas I think your closer friend you would probably write a message to them on Whatsapp for example. Selfie to your best friend or to your mum for example so they can see where you are. So they can feel more included. They can kind of visualise it more. It's more visual. They are happy to see us together. I guess human beings are quite visual. A visual is more emotive maybe. I guess it's trying to include them in that particular moment. Look we're here, in this moment. Share it with us.

Q: Save the videos? Do you see what the advantage would be? Any specific context? other types of footage.

A: Yeah sometimes I will definitely save the videos or a snapchat story. But it's really if it's something that's out of the ordinary. Say if it's a trip to Paris or something that I will generally flick through my camera roll and think “such a great time”. To remember it cause otherwise.

On a night out I take videos. I would put it on snapchat but I don't want to lose it whereas if it's just a boring day to day thing then I wouldn't save it. It's a memory, something I would look back on in a photo album or something. The only thing I can think of is when I share a funny video on my Instagram with a caption. If it made me laugh then I would put it on Facebook or Instagram and tag people.

Q: What do you think of selfie sticks?

A: Selfie stick, big no from me. I just think: “do people actually carry around a stick?” That's taking things too far I think. I would just ask someone to take the photo for me. I just think in my head selfie stick equates to Japanese tourists. Or you know those tourists in London or Paris walking around with the stick in their hands. No for me a selfie is just a quick moment, I'm not planning it. It just seems a bit touristy and a bit ridiculous. I've never used one and I don't intend to. I'd rather not have the photo. I can see the advantage. You get a better picture, it's much easier. You can get the background in but even when I travelled I didn't take one. I would just be embarrassed to use it. In my head I just wouldn't use it. I'd rather take a photo without me in it to be honest which I prefer anyway. If there's this beautiful



scenery, why does my big head have to be in it. No I'd rather just take a photo of the scenery. Maybe one selfie at a bad angle but I'd rather not use the selfie stick personally.

Q: When the word drone is mentioned: what immediately comes to mind? (ask for key words). What was your last encounter with a drone? (media, real life?) What were your impressions?

A: I haven't heard much about drones. I just think of a flying camera that could take some cool shots. Like flying over somewhere nice, taking videos of the scenery. It actually reminds me of the Monaco Grand Prix. They always have drones flying around taking shots of the show.

Q: What comes to your mind when you hear the words selfie drone? Have you heard of the concept?

A: I don't really know what it is but I'm guessing it's a camera that flies up and takes a photo of you and your surroundings.

Q: Do you think it is a product that you would be interested in? Would you use a selfie drone? If yes, for what purpose? If no, what are the reasons? (product drawbacks)

A: I think personally I wouldn't use it. I don't really use any apps and I'm a bit of a technophobe. And I don't really use any cameras. I'm not a very good photographer. It's not something that I would really think about. I would never think oh I need a camera that flies over me to take photos of me. I'd just rather take a normal camera. I'm not that bothered whether I'm in them or not or the quality.

Q: Do you think if your friends would buy one you would? Or what kind of influencer?

A: I think personally I wouldn't be influenced by a celebrity or an Instagram person. I don't think my friends would really use it. And even though my friends would start buying it I don't think I would. I think a brand ambassador that would be good is a sporty person. Maybe like someone who does extreme sports although maybe not that many people follow them. Maybe someone like a boxer. What kind of sports are popular but outside? Someone who does sport and you could see their surroundings and you could film their race outside and it would be really cool. Or it could film their training. That's the kind of person I think would be a cool ambassador. Cause if it's just a normal celebrity it would be boring just to watch them.

Q: Where do you see it in a few years? Do you think it will be popular? How do you think it will change people's behaviour? What would be the drawbacks?

A: So I can't really see it becoming a day to day thing. I can't really see these cameras flying around the streets of London. Who's is who's camera and what if they bashed into each other. I just think it's hassle. Are you really that bothered to get a photo that you're going to start sending something into the air and managing it with your phone. Personally I can't see it. For something it would be good for I think for people who travel a lot. Because it seems an easy way to record what you're doing. Maybe if you're doing sports like hiking and you don't have to be taking photos. That could take photos for you and could capture the scenery a lot better. Also for people who do travelling and who have blogs. People who do travel blogs and do that for a living. Whether that's mass market I'm not sure. For travelling or for holidays it could be nice. Just to take photos of yourself on a day to day basis - no. But if there are more things to record like scenery, for travelling it could be good but still I wouldn't use it.

Q: What do you think about the AirSelfie?

A: If the case is the actual drone then I think it could encourage more people to use it cause in my head a drone is like a flying spider. A flying metallic spider thing. Like a robot and it's not something I'd be carrying around in my handbag that's for sure. You carry your phone anyway so if it makes it more portable it would encourage more people to use it but not me. It's just not something I would use. Price is not an issue. I'd never even considered that there would be rules and regulations because I just wouldn't use. And to be honest even if it's just \$50 I would rather buy a new bag, some new sunglasses - food. Basically anything but that.

