

INFLUENCER MARKETING

HOW THE POPULARITY THRESHOLD OF INSTAGRAM
INFLUENCERS IMPACTS CONSUMER BEHAVIOUR:
THE MODERATING ROLE OF PURCHASE INVOLVEMENT

Aantal woorden/ Word count: 16985

Julie Messiaen

Stamnummer/ student number : 01205342

Promotor/ Supervisor: Prof. dr. Dirk Van den Poel

Co-promotor/ Co-supervisor: Steven Hoornaert

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Dutch summary

Meer en meer bedrijven maken de laatste jaren gebruik van *influencer marketing*. Influencer marketing focust op het bereiken van *influencers* die een grote invloed hebben op de doelgroep. Een veelgebruikte vorm van deze influencer marketing campagnes, is dat bedrijven influencers gaan betalen om hun producten of diensten te promoten op Instagram (Wang, 2014). Daarbij is het zeer belangrijk dat bedrijven een beroep doen op relevante influencers, influencers die een band hebben met het merk en potentiële kopers positief beïnvloeden, want deze influencers hebben een groeiende impact op het imago en de reputatie van het bedrijf (Gillin & Gillmore, 2012). Vaak doen marketeers beroep op een influencer met een hoog aantal followers, omdat ze menen dat dit zal leiden tot een groter bereik en tot meer WOM (Talavera, 2015). Hoewel, de ratio van het aantal followers tot het aantal followees is een betere maat om de effectiviteit van een influencer campagne na te gaan. Onze studie zal de impact van die ratio nagaan op consumentengedrag; namelijk op de geloofwaardigheid van de influencer, de houding tegenover de Instagram post, de houding tegenover het gepromote merk, de viral intentions en de purchase intentions van de consumenten. Aangezien volgens Lin et al. (2013) purchase decision involvement een moderator is in de relatie tussen een advertentie en purchase intentions, zullen we onze effecten testen naargelang drie producten met een verschillende purchase decision involvement niveau (auto, camera, smoothie).

Ten eerste konden we vaststellen dat de ratio van het aantal followers tot het aantal followees een positief effect heeft op de geloofwaardigheid van de influencer. We verklaarden dat een hoog aantal followers leidt tot hogere geloofwaardigheid, terwijl een laag aantal followees leidt tot lagere geloofwaardigheid. De volgende resultaten toonden aan dat de geloofwaardigheid van de influencer een positieve impact heeft op de houding van de consument tegenover de Instagram post, wat vervolgens een positief effect heeft op de houding tegenover het gepromote merk. Een volgend inzicht was dat de houding tegenover het gepromote merk zowel de viral intentions als de purchase intentions positief beïnvloedt. Daarnaast toonden onze resultaten aan dat de purchase decision involvement geen moderator is in de relatie tussen de ratio en de geloofwaardigheid van de influencer. Maar, de product categorie zelf heeft wel een algemene positieve invloed op de geloofwaardigheid. We konden namelijk vaststellen dat Instagram influencers die een low involvement product promoten, als geloofwaardiger aanzien zullen worden. Als laatste konden we afleiden dat een persoon die een grote interesse heeft in de product categorie, of iemand die een Snapchat account bezit, of iemand die het vrouwelijk geslacht heeft, meer beïnvloedbaar is door een Instagram influencer, in vergelijking tot iemand die niet aan deze eigenschappen voldoet.

Foreword

Writing a Master's thesis is not the merit of one person, so I would like to take this opportunity to offer my sincere thanks to all the people that helped and assisted me while writing my thesis.

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Julie Messiaen, Ghent, June 2017

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List of Used Abbreviations

F/F-ratio= Followers to Followees ratio (popularity threshold)

Aad= Attitude toward the Ad

Abr= Attitude toward the Brand

Cred= (influencer) Credibility

VI= Viral Intentions

PI= Purchase Intention

WOM= Word-Of-Mouth

eWOM= electronic Word-Of-Mouth

UGC= User-Generated Content

FGC= Firm-Generated Content

IACM= Information Acceptance Model

IAM= Information Adoption Model

TORA= Theory Of Reasoned Action

FTC= Federal Trade Commission

HOE= Hierarchy-Of-Effects model

ELM= Elaboration Likelihood Model

PDI= Purchase Decision Involvement

H_0 = null hypothesis

M = Mean

SD = Standard Deviation

n = sample size

SE = Standard Error

ANOVA= Analysis Of Variance

MSE= Mean-Squared Error

R^2 = R-squared

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1. INTRODUCTION

Consumers rely more on social media and less on traditional advertising (i.e., TV, radio, print) as an information source for their purchasing decisions (Baird and Parasnis, 2011; Hennig-Thurau et al., 2004; Rashtchy et al., 2007; Vollmer and Precourt, 2008). Several authors have argued that social media and traditional advertising should be integrated so that marketers can communicate more effectively with their target market (Hanna, Rohm and Crittenden, 2011; Mangold, 2009; Qualman, 2009). The benefits of social media marketing are increased customer experience and credibility, because it gives a brand the possibility to communicate with their customers in a two-way format and to develop a long-term following (Wyshynski, 2009). On the other hand, traditional media has the benefit of wide reach, but is a one-way communication format that does not create engagement or does not generate much word-of-mouth, which are the hallmarks of social media marketing (Maven, 2014). Also, because of the large exposure, social media advertising is cheaper than any form of advertising available today (Lyfe, 2016). Moreover, when a brand message is transmitted through social media, it facilitates convenience and accountability for the brand, because analytics are provided on how many people saw, shared or endorsed the brand's message and in how many sales it resulted (Maven, 2014). On top of that, consumers spend an increasing amount of time online (Solomon, Russell-Bennett and Pevite, 2012), which provides tremendous opportunities for companies to reach people (Souza and Durro, 2016). These platforms have been proven to play an important role in electronic word-of-mouth (eWOM) communication and have an effect on consumer behaviour and purchase decisions (Abdallah, 2015; Kudeshia and Mittal, 2016). Approximately two billion Internet users visit social networking and blogging sites like Flickr, Blogger, YouTube, Facebook, Twitter and Instagram each month ("Digital in 2016," 2016) and use these to share ideas and make purchase decisions (Barczyk & Duncan, 2011).

The result is that companies spend more and more of their media budgets on social media marketing for better reach and interactivity (Alkhowaiter, 2016; Leskovec et al., 2007; Saxena and Khanna, 2013). A specific type of social media marketing, called *influencer marketing*, has gained traction in recent years. In contrast to traditional marketing which focuses on the target market as a whole, influencer marketing focuses on reaching *influencers*, individuals that have a strong impact on potential buyers. By directing marketing efforts toward these influencers, companies hope that they spread positive word-of-mouth about the brands' products or services in their network (Wang, 2014). This will lead to a snowball effect: an influencer reaches a large, engaged audience, who shares his/her post with their followers, who then

in turn share it with their followers, leading to an increased amount of exposure of the post. The idea is that this will create more brand awareness and brand preference, which will eventually lead to an increase in sales.

A study by Newman (2014) stated that only 18% of surveyed users was trusting influencers. However, a more recent joint study by Twitter and analytics firm Annalect (2016) showed that 49% of surveyed users rely on influencers (Swant, 2016; Woods, 2016), suggesting that influencer campaigns first had fundamental problems to gain the trust of consumers. In the study of Kirkpatrick (2016), around 40% of respondents said they have purchased an item online after seeing it being used by an influencer on Instagram, Twitter or YouTube. Not surprisingly, recent industrial studies reveal that 84% of marketers would launch an influencer marketing campaign in 2017 (Schlesinger Associates, 2016) and 59% planned to increase its influencer marketing spending (Woods, 2016).

Instagram is currently the market leader in online photo sharing services in terms of reach and scope ("B.V.L.G.," 2016). The social platform reaches a younger demographic between 18 and 29 years old (Duggan & Brenner, 2013) of primarily women ("An Experiment," 2015). This generation has the reputation of being easily bored and hence prefers visual and attractive messages over text messages (Bakhski et al, 2015; Ting et al., 2015). Instagram offers a lot of photo editing features (e.g., filters, photo adjustments) (Sheldon and Bryant, 2016), making it an effective marketing tool for displaying products with visual descriptions (Ting et al., 2015). In Belgium, approximately 1.5 million users have an Instagram account ("key facts: Social media in België," 2015).

One form of social media marketing companies are using, is to pay influencers to promote their products or services on Instagram. In order to do this, a company has to find a relevant influencer, someone who has a great fit with the brand and their values, and who has in addition a great impact on the target market. Although everyone has the potential to become an influencer (Bakshy et al., 2011; Brown and Fiorella, 2013), some are more influential than others due to their reach, credibility, authority or experience (Ferguson, 2008). It is important for companies to identify relevant social influencers and have a good interaction with them because these social media users have a growing impact on a firm's corporate image and reputation (Gillin & Gillmore, 2012).

Companies tend to use an influencer with a large reach, but it is not good to only focus on the number of people who follow the influencer (i.e., number of followers). A company must also reflect on the number of people who the influencer follows him/herself (i.e., number of followees). De Veirman, Cauberghe and

Hudders (2015) investigated the impact of the number of followers and the number of followees on the likeability and perceived opinion leadership of Instagram influencers. Their study showed that Instagram users with a high number of followers, for example 20 000, are considered more likeable, mostly because they are considered as more popular. Only in limited cases, these perceptions of popularity lead to perceptions of opinion leadership. Furthermore, low numbers of followees might negatively impact users' likeability (De Veirman, Cauberghe and Hudders, 2015).

Compared to their study and with the opinion in mind that perceived likeability of the influencer does not really explain consumer behaviour (Grigaliunaite and Pileliene, 2016; Pelsmacker, Geuens and Bergh, 2007), our research will go a step further. Our aim is to study the impact of the ratio of the number of followers to the number of followees, often called the popularity threshold, of Instagram influencers on the credibility of the influencer and the attitude of the consumer toward the advertisement and toward the promoted brand. Attitude toward the ad (Aad) and attitude toward the brand (Abr) are predispositions to respond in a favourable or unfavourable way to respectively an advertising stimulus (Ajzen and Fishbein, 1985; MacKenzie and Lutz, 1989) or brand-related stimuli during an exposure (Laczniak & Carlson, 1989; Murphy and Zajonc, 1993). Also, as high numbers of followers might lead to perceptions of popularity (De Veirman, Cauberghe and Hudders, 2015), we want to know if a more popular influencer will lead to more viral intentions and purchase intention of a consumer who encounters an Instagram post. Viral intentions include liking, forwarding, sharing or commenting on an Instagram post, as well as following the influencer or brand on Instagram. The reason why we are interested in these viral intentions is because these actions will create buzz, brand awareness, consumer interest, product trials and finally contribute to the bottom-line numbers, leading to increased sales (Keller, 2009; Kirby, 2006; Petrescu, 2012). Moreover, since Lin et al. (2013) showed that purchase decision involvement has a moderating effect on the relationship between the ad and purchase intentions, we test this relationship across three different product categories (i.e., car, camera, smoothie).

The remainder of this paper is organized as follows. First, we give an overview in Section 2 of literature on influencer marketing, electronic word-of-mouth, the popularity threshold and the impact on consumer behaviour. In Section 3, we discuss the operationalization of our study in the methodology section. Section 4 provides the results of our research, while Section 5 and 6 handle the discussion and conclusion respectively regarding the results. Finally, Section 7 highlights the limitations of our study and gives ideas for future research.