Appendix 3: Expert Interviews

Interview with FotoKite CEO, Chris McCall

Q: How did you get involved with FotoKite?

A: I joined the company when it was about a month old. Back then I join it as product lead. I've now been working for the past two and half years with the founder, and became CTO and I've now moved into the CEO position.

Q: Were you interested in drones before that?

A: I was already interested in Robotics, both ocean and aerial robotics before that.

Q: What do you think distinguishes FotoKite from other drone manufacturers?

A: The company started off with this new technology that allows for a tethered drone to localise and estimate the position completely autonomously without the need for any external sensors. And what I



mean by that is that we've created a way for a drone to estimate its position relative to you without the need for GPS and optical stabilisation or any externally looking sensors. Only based on an internal sensor. That's quite special. What that means is that it allows people to essentially use the system as a kite. You would probably not hand over a drone system to a small child and feel safe about that. You would with FotoKite send them to play with it in the park. This is a system that is fundamentally easier to use because they are connected to you. That's really what we try to differentiate ourselves with.

Q: What would say the general market response has been and the media response?

A: I think it depends on the market that you're talking about. Our very first product was a B2B facing product made for broadcast journalists. The special thing about that is that it sent power up the line. It could last for 24 hours up in the sky. The other cool thing about it is that it pumped down live 1080p uncompressed video, a greater resolution than the one you use for broadcast television visuals. What we enabled was a brand new way of safely providing an aerial live stream video that's broadcast quality for CNN, BBC. They all bought these systems and they're currently using them which is really exciting. This FotoKite pro back in August became the very first drone system approved by the CAS as device to be used over a crowd. That showed that it's a safer alternative to the free flying systems. The second product was our consumer product and we launched that thanks to a crowdfunding campaign kind of as an experiment. For every one broadcast customer that we had that was interested in this product we'd have 100 consumers coming to ask what we could do for them. So we did this crowdfunding campaign and sold about 1,500 of these systems and that was a really great set of experiences and at the end of the day we realised we weren't able to face both B2B and B2C consumers and so we're really focusing on the B2B aspects. The B2C product was a success and we're really happy with the experience it gave us. What we realised is there aren't many consumers that want a system that can fly for 24

hours. So we created a product drone that flies for a regular amount of time that other drones. So for drones that fly for a long time you really have to look at the uses. Why would people want a drone that flies for that amount of time. At the end of the day, what a drone system is, whether it carries a camera, it's providing data. And the data that consumers are interested in is typically a few pictures or maybe a couple of minutes video from an aerial perspective. One we can do with FotoKite is to provide more data for commercial purposes. It's just down to what consumers really value. It costs money to put in the components to power the drone. What we could do is the same for consumers but the costs that it takes to do so isn't as valued by consumers as it is by commercial customers.

Not focusing on our B2C is different than making any presumptions about the market as a whole. We're a team of 10 so we can only really address as much as possibly can right now. I think if we had unlimited resources we would certainly be spending a lot more on the consumer story cause I think there's certainly things to do there but for now what we're focusing on is B2B.

Q: How would describe the typical profile of your customers?

A: Mostly in the US and Europe. A lot of people who are buying these systems are people who have previously owned a drone that has broken or that they've lost. They're looking for a safer system, something that flies like a kite is isn't to understand than the drone that they can't fly at home. Primarily males are buying the system but not overwhelmingly so. We almost get an even spread but not quite.

Q: Is this the next generation of selfie sticks?

A: It goes in the direction of what the technology is enabling, certainly. In terms of creating the next selfie stick that's not something that we're focusing on right now.

Q: How do you see your company evolving?

A: I think both us and the market in general is moving towards more and more purpose built solutions. So creating things that do one or more things for a specific customer.

How would you describe your marketing strategy?

In a few words, in terms of the B2C, what helped was the initial interest of people who had signed on to newsletters, expressed lots of interest previously. Those guys were great in initialising that initial kick in responses when we launched the product. Beyond that, because it's a new technology and differentiates take on drones, even though you hear about drones all the time, we were able to get a lot of coverage because of our distinguished tethered approach. This was a fresh perspective on a traditional drone and because of that we were able to get quite a bit of coverage from really well known and far reaching journalists and things like that. So focusing on talking to the right people that we respected and new their reviews on similar technology. And had the reach that we wanted to target. Those were key figures in getting the word out to our key target. Beyond the crowdfunding campaign, all of the marketing and the sales that we brought in were more or less just organic on our B2C product. We wanted to see how it did just going with the flow and sitting there and seeing where the customers were coming from and what they wanted. Just to get a better idea of who that customer was. It was very organically. We didn't really devote a lot of marketing resources to that product. We focused most of the resources on manufacturing it and delivering it. In terms of the B2B product it was completely different. We started off with a very



purpose built solution and we knew it was for broadcasters and we knew what broadcasters wanted because we went out and did demonstrations with them, we did a few field trials with them and rentals. We knew what they wanted and we knew that we were making something that they wanted. So at that point, the smartest thing that we ended up doing was putting it in the hands of some key partners, and really developing some strong relationships as much as possible. Those relationships really ended up paying off for us in terms of the feedback we received and the success in the market.