2. LITERATURE

2.1 Influencer Marketing

Influencer marketing is the concept of engaging key individuals to leverage their influence, which is transmitted through electronic word-of-mouth (eWOM). This is explained by Hennig-Thurau (2004) as “statements about a product or brand made by customers and broadcasted to many people via the Internet, independently from the company”. Social media have created valuable new opportunities for eWOM (Canhoto and Clark, 2013; Erkan and Evans, 2016), as the positive or negative opinions of the online influencers about products or services, will spread more rapidly due to their broad network (Kim et al., 2014). eWOM has long been an effective marketing tool (Bickart and Schindler, 2001; Kumar and Benbasat, 2006; Zhang, Craciun and Shin, 2010) and has always been regarded as the most reliable and trusted source of information by consumers (Abdallah, 2015). The consequence is that eWOM has been found influential on the consumer’s decision making process, brand preference and purchase intention (See-To and Ho, 2014; Erkan and Evans, 2016).

Social influencers are individuals who can effectively influence purchase decisions of connected others because of their authority, knowledge, or position, and whose opinions are valued by a considerable number of social media users (McCracken, 1989; Snee 2008). They exercise social influence over others, which is the process of a person’s thoughts, opinions, behaviours or actions being affected by others (Turner, 1991). By consistently creating content and building a relationship with their followers, influencers are perceived as very accessible and relatable and can gain the trust of followers. This can be explained by the study of Moscovici and Personnaz (1980), saying that individuals are more likely to trust and behave according to relatable messages produced by someone like themselves, compared to a sponsored post that comes from a company (Kwak et al., 2010). Polanski (2012) also showed this by saying that when a follower sees photos of relatable or similar people using a product, they are more likely to buy it.

Influencer marketing can be further divided in earned influencer marketing and paid influencer marketing (Corcoran, 2009). In case of earned influencer marketing, the influencers are user-generated content (UGC) producers, because they are unpaid and produce media content that is not controlled or bought by a marketer (Francalanci and Hussain, 2015). In case of paid influencer marketing, the influencers are firm-generated content (FGC) producers, because the influencers post content fabricated or on behalf of

companies with the purpose of promoting their products and interacting with their customers. FGC is also for example product information, such as pictures, product specifications, product features and prices (Kumar et al., 2015). Thus, the brand and the influencer have a relationship that depends on some sort of sponsorship (Corcoran, 2009). In this case, marketers can take advantage of the trusting relationship and large following of the influencers by paying them to post favourably about the brand or products on their social media channels so that the brand message will be broadcasted through their network (Kirby and Marsden, 2006; Mallalieu and Faure, 1998).

The aim of influencer marketing is to turn relevant influencers into brand advocates, by offering them a brand experience they want to talk about. The way in which the marketers convert influencers differs; a brand can send influencers a sample of their product or service of which they share a post afterwards, in return the brand gives them a discount or commission. The brand can invite them to their shows (i.e. fashion influencers are now sitting in the front-row at fashion shows) or they can pay influencers to attend events or store openings if they agree to share on social media what they are seeing. A good example is Chiara Ferragni, the most popular fashion influencer who currently has 9.5 million followers on Instagram. She can get easily paid up to 60 000 euros by a brand for posting one single Instagram post wearing for example clothes from that brand (Boer et al., 2016). Nowadays the top 2% of influencers, for example the Kardashian clan, get paid on average 250 000 euros per sponsored post (Abidin, 2014; Thompson, 2016). In the next sections, our focus will be on paid influencer marketing, as we will examine Instagram influencers who get paid by companies to promote their products.

Often, influencer marketing is confused with similar concepts such as viral marketing, guerrilla marketing, celebrity endorsement or blogger marketing. Viral marketing differs from influencer marketing, because the viral marketing campaigns are run and managed by a company to spread messages about its product or services. So, the company still remains in full control of the information and content shared. In contrary to influencer marketing campaigns, where the influencers post on behalf of the company but their opinions and the information they share are their own ("Buzz, viral marketing, and word-of-mouth," 2016; Cruz & Fill, 2008; "Why Marketers Should Know the Difference Between Viral and Social," 2016).

Guerrilla marketing is a marketing technique that uses different innovative and/or original advertising instruments with the aim of gaining a large effect with minimal resources (i.e. a lot of media or public attention in a short amount of time) (Hutter and Hoffman, 2011). Often, a guerrilla marketing campaign is

executed on the streets or in public areas, for example a flash mob, to attract a large audience ("Quora," 2015).

Next, celebrity endorsements and posts of social influencers are often confused. A celebrity endorsement is an endorsement of services, products or ideas on behalf of companies, made by a person who enjoys the public recognition and whose name gets a lot of attention and public interest (Canning and West, 2006; Gupta, 2009). The difference between celebrities and influencers is that the latter have built a community around themselves in a very niche place and this can lead to the generation of true recommendations within the target community (Geppert, 2016). Moreover, a celebrity endorsement is often a one-way message and is not intended for interaction. An influencer on the other hand is constantly running a dialogue with his/her followers. Also, the celebrity is often only the face of the brand message, while an influencer is perceived to be the creator of his/her own message (i.e. writing the post or editing the video him-/herself) which will lead to credibility, authenticity and loyalty (Geppert, 2016).

As the personalization of the Internet increased, the popularity of blogs has also increased (Herring et al., 2005). Bloggers are senders of WOM, in the form of regularly updated and personalized web pages (blog), who operate independently from the market (Herring et al., 2005). Some bloggers can be considered social influencers; but since being a social influencer does not require having a blog, not all social influencers can be classified as bloggers.

2.2 Ratio Number of Followers to Number of Followees

Generally, marketers focus on reaching a high number of impressions when selecting an influencer. As a high number of followers will accelerate the diffusion of information across an audience (Mayzlin and Yoganasimhan, 2012), this may result in larger reach and WOM (Talavera, 2015). Social media users perceive influencers with a higher number of followers as more popular, which has a positive effect on their perceived opinion leadership and likeability (Berger et al., 2007; De Veirman, Cauberge and Hudders, 2015). Jin and Phua (2014) found that positive tweets from celebrities with a high number of followers result in higher product-involvement and buying intentions compared to tweets from less popular celebrities. These numbers do not imply however that followers will engage with the message, through liking, commenting or sharing (Cha et al., 2010; Romero et al., 2011). Moreover, if a company works with influencers who have a high number of followers, this might not be the best marketing campaign for

promoting divergent or unique products. As a result, working with an influencer with a high number of followers might reduce the brand's perceived uniqueness (De Veirman, Cauberge and Hudders, 2015).

The ratio of the number of followers to followees, or the popularity threshold, is a better metric for the effectiveness of a collaboration with an Instagram influencer. An influencer with a high number of followees can be seen as a true opinion leader, as the influencer expresses more community involvement and is able to know more about different topics and opinions (Williams, 2006). Subsequently, low numbers of followees might negatively impact the positive relationship between number of followers and the influencers' likeability (De Veirman, Cauberge and Hudders, 2015). In contradiction, the higher the F/F-ratio, or the lower the number of followees, the more people might consider the influencer as a true opinion leader. Because they have the feeling that the follower base does not merely consist of artificially collected people who followed the influencer back after he/she started following them (Cresci et al., 2015).

In our opinion, the impact of the F/F-ratio on the perceived likeability of influencers by consumers, explained by De Veirman, Cauberge and Hudders (2015), is not clarifying the real impact on consumer behaviour as a whole. Lavidge and Steiner (1961) developed a hierarchy-of-effects (HOE) model explaining that consumers go through three different stages in responding to marketing communications: the cognitive, affective and conative stage, or a think-feel-do sequence. According to Grigaliunaite and Pileliene (2016) the cognitive stage of the hierarchy of effects model (Lavidge and Steiner, 1961) contains attention, recall and recognition of the ad, the affective stage includes attitude toward the ad and toward the brand. The last stage, the conative stage, appears when the consumers develop purchase intentions. Based on these stages, the following paragraphs will explain the successive steps, namely influencer credibility, attitude toward the ad and toward the brand, and these steps will lead to viral and purchase intentions of the consumer. According to us, this approach will give us a better insight of the impact of the F/F-ratio of Instagram influencers on consumer behaviour. Our aim is to investigate if the next literature findings about each successive step also apply to social media marketing, and in particular to Instagram influencers. More specifically, we will try to give an answer to the contradicting point of views of literature authors about influencer credibility. Next, we will investigate if the link between attitude toward the ads and brands endorsed by celebrities also apply to Instagram influencer posts. Also, we will find out if the literature findings about viral and purchase intentions hold true for brands promoted by Instagram influencers. Finally, we will clarify the different contradicting point of views about the impact of

purchase decision involvement on the relationship between an advertisement and purchase intentions and apply this to Instagram influencers.

2.3 Influencer Credibility

The Information Acceptance Model (IACM) by Erkan & Evans (2016), combines the Information Adoption Model (IAM) (Sussman and Siegal, 2003) with components of the Theory Of Reasoned Action (TORA) (Ajzen and Fishbein, 1975), in order to identify the determinants of eWOM information that influence consumers' purchase intentions. This model shows the positive relationship between purchase intentions and both the consumers' behaviour toward eWOM information, such as attitude toward the information and need for information, described by the TORA, and the components of eWOM, such as information quality and credibility, explained by the IAM (Erkan & Evans, 2016). Lee et al. (2011) agreed that the stronger the perceived credibility of online consumer reviews, the higher the purchase intention. The credibility of influencers is found to make them more effective promoters of brand messages (Chu and Kamal, 2008; Ohanian, 1990), as a credible influencer is more effective in influencing attitudes and behavioural intentions (La Ferle and Choi, 2005). Based on these findings, we will include the credibility of the influencer (IAM) and attitude toward the advertisement (TORA) in our research.

As already highlighted above, consumers perceive individuals with a large number of followers on Twitter as more attractive and trustworthy in line with the source credibility theory (Jin and Phua, 2014). In literature, source credibility refers to the extent to which a person perceives a source or person as credible (Austin and Dong, 1994). Mostly, source credibility is based on attractiveness, trustworthiness and knowledge or experience in the sector of the endorsed product (Ohanian, 1990; Teng et al., 2014). Source credibility is a major contributor to the effectiveness of advertisements (Clow et al., 2006). In contradiction, Djafarova and Rushworth (2017) found that lower-scale types of influencers, with a lower number of followers, were more influential than famous celebrities or influencers, as the first were perceived as more credible and relevant with a higher community involvement. Also, they would endorse products and services that were more affordable to consumers. In sum, according to Jin and Phua (2014), a high number of followers on Twitter lead to a higher perceived credibility, in contradiction with Djafarova and Rushworth (2017), claiming that a low number of followers would improve the credibility. Therefore, we state that

H₁: Ratio of followers to followees has a positive effect on influencer credibility.

Another factor, next to the F/F-ratio, that could influence the Instagram influencer credibility is the presence or absence of promotional disclosures. Although the blurring line between a genuine post and a paid endorsement is what makes influencer marketing so effective, the Federal Trade Commission (FTC) requires a promotional disclosure when the poster makes a contractual arrangement with the brand. In practice, this is often done by ending the post with “#ad” or “#sponsored”. Disclosures help consumers distinguish an advertisement from a genuine post and can activate people’s persuasion knowledge (Friestad and Wright, 1994), which results in people using cognitive and/or affective resistance strategies (Jacks & Cameron, 2003; Knowles and Linn, 2004) to cope with the persuasion attempt (Boerman, van Reijmersdal and Neijens, 2012). Disadvantages of disclosures are that they result in lower perceived credibility and less purchase intentions (Liljander, Gummerus and Söderlund, 2015). Other studies, however, showed positive effects of disclosures on brand attitude and purchase intentions (Colliander and Erlandsson, 2015) as the transparency might be appreciated by readers.

2.4 Attitude Toward the Ad (Aad) and Brand (Abr)

Besides influencer credibility, we consider the attitude toward the ad as the following step in explaining the consumer’s behaviour. A promoted Instagram post can be seen as an advertisement since it contains a photo and/or text designed to inform a target group and to persuade the people to buy the product or service. The social influencer shows how good or effective the product or service is and tries to change the thinking (or buying behaviour) of the social media users.

Attitude toward the advertisement (Aad) positively influences viewing time for the advertisement, brand consideration and consumers’ intention to buy the advertised product (Moore and Hutchinson, 1983). Aad is also a mediator intervening between advertisements and attitude toward the brand (Abr) (Holbrook and Batra, 1987; MacKenzie, Lutz and Belch, 1986; Miniard, Bhatla and Rose, 1990). Other researchers found that Aad had a direct positive influence on Abr and memory and familiarity with the brand (MacKenzie et al., 1986; Mitchell and Olson, 1981; Muehling and McCann, 1993). Marketers regard brand attitude as the most important predictor of consumer behavioural intentions toward a product or service (Mitchell and Olson, 2000; Wu and Wang, 2011). Also, Yoo, Donthu and Lee (2010) stated that the positive relationship between Aad and Abr will influence the intention to purchase and, eventually, the purchase itself.

Literature on linking source credibility with Aad and Abr is rare and focused solely on celebrity endorsements. According to Spry, Pappu and Cornwell (2011), the credibility of a celebrity endorser positively impacts the credibility of the endorsed brand, approved by Elberse and Verleun (2012) and Nicolau and Santa-María (2013). Kutthakaphan and Chokesamritpol (2013) claimed that source credibility is also dependent upon the quality of the argument (Teng et al., 2014). When consumers perceive reviews or statements of celebrities about products and services as credible and valid on Instagram, consumers will develop a positive attitude toward the brand (Spry, Pappu and Cornwell, 2011). Cheung et al. (2009) found that if the reviews of the endorsed products are perceived as false and invalid, consumers will have a negative attitude toward the celebrity endorser and the brand. This is confirmed in studies conducted by Lee et al. (2008) and Wu and Wang (2011), stating that positive eWOM message with higher message source credibility indicates a better brand attitude than an eWOM message with lower message source credibility. To summarize, according to Spry, Pappu and Cornwell (2011), the credibility of the celebrities and their reviews positively influences the credibility of the endorsed brand. But, as mentioned, according to MacKenzie et al. (1986), Aad cannot be neglected as a mediator intervening between advertisements and Abr. Therefore, we suppose that

H₂: Influencer credibility has a positive impact on attitude toward the ad.

H₃: Attitude toward the ad positively influences attitude toward the brand.

2.5 Viral Intentions

Subsequently, other studies stated that Abr has in turn a positive effect on consumers' purchase intentions of the advertised product and also on their viral intentions (Biehal, Stephens and Curio, 1992; MacKenzie, 1986). Viral intentions of a social media user cover not only liking, commenting or sharing a post, but also the intention to follow brands and to tell others about the post. In this way, viral intentions of consumers create extra buzz for an online campaign. Goodrich (2011) stated that clicking like on Facebook or the intention to forward the ad contributes to brand recall and future purchase intent. Thus, we would like to explore if the positive relationship of Biehal, Stephens and Curio (1992) between the Abr and consumers' viral intentions also holds true for Instagram posts. Therefore, we state that

H₄: Attitude toward the brand positively influences viral intentions.

One example of viral intentions is having the intention to follow brands on social media. This intention can particularly be explained by perceived ease of use (Logan, 2014) and peer pressure (Stockman, 2010). In contradiction, Yilmaz and Enginkaya (2015) stated that motivations for consumers to follow brands on social media are conversation, brand affiliation, opportunity seeking, entertainment, and investigation.

The following additional findings about viral intentions are also expected to have an effect on Instagram. Apparently, social media users tend to press the like button more than writing comments, because the latter requires more effort to drive the social interaction toward conversation (Ferrara, Interdonato and Tagarelli, 2014). Next, research found that young adults between 18 and 24 years old, post less content and photos on social media because of their privacy protection (Jia et al., 2015). But, they are more engaged and expressive than adults in giving likes and comments, showing their higher sense of self-representation. They are leveraging social media as a social interaction and conversation place with their friends or peers (Ito et al., 2008; Jang et al., 2015). Furthermore, we also expect that women will like and comment more on an Instagram post than men, since women care more about personal relationships (Sheldon and Bryant, 2016). This follows the point of view of Jang (2016), who stated that participation in UGC, such as commenting and liking, is associated with social needs. Therefore, we predict that

H_{4a}: Instagram users have a higher intention to like than to comment on posts.

H_{4b}: Young adults have a higher intention to like and comment than older adults.

H_{4c}: Women have a higher intention to like and comment than men.

2.6 Purchase Intention

Finally, all the previous successive steps lead to the purchase intention of consumers. This is also the last stage of the Hierarchy-Of-Effects (HOE) model, after brand awareness, brand knowledge, brand likeability and preference of the brand (Lavidge and Steiner, 1961). This stage is often the most difficult one to get to, but often used to measure the effectiveness of social media campaigns (Kapferer, 2008; Keller, 2008; Yoo, Donthu and Lee, 2010). Purchase intention refers to the desire of a consumer to purchase a product or service after being exposed to an advertisement of it (Gruber, 1970; Belch & Belch, 2004). The higher the expressed purchase intention, the more likely they are to complete the purchase (Gruber, 1970; Schiffman & Kanuk, 2000).

A positive Abr results in a continuous preference of the consumer for this brand (Wu and Wang, 2011) and also in a significant positive effect on purchase intention (Aaker and Keller, 1990; Biehal, Stephens and Curio, 1992; MacKenzie et al., 1986). Other results also indicate a direct and positive relationship between positive eWOM on Facebook, Abr and purchase intention, confirmed by Schivinski and Dabrowski (2014) saying that Abr influences purchase intention. Abzari, Ghassemi and Vosta (2014) even claimed that Abr is the most important determinant of purchase intention. Thus, we investigate if the positive relationship between the attitude toward the brand and purchase intention (MacKenzie et al., 1986), is also applicable to brands endorsed by Instagram influencers. Thus,

H₅: Attitude toward the brand has a positive effect on purchase intention.

2.7 Purchase Decision Involvement

We found that there is a direct link between eWOM and purchase intentions, but Lin et al. (2013) stated that this link may vary according to different product categories (low, medium or high purchase decision involvement). Purchase decision involvement is a mind-set to define the level of interest and concern that a consumer has when making a purchase-decision task (Mittal and Lee, 1989). So, it is the outcome of an individual's interaction with the product and the purchase situation (Beatty, Homer, & Kahle, 1988). According to the Elaboration Likelihood Model (ELM), two routes exist to make a purchase decision, namely the central and the peripheral route (Petty & Cacioppo, 1986). When the consumer is interested in the message and takes the time to consider and evaluate alternatives, because the decision is of great importance or there is a potential of big risk, the elaboration is high. Then, the consumer processes a high purchase decision involvement and follows the central route. If the consumer is distracted, uninterested, or does not take the time to think about the purchase decision, the elaboration is low. Then, the consumer processes a low purchase decision involvement and he/she follows the peripheral route to make purchase decisions about products, which are often routine purchases (Petty & Cacioppo, 1986).

So, the impact of the F/F-ratio of the Instagram influencer on the purchase intentions of the consumer might be different according to the type of product. For example the need for divergent products, which can be explained by the need for uniqueness and the need for conformity, might influence consumers' choices. In some situations, consumers may be attracted to unique products, but at other times, they want to buy what others bought (Steinhart et al., 2014). These two needs can be explained by two theories (Deval et al., 2013): the theory of exclusivity, the belief that exclusive and unique products are

desirable (Berger and Heath, 2007), and the theory of popularity, the belief that popular products are desirable (Henshel and Johnston, 1987; Deval et al., 2013). If an influencer with a high number of followers is promoting a product, the theory of popularity will pop up explaining that the product is rather common instead of unique (De Veirman, Cauberge and Hudders, 2015). Thus, the positive relationship between product diversity and brand attitude through perceived uniqueness is weaker when the product is posted by an influencer with a very high number of followers compared to an influencer with a moderate number of followers (De Veirman, Cauberge and Hudders, 2015). This is explained by the fact that the product, if advertised by an influencer with a high number of followers, is not that unique after all and that many people will be interested in it (Machleit and Eroglu, 2000).

First, let's consider for example clothes as a product category. Fashion branding on Instagram is very popular, as this social media platform has a significant amount of posts that belong to the fashion category and fashion brands have on average a high number of followers (Manikonda, Hu and Kambhampati, 2014). However, evidence is found that customers' engagement through commenting with brands in the electronics product category is almost 8 times higher than brands in the clothing sector ("Electronic Word of Mouth on Instagram," 2015). On average, electronic products are mostly considered having a higher purchase decision involvement compared to clothes. As the electronics gain a higher engagement than the clothes ("Electronic Word of Mouth on Instagram," 2015), we could suggest that the higher the purchase decision involvement, the stronger the (assumed positive) relationship between the popularity threshold and influencer credibility, which will eventually impact the viral intentions of the consumer.

In contradiction with that, let's consider for example cars and clothes. In most circumstances, clothes will have a lower purchase decision involvement compared to cars. Both are products that allow consumers to show off daily and present their sense of personality in a more outward manner, so social approval and social media influences will be considered equally important for these products. Eventually, marketers of these products might do good to spend their marketing budget on targeting online influencers with a high number of followers (Grange, 2015). Next, electronic products, for example a camera or a TV will normally have a higher purchase decision involvement compared to clothes. But, electronic products are mostly used in a private or working setting, so these are less personal or social products, so there might be less effect of social media influences here. In this case, a marketer should not necessarily collaborate with an influencer with a high number of followers. In sum, this point of view is contradicting our previous

suggestion that the higher the purchase decision involvement, the stronger the relationship between the F/F-ratio and influencer credibility. Thus, we predict that

H₆: Purchase decision involvement has a moderating effect on the relationship between the ratio of followers to followees and influencer credibility.

H_{6a}: High purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6b}: Medium purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6c}: Low purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

To summarize, Figure 1 displays our conceptual framework and the corresponding hypotheses.

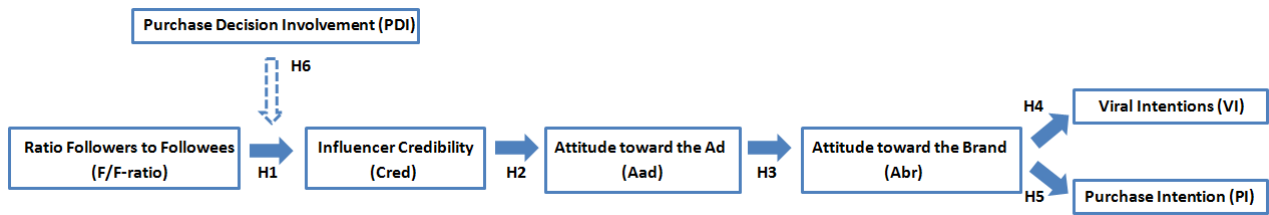


Figure 1: Conceptual Framework

RQ1: What is the impact of the F/F-ratio of Instagram influencers on consumer behaviour?

H₁: Ratio of followers to followees has a positive effect on influencer credibility.

H₂: Influencer credibility has a positive impact on attitude toward the ad.

H₃: Attitude toward the ad positively influences attitude toward the brand.

H₄: Attitude toward the brand positively influences viral intentions.

H₅: Attitude toward the brand has a positive effect on purchase intention.

RQ2: Do these effects differ across product categories according to purchase decision involvement?

H₆: Purchase decision involvement has a moderating effect on the relationship between the ratio of followers to followees and influencer credibility.