Q: Who was your specific target market in the B2C?

A: They were all different types of demographics which lead us to think that this could be a basic consumer product where it's far reaching and has a lot of potential. The ones that had expressed interest are from a diverse demographic.

I think that it could be a pretty wide market product and even little kids could be using these in the parks. But that doesn't mean that we're going to necessarily try and make that happen.

There are a thousand drone companies out there. I think the ones that will be successful are the ones that can differentiate themselves in some ways. It's more about a blue market strategy here of creating a market where the competition is irrelevant rather than becoming something that you have to fight against.

Q: There are many regulations to consider. How does this affect your vision of the future for FotoKite?

A: Regulations is an interesting topic for us because so far in every country and in every territory that we have formally addressed and given demonstrations to and gone through the application to try to get preferential regulations towards our FotoKite system has been successful. We've obtained preferential regulations in Switzerland, France, the US with the FAA. We're looking at other places here such as the UK, Germany here in Europe. I wouldn't say that right now it's necessarily limiting. What it does do though is that it definitely gives from the very first day every drone manufacturer a set of considerations to take when deciding to make something that is safe and useable in the public sphere or not. There is one thing that I am particularly interested in hearing about.

We're looking at working on applications for sports teams, maybe professionally first but also amateur teams, and for the fans, the families. So it would be a useful application for the consumer rather than B2B. This sports application is something that we've received feedback on from the professional level but not yet from the kind of more high school consumer amateur level. So our professional consumers are asking for us but we'd love to hear what the market looks like kind of on that amateur level.

The product is a system that is very mobile that you're to carry around in a small back pack. You put it down on the side of the pitch and you press one button and this thing self deploys and just sits there at 20-30 minutes about the ground. This could also broadcast the footage. People could then watch the sports event live. What we're looking to do is a "press and go" system so it can be used at high school football. It could even do some tracking and analytics on the fly based on some increased processing power. That's what we'd be interested to hear about. Who is the customer is it coaches, is it the players themselves, what's the price point that's good for that level. But getting to know how we can get the system into more people's hands would be really great. And the real advantage here. Being able to live stream and upload to any type of social media like Facebook could be a really interesting place to be in a year or two from now.

We are moving away from the selfie-focused products ourselves. That said, we do believe in the potential for drones to serve a specific emphasis on sharing footage on social media- our focus will be to provide that footage in livestream form for sports/events where there is increasingly larger consumption (both in traditional sports broadcasting viewership, and livestream digestion).

Interview with AirSelfie co-founder, Edoardo Stroppiana

Q: What is your target audience?

A: Our target audience are both female and male from all around the world, with an age from 17 up to 45. We don't want to be the cool device just for the youngest consumers but we want to become the "must have" thing for also adult people who have a mid-high income and could pay for an high end tech gadget.

Q: Could you elaborate on your current communication strategy? How are you making your product visible before it is launched? What is your USP?

A: We are targeting the potential customers through the Web and we have an external agency which is working in order to facilitate the organic visibility of the product through the social media, but also through the traditional ones as newspapers and magazine and all the commercial types of means.

We have been very successful in divulging the news and we have estimated that more than 80 million people has seen our video just across the internet. We also counted around 50 million interactions around the social media.

Q: What has been the response thus far? (media, potential consumers..) Why do you think consumers would buy an AirSelfie?



A: The reactions are always amazing, people loves this product and so is the media around the world. It's a truly innovative product and that helps to create the buzz. Also, it's really appreciated for its unique design and considered as a stylish device. It could generate a real brand new trend. Another reason why people should buy AirSelfie, it's because it allows you to operate it safely and easily and this means a good customer experience, allowing the user to take pictures and videos from the air wherever you want 'cause it fits perfectly into your pocket.

Q: What potential do you think the AirSelfie has in the market? Do you think it will become a mainstream product?

A: Our aim is to break through into the mainstream. AirSelfie has a huge potential because it's not a drone but people are already starting to understand it. It is perceived just as a gadget for the smartphone, and that's really important when hitting the mainstream market.

Q: Who are your main competitors?

A: These could be drone makers, but we don't make a drone we make a real smartphone gadget. The real direct competitor could be just some companies that copy our product and idea.

Q: What are your main concerns about launching this product? How are you tackling them?