H_{6a}: High purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6b}: Medium purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6c}: Low purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

3. METHODOLOGY

The aim of this thesis is to examine the impact of the F/F-ratio of Instagram influencers on the influencer credibility and Aad, Abr, viral intentions and purchase intention of the consumer. We test these relationships across three different product categories with different levels of purchase decision involvement (i.e., car, camera, smoothie).

3.1 Pretest

To choose which three products, with different purchase decision involvement level, were used in the experiment, a pretest was designed in Qualtrics. Appendix 1.2 presents the pretest survey.

In this pretest, pictures of seven products (i.e., TV, smoothie, camera, shampoo, watch, car, water bottle) with varying purchase decision involvement were shown in random order to the respondents. We chose these 7 products, because we believe that these products display a wide range of purchase decision involvement. We expected that the smoothie, the water bottle and shampoo would be perceived as low purchase involvement products, whereas the TV and the car as high involvement products. In our opinion, the camera and the watch would belong in the middle category, so neither low nor high purchase decision involvement products. The brand name or logo of the products was changed or made invisible, so that any prior brand experience could not bias the results.

Purchase decision involvement was measured for each product based on four questions adapted from the seven-point semantic differential scale of Mittal (1989), shown in Table 1 below. At the end of the pretest, three socio-demographic questions were asked, namely age, gender and education level. This pretest had a within-subjects design, as every respondent had to go through all the products.

Table 1: Purchase Decision Involvement Scale

Construct	Questions
Purchase Decision Involvement <i>(7 point semantic differential scale)</i>	Do you think that the various types and brands of this product available in the market are all very alike or are all very different? <i>(They are alike - They are all different)</i>
	In selecting from many types and brands of this product available in the market, how much would you care as to which one you buy? <i>(I would not care at all - I would care a great deal)</i>
	How important would it be to you to make a right choice of this product? <i>(Not at all important - Extremely important)</i>
	In making a selection of this product, how concerned would you be about the outcome of your choice? <i>(Not at all concerned - Very much concerned)</i>

3.1.1 Sample

The demographic characteristics of the respondents of the pretest are displayed in Table 2. Twenty-three respondents completed the survey: 11 respondents were female, 11 male, and 1 respondent did not disclose his/her gender. After removing this respondent, 22 respondents remained in our analysis. More than half of the respondents, namely 54.5%, were between 19 and 24 years old. Also, the majority of our respondents (59.1%) owned a Bachelor's degree.

Table 2: Socio-Demographic Data of the Pretest Respondents

Variable	Levels	Frequency (n= 22)	Relative frequency
Gender	Male	11	50%
	Female	11	50%
Age	12-18	1	4.5%
	19-24	12	54.5%
	25-34	5	22.7%
	35-44	1	4.5%
	45-54	2	9.1%
	55+	1	4.5%
Highest degree	Master's degree	7	31.8%
	Bachelor's degree	13	59.1%
	High school degree	2	9.1%

3.1.2 Results

The reliability of the scale of Mittal (1989) was examined for all seven products, by checking the Cronbach's alphas. All alphas were above 0.70, showing high reliability according to Nunnally (1978) (Cronbach's alpha for TV=0.89, camera=0.89, smoothie=0.89, shampoo=0.95, car=0.80, water bottle=0.91, watch=0.82). Following this test, we transformed the four questions of the PDI (Purchase Decision

Involvement) scale into one variable, named 'pdi' for each product. Table 3 shows the mean and standard deviation of the 'pdi' variable for all 7 products. We see that the water bottle has the lowest mean PDI, whereas the car has the highest mean PDI. The SPSS output of the pretest can be found in Appendix 2.1.

Table 3: Pretest - Summary Statistics of Purchase Decision Involvement across product categories

	<i>M</i>	<i>SD</i>
TV	5.76	1.01
Camera	5.36	0.69
Smoothie	3.26	1.50
Shampoo	3.47	1.62
Car	6.23	0.62
Water	2.44	1.30
Watch	5.31	0.86

Next, we analysed whether these means differ across different socio-demographic profiles, in order to know if we must show other products depending on the type of respondent (according to gender, age and education). The probability of Type I error was set at 0.05 level for all tests of statistical significance reported in this thesis. The *p*-values reported were one-tailed for all hypotheses tests.

An independent t-test revealed a significant difference in PDI between men (*M*=2.75, *SD*=1.50) and women (*M*= 4.20, *SD*=1.44) for one product, shampoo ($t(20)=-2.32$; $p=0.031$). A oneway ANOVA did not show a significant difference in mean purchase decision involvement for age or education. Table 4 summarizes the mean purchase decision involvement for all products. We see that the products ordered from low to high PDI are: water, smoothie, shampoo, watch, camera, TV, and car.

Table 4: Low to High Purchase Decision Involvement

MEAN: in order from low to high purchase decision involvement						
Water	Smoothie	Shampoo	Watch	Camera	TV	Car
2.44	3.26	3.47	5.31	5.36	5.76	6.23

We analysed afterwards whether the mean purchase decision involvement differed significantly across products using a repeated measures ANOVA. The Mauchly's Test of Sphericity was statistically significant ($p=.011$), so we could accept the alternative hypothesis that the variances of the differences were not equal (i.e., sphericity was violated). A repeated measures ANOVA with a Greenhouse-Geisser correction showed an overall significant difference in purchase decision involvement between the products ($F(3.70,77.76)=47.17$, $MSE=1.61$, $p<.001$). Bonferroni post hoc tests revealed that the PDI of the TV (*M*=

5.76, $SD=1.01$) differed significantly from the smoothie ($M=3.26$, $SD=1.50$; $p<.001$), the shampoo ($M=3.48$, $SD=1.62$; $p<.001$) and the water bottle ($M=2.44$, $SD=1.30$; $p<.001$). Furthermore, the PDI for the camera ($M=5.36$, $SD=0.69$) was significantly different from the car ($M=6.23$, $SD=0.62$; $p=.006$), smoothie ($p<.001$), shampoo ($p<.001$) and water bottle ($p<.001$). Next, the PDI of the smoothie was also significantly different from the PDI of the car ($p<.001$) and the watch ($M=5.31$, $SD=0.86$; $p<.001$). Also, shampoo had a significantly different PDI than the car ($p<.001$), the water bottle ($p=.018$) and the watch ($p<.001$). Moreover, the PDI for the car was also significantly different than the water bottle ($p<.001$) and the watch ($p=.016$). Lastly, the water bottle also had a significant different PDI compared to the watch ($p<.001$).

Hence, there were significant differences in PDI between almost all products, aside from the difference car-TV, TV-watch, TV-camera, watch-camera, smoothie-water bottle, and smoothie-shampoo. Based on this test, we retain the car as the high involvement product, as this product differed significantly from almost all other products, unlike the TV. For the medium product we chose a camera, instead of a watch, since the camera differed significantly from the car and we would not need to separate pictures for male or female respondents for this product, unlike the case for the watch. Finally, for the low purchase involvement product we chose a smoothie, as this product differed significantly in PDI from the camera and the car. In sum, we retain the **car** as the high involvement product, the **camera** as the medium involvement product, and the **smoothie** as the low involvement product.

3.2 Main study

In this experiment, we examined the impact of the F/F-ratio of Instagram influencers on influencer credibility and Aad, Abr, viral intentions and purchase intention. We test these relationships across three different product categories with different levels of PDI. Based on our results of the pretest, we chose a car, a camera and a smoothie. This experiment was measured with a survey, created in Qualtrics, in which respondents got to see different Instagram posts. The survey is included in Appendix 1.3. For the three different product categories, we used fictitious brands, namely Carson Cars, Shot cameras and V-smoothies. In this way, any prejudices about brands could not bias the results of our study. Next, we selected the number of followers and the number of followees, based on the study of De Veirman, Cauberge and Hudders (2015), namely 21200 and 2100 for the high and moderate number of followers respectively; 32200 and 32 were chosen for the high and low number of followees respectively. To check manipulations, respondents were asked if they perceive the number of followers of the Instagram user as very small (=1) or very large (=7), the same for the number of followees.

The Instagram post was indicated to be from a fictitious Instagram influencer ‘Charlie Jones’, who promoted a product on behalf of a company, namely Carson Cars, Shot cameras or V-smoothies. Above the picture, the number of followers and the number of followees of the influencer were visible. Below the picture, a small text appeared where the influencer promoted or said how he feels about the product. Each text ended with #ad, a disclosure required by the Federal Trade Commission, which we discussed already in the literature study. So although we did not use the term ‘social influencer’ in our survey, we used Instagram user instead, the respondents should have been aware of the fact that we showed them influencer posts with an advertisement because of this disclosure. As an example, the Instagram post for the car HH condition is shown in Figure 2 below. The other Instagram posts are attached with the survey in Appendix 1.3.



Figure 2: Instagram Post Car HH Condition

We distributed the link of this survey through social media and via email to a random sample of Instagram users in Belgium. A control question at the start of the survey made sure to only survey Instagram users. Our goal was to have representative results and problems might have occurred if we would also include people who do not own an Instagram account, as they might not immediately understand the definition of followers and followees. Furthermore, this gave us the possibility to examine afterwards possible relationships between our findings and respondents’ Instagram usage and behaviour.

The survey consisted of 3 parts. The first part was an introduction followed by the question whether the respondent had an Instagram account. The second part of the survey covered questions about the different experimental conditions, explained below in 3.2.1 Measurement Instruments, each time followed by a question to measure their interest in the product category (i.e., healthy food/drinks, photography/camera gear or cars). In the third and last part, respondents were asked about their social media usage and socio-demographic profile.

3.2.1 Measurement Instruments

While being shown the Instagram posts, respondents filled out the questions about the dependent variables, namely the credibility of the influencer, respondent's attitude toward the ad, attitude toward the brand, purchase intention and viral intentions, shown in Table 5 below.

Table 5: Measurements: Behavioural Variables and Social Media Usage

Construct	Statement/Question
Credibility (7 point semantic differential scale)	How do you perceive the Instagram user?
	undependable/dependable not an expert/an expert
	dishonest/honest inexperienced/experienced
	unreliable/reliable unknowledgeable/knowledgeable
	insincere/sincere unqualified/qualified
	untrustworthy/trustworthy unskilled/skilled
Attitude toward the ad (7 point semantic differential scale)	How do you perceive this Instagram post?
	unpleasant/pleasant bad/good
	unlikeable/likeable tasteless/tasteful
	boring/interesting artless/artful
Attitude toward the brand (7 point semantic differential scale)	How do you perceive the brand?
	Bad/good Unpleasant/pleasant
	Dislike/like Unfavourable/favourable
Viral intentions (5 point Likert scale: 1= very unlikely - 5= very likely)	Indicate how likely you are to execute the following actions.
	I will forward the Instagram post to others.
	I will recommend the Instagram post to others.
	I will like the Instagram post.
	I will share the Instagram post.
	I will comment on the Instagram post.
	I will follow the Instagram user or brand on Instagram.
Purchase intention (5 point Likert scale: 1= definitely no - 5= definitely yes)	Indicate to what extent you agree/disagree with the following statements.
	Would you like to try this product or brand?
	Would you buy this product or brand if you happened to see it in a shop/online?
	Would you actively seek out this product or brand online/in a shop?
Social media usage	Indicate how often you use Instagram on average. (8 point scale: 1=every 5 minutes – 8=less than once a week)
	How long do you already own an Instagram account? (6 point scale: 1=less than 1 year – 6=more than 5 years)
	Do you own an account on any of the following social media sites? (Facebook, Twitter, LinkedIn, YouTube, Pinterest, Snapchat, Other)
	Do you often request information for purchasing decisions on social media? (6 point scale: 1=never – 6=very frequently)

To measure these dependent variables, we used different scales and each scale was chosen for its reliability, validity and usefulness in addressing the research question. First of all, we wanted to measure the impact of the F/F-ratio on the perceived credibility of the influencer. The **influencer credibility** was measured on a seven-point semantic differential scale of Ohanian (1990), which has trustworthiness, expertise and physical attractiveness as subdimensions. We did not include physical attractiveness, as the Instagram influencer was not recognizable on the pictures used in our survey and previous findings reported that this subdimension has little to do with evaluating the credibility of an endorser (Ohanian, 1991; Till and Busler, 1998). Thus, this led to the scale existing of 10 bipolar items. Next, the **attitude toward the ad** (Aad) was measured with 6 items on a seven-point semantic differential scale of Madden, Allen and Twible (1988). The **attitude toward the brand** (Abr) was measured with 4 items on a seven-point semantic differential scale of MacKenzie, Lutz and Belch (1986). To measure the **viral intentions**, we combined two scales, measured on a 5 point Likert scale. The first two statements were adopted from the intention to recommend (Chiu et al., 2007; Harrison-Walker, 2001; Maxham and Netemeyer, 2002) and measured with the scale from MacKenzie et al. (1986). The other four statements were adopted from Alhabash et al. (2013) and applied to Instagram. Finally, a respondent's **purchase intention** was measured using 3 items on a 5-point Likert scale from Baker and Churchill (1977). The reason we used 5-point Likert scales to measure the viral and purchase intentions, is that previous research showed that the coefficient alpha for Likert type scales increases up to the use of 5 points, while the improvement above 5 points is insignificant (Hinkin, 1998). This part of the survey was for each Instagram post followed by a question that measures the **interest in the product category** on a 4-point scale (from 'No interest at all' to 'High interest').

Regarding their **social media usage**, respondents were asked to indicate on a 8 point scale how often they use Instagram on average (from 'every 5 minutes' to 'less than once a week'). We were also interested in a potential link between how influenceable they are and both how long they already own an Instagram account on a 6 point scale (from 'less than 1 year' to 'more than 5 years') and if they own an account on other social media sites (Facebook, Twitter, LinkedIn, YouTube, Pinterest, Snapchat, Other). The last question in this section was if they often request information for purchasing decisions on social media, measured on a 6-point scale (from 'never' to 'very frequently').

In the personal information section, we asked three key variables, namely **education level, age and gender**. Education level (their highest degree already obtained) included three options (i.e. Master's

degree, Bachelor’s degree or High school degree), while age was measured with 6 points (12-18, 19-24, 25-34, 35-44, 45-54, 55+ years old). Gender options were male, female or ‘rather not want to disclose this information’.

3.2.2 Experimental Design

A 4x3 between-subjects factorial design was used to test the hypotheses of our main study. The first factor, the ratio of the number of followers to the number of followees, was manipulated at four levels (high/high, high/low, moderate/high, moderate/low). The second factor, product category, was manipulated at three levels (high, medium and low PDI). Combining these two factors, resulted in twelve conditions (4x3=12), as seen in Table 6 below.

Table 6: Twelve Conditions

Condition	Ratio				Product		
	HH	HL	MH	ML	Car	Smoothie	Camera
1	✘				✘		
2		✘			✘		
3			✘		✘		
4				✘	✘		
5	✘					✘	
6		✘				✘	
7			✘			✘	
8				✘		✘	
9	✘						✘
10		✘					✘
11			✘				✘
12				✘			✘

A respondent was shown three Instagram posts of three different products with a different F/F-ratio. To avoid any leading order of low to high or high to low PDI, the products were shown in the following order: first the car, then the smoothie and lastly the camera. Thus our experiment was a between subjects design, as each respondent was randomly assigned to one of the four F/F-ratios for each product. The randomization of the respondents is visualised in Figure 3 below. This experimental design gave us the advantage that we only had four conditions, instead of twelve. Although by using this survey flow, it could occur that a respondent would see two or even three times the same F/F-ratio, this would be rare.

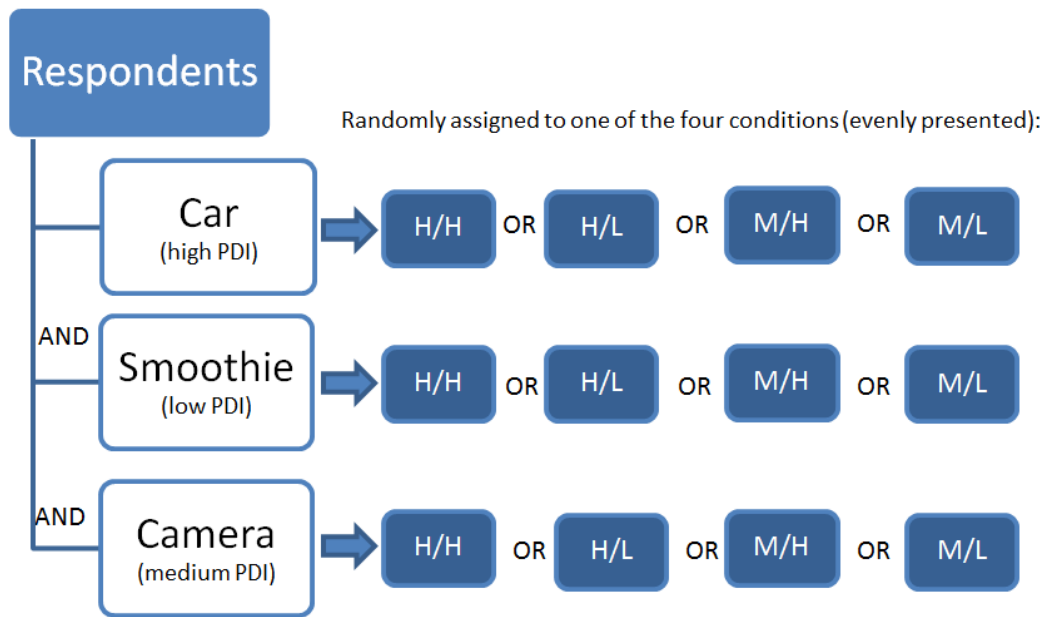


Figure 3: Visualisation of the Randomization of the Respondents

3.2.3 Sample

Because we had 4 conditions (four F/F-ratios) the sample must ideally exist of 120 to 200 respondents (30-50 respondents per condition). In total, 211 persons participated in the survey. Sixty respondents did not complete the survey, and ten indicated that they did not own an Instagram account. After excluding these respondents from the data, a sample of $n=141$ respondents remained.

These respondents were randomly, but evenly distributed, assigned to one ratio for each product. The amount of people per ratio is given in Table 7 below. Again, each respondent saw each product (see Figure 3), explaining why all the numbers in the table sum up to more than 141.

Table 7: Number of Respondents per F/F-ratio

Respondents	H/H ratio	H/L ratio	M/H ratio	M/L ratio	Total per product
Car	39	27	33	42	141
Smoothie	35	36	33	37	141
Camera	34	35	34	38	141
Total per ratio	108	98	100	117	

The demographic characteristics of the respondents are displayed in Table 8. We see that more women (66.7%) than men filled out the survey and almost 86% of the respondents aged between 19 and 24 years. This sample matched the users of Instagram, which are on average between 18 and 29 years old and mostly women (Duggan & Brenner, 2013). The age of the respondents ranged between 12-18 and 35-44

years and the average age was between 19 and 24 years old (SD=0.41). Finally, almost half of the respondents' highest degree was a Bachelor's degree (48.2%).

Table 8: Socio-Demographic Summary of the Survey Respondents

Socio-demographic variable	Category	Frequency (n= 141)	Relative frequency
Gender	Male	46	32.6%
	Female	96	66.7%
Age	12-18	9	6.4%
	19-24	121	85.8%
	25-34	10	7.1%
	35-44	1	0.7%
	45-54	0	0
	55+	0	0
Highest degree	Master's degree	40	28.4%
	Bachelor's degree	68	48.2%
	High school degree	33	23.4%

The average completion time of the survey was 630.68 seconds (10.51 min). This is in line with the estimated completion time of 10 minutes that was communicated to the respondents.

4. ANALYSIS AND RESULTS

4.1 Manipulation Check

Before we started with the analysis of our results, a manipulation check was executed. We wanted to check whether the number of followers and followees were indeed perceived as high, moderate or low by the respondents. For the high and moderate number of followers we assumed 21200 and 2100 respectively; for the high and low number of followees we assumed 32200 and 32. These numbers were based on the numbers used in the study of De Veirman, Cauberge and Hudders (2015). Using a 7-point Likert scale (1=very small, 7=very large) respondents were asked how they perceived the number of followers and followees of the Instagram influencer for all three Instagram posts. Two one-way ANOVA's were conducted to check how the popularity thresholds were perceived by the respondents. The SPSS output of the manipulation check is attached in Appendix 2.2.1.

First, the one-way between-subjects ANOVA of the number of **followers** revealed a significant positive effect on the perceived number of followers ($F(3,419)=36.35, p<.001, MSE=1.20$). A Post-hoc Bonferroni test showed that the perception of the high number of followers of the ratio **HH** ($M=5.82, SD=0.97$) differed significantly from the perception of the medium followers of the **MH** ratio ($M=4.64, SD=1.49; p<.001$) and the **ML** ratio ($M=5.42, SD=1.08; p=.034$). Also, the perception of the high followers of the **HL** ratio ($M=6.17, SD=0.70$) differed significantly from the perception of the medium followers of the **MH** ratio ($p<.001$) and the **ML** ratio ($p<.001$). Last, the perception of the medium followers of the **MH** ratio differed significantly from the perception of the medium followers of the **ML** ratio ($p<.001$). In sum, also visualised in Figure 4 below, this suggests that the number of followers of the **HH** ratio and the **HL** ratio were indeed perceived as higher than the number of followers of the **MH** ratio and the **ML** ratio. Remarkably, the number of followers of the **ML** ratio were also perceived as slightly higher than the number of followers of the **MH** ratio. This suggests that the lower number of followees led to a higher perception of number of followers, even though the followers represented the same medium number.



Figure 4: How the Respondents Perceived the Number of Followers

Subsequently, another one-way ANOVA for the number of **followees** was executed and revealed a significant positive effect on the perceived number of followees ($F(3,419)=1072.44$, $p<.001$, $MSE=0.80$). The post-hoc Bonferroni test showed that the perception of the high number of followees of the HH ratio ($M=6.30$, $SD=1.01$) was significantly different from the perception of the low number of followees of the HL ratio ($M=1.36$, $SD=0.50$; $p<.001$) and the ML ratio ($M=1.55$, $SD=1.03$; $p<.001$). Next, the perception of the high number of followees of the MH ratio ($M=6.49$, $SD=0.89$) differed significantly from the perception of the low number of followees of the HL ratio ($p<.001$) and the ML ratio ($p<.001$). So, as visualised in Figure 5 below, the number of followees of the HH ratio and the MH ratio were indeed perceived as higher than the number of followees of the HL ratio and the ML ratio.

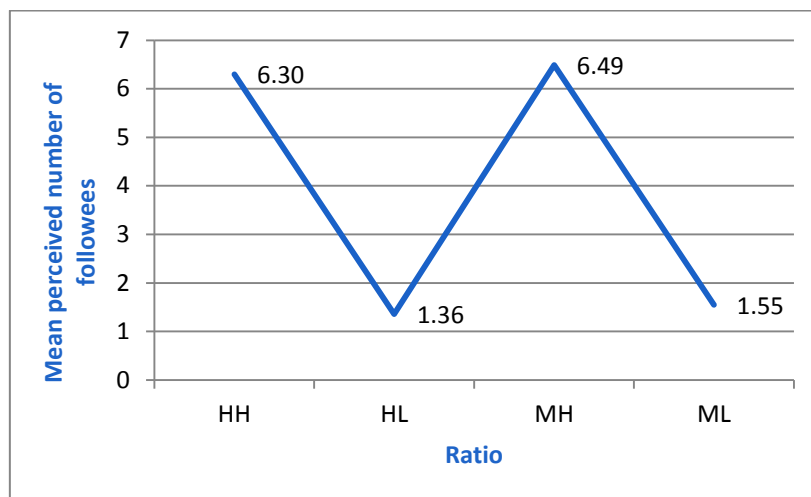


Figure 5: How the Respondents Perceived the Number of Followees

In conclusion, our manipulations of the number of followers and followees were valid.