A: The main concerns are all based around perfecting the product and making it as good and easy to operate as it can get; although we are already in production our focus remains the fine tuning and research & development field to truly improve the customer experience.

Q: Our recent focus group, conducted among millennials, revealed that they are interested in the Selfie drone technology and think it is very "cool". However, they think it is too early to purchase one as it is still in its infancy and they would have to see it become a more mainstream product before buying one. Do you agree with this?

A: That's a really common thought, people are getting wiser and it's also because there have been many frauds with new products. Fortunately there are people who still aspire to be innovators and decide to buy and use innovative products such as AirSelfie.

Q: What are your plans in terms of marketing and communication short term and long term? Will it also be sold elsewhere than online?

A: We will keep on focusing on the internet kind of marketing, although we believe that the best marketing is getting the product "out there".

When people see someone using it they fall in love immediately with the product. That's why we are also focusing the sales on the more traditional markets. We are currently collecting orders from distributors and big retailer chains from all around the world.

Q: Have you considered influencer marketing?

A: Yes, influencers are important for what we do, that's because you can target some very specific potential customers, and yes we have been working with few.

Exchange with Joel Fritz, Independent Aviation & Aerospace Professional (Original in French)

Bienvenue dans le domaine des drones. Sujet très vaste et un peu mystérieux pour le grand public qui finalement ne va voir le drone que comme un outil qui fait totalement parti de l'environnement au même titre qu'un i-phone ou autre objet communiquant.

Ayant un agenda bien à bloc en cette transition d'année, dans un premier temps envoyez-moi vos questions par e-mail. Ensuite si vous voulez approfondir, il sera toujours temps d'avoir une conversation téléphonique, voire se rencontrer.

Pour première lecture, je vous attache le livre blanc sur les drones que j'ai rédigé fin 2009 pour le compte du pôle de compétitivité Pégase. Ce document reste entièrement d'actualité, à ceci près que des centaines de micro sociétés de services travaillent avec des petits drones sous le contrôle des autorités françaises et certainement à l'identique dans les autres pays.

La cible du marché "petit drone" style Parrot, c'est le jouet connecté qui fait rêver. Posséder et jouer avec ces joujoux c'est pour la plupart un petit cran d'évolution sociale. Dominer la troisième dimension alors que l'on est "tout le monde" fait vibrer. Ceci étant, bien souvent cela ne dure que le temps que l'engin se casse, mais en attendant on a accédé à l'inaccessible. Je pense que cette activité touche plusieurs milliers d'individus en France.

Le second marché est celui de l'auto-entrepreneur qui va partir de rien et proposer ses services de prise de photo, vidéo aérienne assistance au tournage de films, etc. pour se faire de l'argent à travers le rêve. Beaucoup y arrivent aujourd'hui malgré les écueils qu'il faut surmonter jusqu'à la machine administrative lourde avec laquelle il faut composer ; en particulier passer un examen permettant de faire voler sa machine, prouver que sa machine entre dans les bonnes normes et enfin déclarer et obtenir l'autorisation au coup par coup de faire voler sa machine? Il suffit d'ouvrir le web pour trouver d'excellentes compétences dans ce type de services aérien. Toujours pour la France, on doit être entre 1500 et 2000 entreprises de services déclarées.



Un troisième axe qui commence à se développer est le drone "show" qui nécessite une forte compétence en informatique et des moyens d'investir conséquents. Intel développe des shows avec cent et plus de drones qui volent en cœur sur une musique de Haydn, Mozart, Bach, Wagner, etc.... But, prendre place dans le rêve type "feux d'artifice".

Des milliers voir des millions de ces petits joujoux sont ou seront sur le marché, mais ils termineront tous rapidement leur vie et leur intérêt. On ne peut comparer cet objet au téléphone portable qui doit être durable et qui est devenu un élément intime. Le drone selfie est et restera à mon sens un produit de consommation de durée de vie courte, ceci n'empêchant pas de développer un important marché pendant des années jusqu'à y trouver peut-être un jour, une véritable utilité dans "le monde connecté".

Exchange with Ole Jørgen Seeland, Founder and CEO of Staaker

Customers:

Adventurous everyday athletes

90% men

22-45 years old with a middle value approx. 33

Well educated and high income

Not the ones doing quadruple flips sponsored by Red Bull

The unifying factor is that the target consumer loves new experiences and loves sharing

The target customer is looking for a tool to add value to the weekend adventures

As for communication strategy that's something we are currently re-doing. So don't have that just yet. But we want to be more "down to earth" and tone down the Red Bull helmets and quadcopters.

We are focusing more towards that direction now. But it's not a new thing for us.

However as a start-up we just throw shit at the wall and see what sticks. Then we double down on the stuff that sticks and make more shit that looks like the shit that stuck.

Cptr is now Staaker but as with every startup finding a name is hard.