4.2 Scale Reliability

The next step was to check the reliability of the scales using Cronbach's alpha. According to Nunnally (1978), scales with reliability above 0.70 have relatively good internal consistency. Also, to reduce the quantity of variables, it is determined whether a factor analysis is needed. The SPSS output of the scale reliability tests is attached in Appendix 2.2.2.

Our experiment had a 4x3 between-subjects design so we had to calculate the Cronbach's alpha across the four conditions, for each item of a scale and for each product. Since each of the 141 respondents was exposed to three different products (1=car, 2=smoothie, 3=camera), we could multiply our data set by three. This was possible, because for each product, the respondent was randomly assigned to another ratio. So in fact, our data set consisted of 423 respondents, explaining why we have this number as the total sample of respondents (n) or explaining the degrees of freedom in the next analyses.

Table 9: Reliability of Scales

Product	Scale	Cronbach's alpha
Car	Credibility	0.88
	Aad	0.92
	Abr	0.95
	Viral intentions	0.79
	Purchase intention	0.78
Smoothie	Credibility	0.94
	Aad	0.93
	Abr	0.97
	Viral intentions	0.90
	Purchase intention	0.85
Camera	Credibility	0.96
	Aad	0.94
	Abr	0.96
	Viral intentions	0.89
	Purchase intention	0.85

Table 9 shows that all Cronbach's alphas were higher than 0.70, so we could conclude that the scales had good internal consistency and that factor analyses were not necessary.

4.3 Results

Our first research question RQ1 was: "What is the impact of the F/F-ratio of Instagram influencers on consumer behaviour?". This was tested in hypotheses 1 to 5. The second research question RQ2 was: "Do

these effects differ across different product categories according to purchase decision involvement?” and was handled using hypotheses 6a, 6b and 6c. The SPSS output for the hypotheses tests can be found in Appendix 2.2.3-2.2.8.

H_1 : Ratio of followers to followees has a positive effect on influencer credibility.

Because the independent variable (Ratio) was nominally scaled, a one-way ANOVA was conducted to compare the effect of the F/F-ratio on influencer credibility. The test of homogeneity of variances showed a p -value of .880, which suggested that we could not reject the H_0 that the variances are equal ($H_0: \sigma^2_{HH} = \sigma^2_{HL} = \sigma^2_{MH} = \sigma^2_{ML}$). The one-way, between-subjects analysis of variance revealed a significant positive effect of the F/F-ratio on influencer credibility ($F(3,419)=6.22, p<.001, MSE=1.23$). Post-hoc Bonferroni tests showed that the MH ratio ($M=3.51, SD=1.08$) led to a significantly lower influencer credibility than the HH ratio ($M=3.98, SD=1.16; p=.015$), the HL ratio ($M=4.17, SD=1.15; p<.001$) and the ML ratio ($M=3.94, SD=1.04; p=.029$). To summarize, our results (displayed in Table 10, Table 11 and Figure 6 below) suggest that the MH ratio leads to the lowest score on influencer credibility and the HL ratio to the highest score on influencer credibility.

Table 10: One-way ANOVA Statistics- H_1

F(3,419)	p	MSE
6.22	<.001	1.23

Table 11: Descriptive Statistics: Impact Ratio on Influencer Credibility

Ratio	n	M	SD	SE
HH	108	3.98	1.16	0.11
HL	98	4.17	1.15	0.12
MH	100	3.51	1.08	0.11
ML	117	3.94	1.04	0.10
Total	423	3.90	1.13	0.05

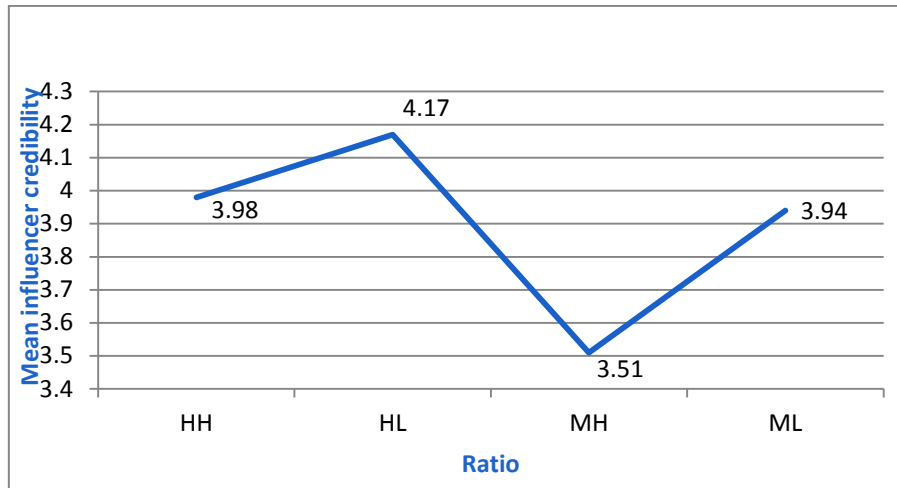


Figure 6: Impact Ratio on Influencer Credibility

H_2 : Influencer credibility has a positive impact on attitude toward the ad.

A linear regression was executed to predict the attitude toward the ad based on influencer credibility. A significant regression equation was found ($F(1,421)=160.19, p<.001$) with an R^2 of 0.276. The intercept was 1.59 and the parameter estimate for credibility was 0.58.

Table 12: Linear Regression Statistics-H2

Attitude toward the ad			
	B	SE	Sign.
Cred	0.58	0.05	$p<.001$
Intercept	1.59	0.19	$p<.001$
$F(1,421)$	160.19 ($p<.001$)		
R^2	0.276		

H_3 : Attitude toward the ad positively influences attitude toward the brand.

For hypothesis 3 we also performed a linear regression to predict the attitude toward the brand based on the attitude toward the ad. A significant regression equation was found ($F(1,421)=386.62, p<.001$) with an R^2 of 0.479. The intercept was 2.03 and the parameter estimate for the attitude toward the ad was 0.62.

Table 13: Linear Regression Statistics-H3

Attitude toward the brand			
	B	SE	Sign.
Aad	0.62	0.03	$p<.001$
Intercept	2.03	0.13	$p<.001$
$F(1,421)$	386.62 ($p<.001$)		
R^2	0.479		

H₄: Attitude toward the brand positively influences viral intentions.

Like the two previous hypotheses, a linear regression was executed to predict the viral intentions based on the attitude toward the brand. Once again, a significant regression equation was found ($F(1,421)=87.07, p<.001$) with an R^2 of 0.171. The intercept was 0.42 and the parameter estimate for the attitude toward the brand was 0.25.

Table 14: Linear Regression Statistics-H4

Viral intentions			
	<i>B</i>	<i>SE</i>	<i>Sign.</i>
Abr	0.25	0.03	$p<.001$
Intercept	0.42	0.12	$p=.001$
<i>F(1,421)</i>	87.07 ($p<.001$)		
<i>R</i>²	0.171		

H₅: Attitude toward the brand has a positive effect on purchase intention.

We performed a linear regression one last time to predict purchase intention based on the attitude toward the brand. A significant relationship was found ($F(1,421)=194.62, p<.001$) with an R^2 of 0.316. The intercept was 0.59 and the parameter estimate for the attitude toward the brand was 0.42.

Table 15: Linear Regression Statistics-H5

Purchase intention			
	<i>B</i>	<i>SE</i>	<i>Sign.</i>
Abr	0.42	0.03	$p<.001$
Intercept	0.59	0.14	$p<.001$
<i>F(1,421)</i>	194.62 ($p<.001$)		
<i>R</i>²	0.316		

H₆: Purchase decision involvement has a moderating effect on the relationship between the ratio of followers to followees and influencer credibility.

H_{6a}: High purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6b}: Medium purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

H_{6c}: Low purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.

To test whether the product category was an interacting variable in our analysis that would affect the direction and/or strength of the relation between the F/F-ratio and influencer credibility, a univariate linear regression was executed and visualized in Table 16. The main effect of Product ($F(2,411)=13.02$, $MSE=15.03$, $p<.001$) and the main effect of Ratio ($F(3,411)=6.18$, $MSE=7.13$, $p<.001$) were both significant on influencer credibility. The interaction between Product and Ratio was not significant ($F(6,411)=1.20$, $MSE=1.39$, $p=.304$).

Table 16: Univariate Linear Regression Statistics-H6

	F	p	MSE
Main effect Product	$F(2,411)=13.02$	<.001	15.03
Main effect Ratio	$F(3,411)=6.18$	<.001	7.13
Interaction effect Product and Ratio	$F(6,411)=1.20$	0.304	1.39

The ratio MH ($M=3.51$, $SD=1.08$) led to significantly lower influencer credibility than the ratio HH ($M=3.98$, $SD=1.16$; $p=.011$) and the ratio HL ($M=4.17$, $SD=1.15$; $p<.001$), as well as differed significantly from the ratio ML ($M=3.94$, $SD=1.04$; $p=.022$). These effects were already analysed for H1.

Since the main effect of Product on influencer credibility was significant, significant differences between the car ($M=3.51$, $SD=0.95$) and the smoothie ($M=4.10$, $SD=1.14$; $p<.001$) and between the car and the camera ($M=4.10$, $SD=1.19$; $p<.001$) were found. There was no significant difference between the smoothie and the camera ($p>.10$). The effect of the type of product on influencer credibility is shown in Figure 7.

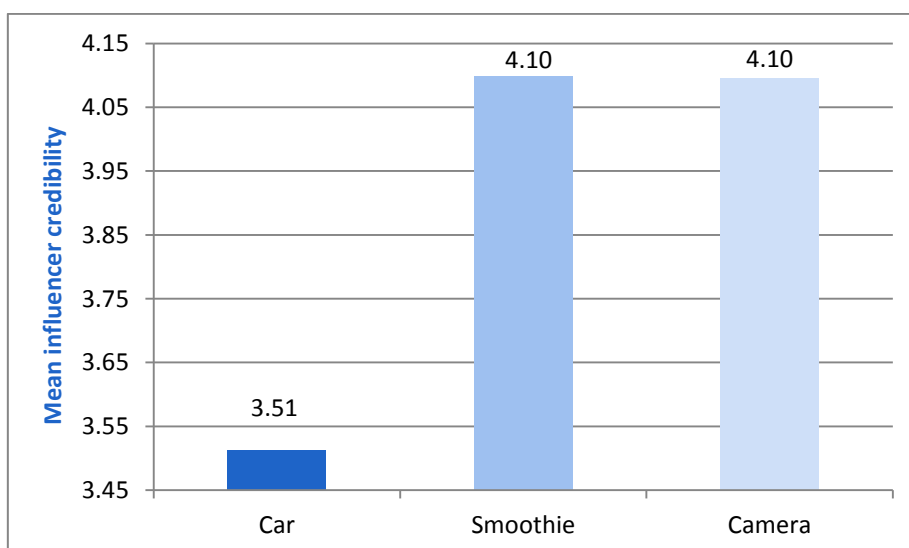


Figure 7: Main Effect of Product on Influencer Credibility

4.4 Overview Tested Hypotheses

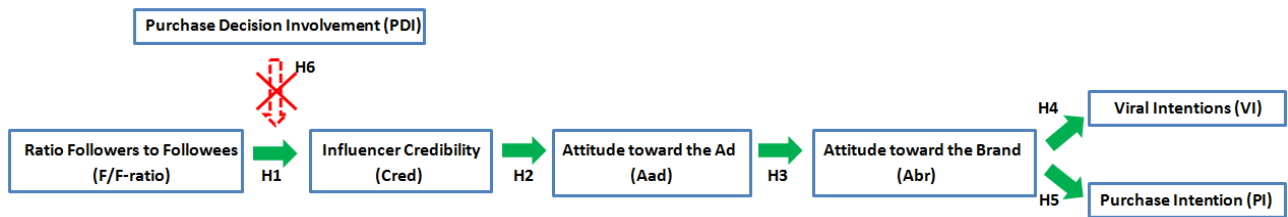


Figure 8: Conceptual Framework Tested

Table 17: Summary of Tested Hypotheses

Hypothesis	Description	Conclusion
1	Ratio of followers to followees has a positive effect on influencer credibility.	Confirmed
2	Influencer credibility has a positive impact on attitude toward the ad.	Confirmed
3	Attitude toward the ad positively influences attitude toward the brand.	Confirmed
4	Attitude toward the brand positively influences viral intentions.	Confirmed
5	Attitude toward the brand has a positive effect on purchase intention.	Confirmed
6a	High purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.	Rejected
6b	Medium purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.	Rejected
6c	Low purchase decision involvement moderates the relationship between the ratio of followers to followees and influencer credibility.	Rejected

4.5 Additional Tests Viral Intentions

As explained in the literature part, there are a few extra assumptions we found about viral intentions that we also expected to see in our research. In this paragraph, we will explain how we tested these assumptions. SPSS output of these additional tests is attached in Appendix 2.2.9.

H_{4a}: Instagram users have a higher intention to like than to comment on posts.

A paired-samples t-test was conducted to compare the intention to give likes and the intention to give comments on the Instagram posts. There was a significant difference between the intention to like ($M=1.74$, $SD=1.04$) and the intention to comment ($M=1.20$, $SD=0.48$) on the Instagram post with the car ($t(140)=6.92$, $p<.001$). Also a significant difference between the intention to like ($M=2.15$, $SD=1.24$) and the intention to comment ($M=1.52$, $SD=0.88$) was found for the Instagram post with the smoothie ($t(140)=7.47$, $p<.001$). The same for the intention to like ($M=2.04$, $SD=1.16$) and the intention to comment ($M=1.41$, $SD=0.72$) on the Instagram post with the camera ($t(140)=7.13$, $p<.001$). Summarizing, for all three products, respondents experienced more intention to like the Instagram post than to comment on it.

H_{4b}: Young adults have a higher intention to like and comment than older adults.

An independent-samples t-test was conducted to compare the intention to like and comment between young adults (between 19 and 24 years old) and adults (25+). To do this, a new variable, 'new_age', was made with our already existing age categories. Value 1 represents 19-24y old respondents, while value 2 represents the following age categories: 25-34, 35-44, 45-54 and 55+ years old. Because our sample matched the users of Instagram, group 1 had 121 respondents, while group 2 only consisted of 11 respondents. There was only a significant difference between the young adults ($M=2.24$, $SD=1.25$) and adults ($M=1.45$, $SD=0.82$) in the intention to like the Instagram post of the smoothie ($t(14.63)=2.88$, $p=.012$). Levene's test for equality of variances showed us that for this case the assumption of equal variances could be rejected ($p=.021$). Furthermore, commenting on the Instagram post of the smoothie and liking or commenting on the Instagram posts with the other two products showed no significant differences between the young adults and the adults.

H_{4c}: Women have a higher intention to like and comment than men.

An independent-samples t-test was conducted to compare the intention to like and comment between men and women. The Levene's test for equality of variances was significant ($p<.05$) for both liking and

commenting for the car, as well as for the smoothie, suggesting that there is a difference in variances for these products between men and women. However, the Levene's test was not significant for the intention to like ($p=.813$) and the intention to comment ($p=.487$) on the Instagram post with the camera, suggesting that for this product, equal variances can be assumed. There was a significant difference in the intention to like the Instagram post with the car between men ($M=2.11$, $SD=1.25$) and women ($M=1.57$, $SD=0.87$; $t(67.18)=2.60$, $p=.011$). For the Instagram post with the smoothie, a significant difference was found for the intention to like between men ($M=1.80$, $SD=1.05$) and women ($M=2.33$, $SD=1.29$; $t(107.97)=-2.58$, $p=.011$), as well as for the intention to comment between men ($M=1.30$, $SD=0.66$) and women ($M=1.63$, $SD=0.95$; $t(121.61)=-2.34$, $p=.021$). The independent samples t-test showed no significant differences between men and women for the intention to like ($p=0.58$) or the intention to comment ($p=0.79$) on the Instagram post with the camera. To be able to explain these results, we executed another independent-samples t-test to compare the interest in product category and gender. There was a significant difference for the interest in healthy food and drinks between men ($M=2.17$, $SD=1.02$) and women ($M=3.37$, $SD=0.82$; $t(138)=-7.51$, $p<.001$). The interest in cars also differed significantly between men ($M=3.17$, $SD=1.04$) and women ($M=1.99$, $SD=0.87$; $t(138)=7.07$, $p<.001$). Another significant difference between men ($M=2.35$, $SD=0.95$) and women ($M=2.80$, $SD=0.97$) was found for the interest in photography and camera gear ($t(138)=-2.60$, $p=.010$). The Levene's test for equality of variances was not significant for all three comparisons.

4.6 Tests for Interest in Product Category, Social Media Usage and Socio-Demographic Profiling

We wanted to check if there were links between the product interest, the social media usage and the socio-demographic profile of the respondent and how influenceable the respondent is. For this paragraph, we describe being 'influenceable', as being more easily influenced by an Instagram influencer compared to others. Thus, we defined someone as 'influenceable' if this person had high viral and purchase intentions and if he/she defined the Instagram influencer as credible. We focused on influencer credibility, viral intentions, and purchase intention because we find these three the most important dependent variables of our research in representing consumer behaviour. The survey questions ('Profiling variables') used to measure these potential links with the 'Influenceable variables' are visualised in Figure 9 below. Specifically, for the accounts on other platforms we only focused on YouTube, Pinterest and Snapchat, because these platforms also make use of images and/or attractive, visual and quick messages.

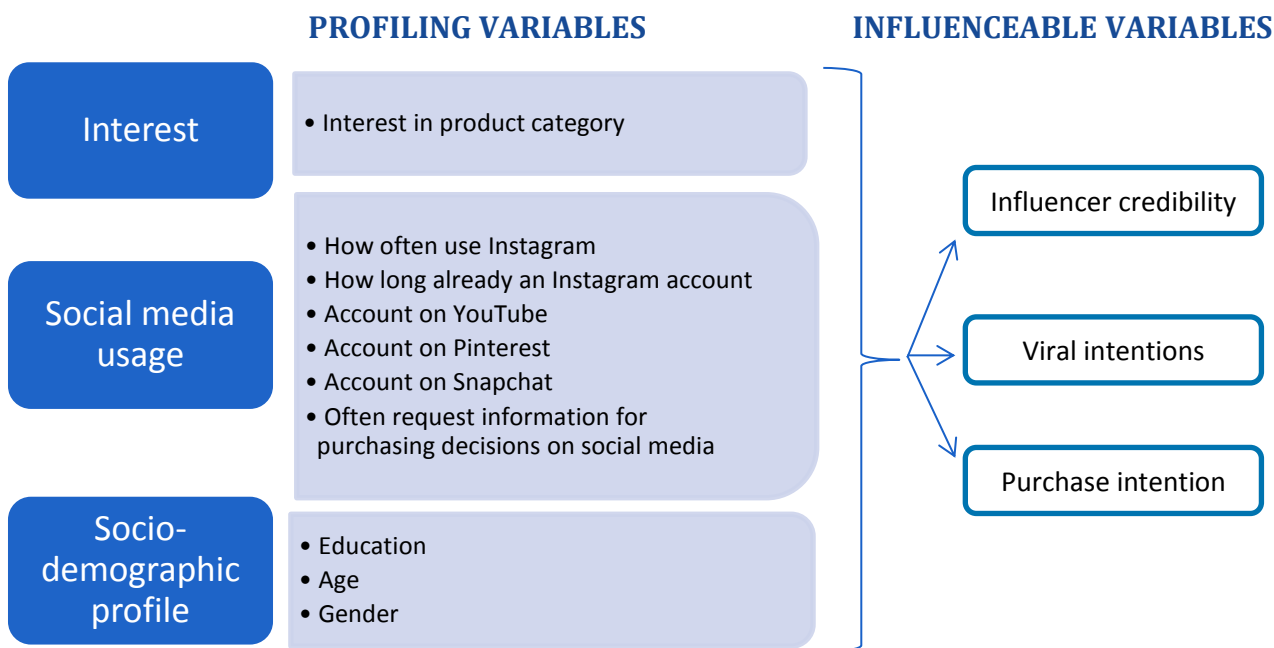


Figure 9: Interest, Social Media Usage and Socio-Demographic Profiling

A multivariate analysis of variances (MANOVA) was conducted to assess profiling differences on the three influenceable variables: influencer credibility, viral intentions and purchase intention. The SPSS output is given in Appendix 2.2.10.

Table 18: Pearson Correlations, Means and Standard Deviations of the Influenceable Variables

	Credibility	VI	PI	<i>M</i>	<i>SD</i>
Credibility	1			3.90	1.13
VI	.34	1		1.52	0.67
PI	.38	.58	1	2.42	0.83

Whether or not being influenceable was not dependent on how often they use Instagram, how long they own an Instagram account, having a Facebook/Pinterest account, how often information for purchasing decisions was requested on social media, degree of education, or age. However, as seen in Table 19, whether or not being influenceable was significantly dependent on having a Snapchat account (Wilks' Lambda: $F(3,410)=4.59$, $p=.004$), gender (Wilks' Lambda: $F(3,410)=3.13$, $p=.026$) and interest in the product category (Wilks Lambda: $F(3,410)=39.51$, $p<.001$).

Table 19: Multivariate Analysis of Variance-Profiling

Profiling variable	F(3,410)	p
Snapchat account	4.59	.004
Gender	3.13	.026
Interest in product category	39.51	<.001
How often	0.17	.917
How long Instagram account	2.36	.071
YouTube account	1.67	.174
Pinterest account	0.90	.443
Info request	0.85	.470
Degree	0.01	.999
Age	0.77	.514

Next, univariate tests were analysed for these three significant profiling variables, which is visualised in Table 20 below. An ANOVA test showed that having a Snapchat account had a significant impact on influencer credibility ($F(1,412)=13.27, p<.001$). Interest in the product category significantly positively influences influencer credibility ($F(1,412)=18.55, p<.001$), viral intentions ($F(1,412)=59.39, p<.001$) and purchase intention ($F(1,412)=110.87, p<.001$). Remarkably, gender had no significant impact on influencer credibility, or viral intentions or purchase intention.

Table 20: Univariate Tests-Profiling

Significant profiling variable	Influenceable variable	F(1,412)	p
Snapchat account	Influencer credibility	13.27	<.001
Interest in the product category	Influencer credibility	18.55	<.001
	Viral intentions	59.39	<.001
	Purchase intention	110.87	<.001
Gender	Influencer credibility	2.33	.128
	Viral intentions	0.00	.958
	Purchase intention	3.59	.059

5. DISCUSSION

The results of H1 suggest that the F/F-ratio (followers to followees ratio) has a positive impact on perceived influencer credibility. Specifically, our results suggest that an influencer with a high number of followers to a low number of followees (HL) is perceived as more credible, followed by an influencer with a high number of followers to a high number of followees (HH) and an influencer with a medium number of followers to a low number of followees (ML). An influencer with a medium number of followers to a high number of followees (MH) is perceived as the least credible. As we expected, the influencer with a high number of followers to a low number of followees (HL) and the influencer with a high number of followers to a high number of followees (HH) are perceived as the most credible, explaining that a high number of followers leads to higher perceived influencer credibility, which is in line with the source credibility theory (Jin and Phua, 2014). This suggests that people will behave like the community and act like their peers or relatable people (Moscovici and Personnaz, 1980), because if they see that a lot of people follow an Instagram influencer they will perceive this Instagram influencer as more skilled, sincere, trustworthy and experienced, and thus as more credible. Hence, our results did not correspond with Djafarova and Rushworth (2017) who claimed that influencers with a lower number of followers, are perceived as more credible because they would endorse products and services that were more affordable to consumers. The results for H1 also confirmed that a high number of followees leads to a lower perceived influencer credibility. This suggests that, in line with Cresci et al. (2015), consumers interpret a high number of followees as a sign that the user's followers base consists of people who followed the user back after he/she followed them first. Therefore, they will consider the Instagram influencer as less credible. Thus, our result is contradicting the statement of De Veirman, Cauberge and Hudders (2015), who said that low numbers of followees negatively impact the positive relationship between the number of followers and the influencers' likeability. Also in contradiction with Williams (2006), our respondents did not take the fact into account that maybe Instagram influencers with a higher number of followees have a higher community involvement and are able to know more about different topics and opinions of customers.

The results of H2 revealed that the higher the perceived influencer credibility, the higher the attitude toward the advertisement (Aad). This means that, if someone perceived the Instagram influencer as credible, the person will automatically have a positive attitude toward the Instagram post in which the influencer promotes the product. Subsequently, our results of H3 confirmed that the higher the attitude

toward the Instagram post, the higher the attitude toward the brand (Abr). This indicates that if a person experiences a positive attitude toward the Instagram post, this will lead to a positive attitude toward the brand promoted by the Instagram influencer. That said, our results confirm the statements of MacKenzie et al. (1986), Mitchell and Olson (1981) and Muehling and McCann (1993), but now we can say that their knowledge about the positive relationship between the Aad and the Abr can also be applied to posts of Instagram influencers. Also, as already mentioned, literature on linking source credibility with Aad and Abr focused solely on celebrity endorsements. For example, according to Spry, Pappu and Cornwell (2011) the credibility of a celebrity endorser positively impacts the attitude toward the brand. In sum, our findings revealed that the higher the influencer credibility, the higher the attitude toward the Instagram post, which will eventually positively impact the attitude toward the promoted brand.

Next, our analysis of H4 confirmed that Abr positively influences viral intentions. Moreover, we analysed three additional hypotheses about two specific viral intentions: the intention to like and the intention to comment. We must first say that, overall, respondents did not have high intentions to like and comment on an Instagram post, as the average intention to like and comment ranged between 'somewhat unlikely' and 'neither likely nor unlikely'.

First of all, we could conclude that respondents had more intention to like Instagram posts compared to commenting on them. This was the case for the Instagram post with the car, the smoothie and the camera. So we revealed that the statement of Ferrara, Interdonato and Tagarelli (2014), who said that social media users tend to press the like button more than writing comments, can also be applied to Instagram influencer posts. Pressing the like button requires less effort and time than commenting on the Instagram post.

The second test for viral intentions considered the statement of Jia et al. (2015), who said that young adults between 19 and 24 years old have a higher intention to like and comment than older adults (25+ years old). But no significant differences for the intention to like and comment between the two age groups were detected, unless for the intention to like the Instagram post with the smoothie. For this product, the young adults were more inclined to like the Instagram post compared to the adults. A smoothie might be more known and popular with young adults. As it is generally a fun product with a good-looking packaging, young adults might be more interested in smoothies compared to adults. So only for the smoothie, and for the intention to like it, we could agree with Jia et al. (2015). However, this could

also be a coincidence. Therefore, we cannot generalize this one specific case and we cannot assume that the fact that young adults have more intention to like and comment compared to adults is always true.

The third additional hypothesis for the viral intentions was to check whether or not the statement of Sheldon and Bryant (2016), that women have more intention to like and comment compared to men, was applicable to Instagram influencer posts. According to them, the reason for this was that women care more about personal relationships. Applied to Instagram, this was the case for the intention to like and comment on the Instagram post with the smoothie, since women tend to do this more. The opposite was found for the Instagram post with the car, as men had a higher intention to like this Instagram post (the difference for the intention to comment was not significant). The Instagram post with the camera showed no significant differences for the intention to like and comment between men and women. These results could be explained by another extra test we executed which revealed that on average, men were more interested in cars compared to women. Women, on the other hand, were more interested in healthy food and drinks and also slightly more into photography and camera gear, compared to men. Hence, we do not support Sheldon and Bryant (2016), because apparently the relationship between the intention to like and comment and the gender depends on the product category.

Furthermore, the next analysis showed that the higher the attitude toward the promoted brand, the higher the purchase intention. So not only a positive effect of the *Abr* on the viral intentions was found, like we previously mentioned, but also on the purchase intention. Thus our findings are in line with other studies, that stated that *Abr* has a positive effect on consumers' viral and purchase intentions (Biehal, Stephens and Curio, 1992; MacKenzie, 1986; Schivinski and Dabrowski 2014). We really wanted to check if these statements also hold true for brands promoted by Instagram influencers, and they do.

Finally, we wanted to clarify the different contradicting assumptions about the impact of purchase decision involvement (PDI) on the relationship between the advertisement and purchase intention and apply this to Instagram influencers. We decided to replace the purchase intention by the influencer credibility in this relationship. This was possible, because influencer credibility is an important factor in explaining the successive behavioural variables, since it positively influences *Aad*, which positively influences *Abr* and this in turn positively influences viral and purchase intentions. So in fact, influencer credibility also indirectly positively influences the purchase intention. We have declared that the interaction effect of the product category on the relationship between the *F/F*-ratio and the influencer

credibility was not significant. So our findings are not in line with Lin et al. (2013), who said that the PDI has a moderating effect on the relationship between the ad and purchase intention. Since the PDI was no moderator in the relationship, we can say that the positive impact of the F/F-ratio on influencer credibility is not differing according to the product category. This means that people apparently do not take the type of product promoted by the Instagram influencer into account when defining whether the Instagram influencer is credible or not, in contrary to the F/F-ratio.

Nevertheless, the main effects of product and ratio were significant on influencer credibility. The results of the significant main effect of the product showed that people perceive the Instagram influencer as more credible when he/she promotes a camera or smoothie compared to promoting a car. The difference between promoting a camera or promoting a smoothie was not significant in defining influencer credibility. People perceive an Instagram influencer promoting a car as less credible, probably because this product is of high value. In order to make a purchase decision, they need more reliable information about it and prefer to search for this information online or elsewhere. Moreover, aside from being an important product, a high involvement product, for example the car, is also a product that has low purchase frequency. So, this suggests that people will not easily fall for Instagram influencers promoting a car and they will not rely on them when making a purchase decision for a car. Thus, influencer campaigns for this type of products will not have a good impact. In contrary, a smoothie is a futile product, something with low value, so the purchase decision is not of big importance and it will not bring risks if a wrong decision was made. Subsequently, for this type of low-involvement products, people will more easily fall for the attempts of the influencer and find him/her more credible. The main effect of the ratio revealed the same effects like the tests for H1, namely that an influencer with a high number of followers to a low number of followees (HL) is perceived as the most credible, followed by an influencer with a high number of followers to a high number of followees (HH) and an influencer with a medium number of followers to a low number of followees (ML). An influencer with a medium number of followers to a high number of followees (MH) is perceived as the least credible.

In order to profile the different respondents, we checked the relationships between the product interest, social media usage and socio-demographic profile of the respondents and how influenceable the respondent is. As already explained, we described someone as 'influenceable' if someone had high viral and purchase intentions and someone who perceived the Instagram influencer as credible. We found these three the most important behavioural variables in our research, because, first of all, according to

Clow et al. (2006) source credibility is a major contributor to the effectiveness of advertisements. The credibility of influencers is found to make them more effective promoters of brand messages (Chu and Kamal, 2008; Ohanian, 1990), as a credible influencer is more effective in influencing attitudes and behavioural intentions (La Ferle and Choi, 2005). Second, viral intention of consumers is an important factor for the success of an online campaign, as these intentions will create extra buzz, brand awareness, consumer interest and product trials (Keller, 2009 ; Kirby, 2006; Petrescu, 2012). Moreover, Goodrich (2011) stated that clicking like or the intention to forward an ad contributes to brand recall. Lastly, purchase intention is often used to measure the effectiveness of social media campaigns (Kapferer, 2008; Keller, 2008; Yoo, Donthu and Lee, 2010). This stage is what advertisers are aiming for and therefore an undeniable goal.

A lot of relationships between the profiling variables and the influenceable variables were found to be non significant. Therefore, we will now only describe the significant relationships. In general, we saw that whether or not being influenceable was significantly positively dependent on having a Snapchat account, on the gender and on the interest in the product category. So, someone who has a Snapchat account is more easily influenced by an Instagram influencer compared to someone who does not own a Snapchat account. Also, females are apparently more easily influenced, as well as someone who has a high interest in the promoted product category. Univariate tests, explained below, showed the specific impacts of these profiling variables on the influenceable variables.

First of all, we could trace that someone who is active on Snapchat perceives the influencer as more credible compared to someone who does not own these accounts. 92.9% of our respondents owns a Snapchat account. So concerning influencer credibility, we could say that people who have an account on Snapchat are more influenceable. This could be explained by the fact that Snapchat like visual, attractive and quick messages. They are attracted to visual images and videos and by looking at a posted image (the Instagram post) they perceive the influencer as credible. Another reason could be that since in practice a lot of people follow influencers on Snapchat, they have the feeling they know them and that they are 'real' friends, because they have an insight in their real life environment. In this way, they may also perceive other Instagram influencers as more credible and trustworthy compared to someone who does not have a Snapchat account. Surprisingly, having a YouTube or Pinterest account was not found to be significant in defining if someone is more easily influenced compared to others.

Secondly, gender has in general also a significant impact on being influenceable. However, no significant effects were found on influencer credibility, or viral intentions or purchase intention in particular. Females are more easily influenced by an Instagram influencer compared to men. This can be explained by the fact that women will probably more easily believe influencers and feel connected with them, as they tend to care more about personal relationships.

Lastly, we saw that someone who has a high interest in the product category (cars, healthy food/drinks, camera gear/photography) perceives the influencer as more credible and has higher viral and purchase intentions compared to someone who does not have a lot of interest in the product category. So we consider a person with a high interest in the product category as being more easily influenced by an Instagram influencer promoting this product category, compared to others who do not have a lot of interest in the product category.

6. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

We studied the impact of the F/F-ratio of an Instagram influencer, on the perceived influencer credibility and on the Aad, Abr, viral intentions and purchase intention of the consumer. Moreover, we tested if different product categories with different levels of purchase decision involvement had a moderating effect on the relationship between the F/F-ratio and influencer credibility. This approach would give us a better insight into the impact of the popularity threshold of Instagram influencers on consumer behaviour.

First of all, an important insight we gave was that the F/F-ratio of an Instagram influencer has a positive impact on perceived influencer credibility. Specifically, an influencer with a high number of followers to a low number of followees (HL) is perceived as the most credible, followed by an influencer with a high number of followers to a high number of followees (HH) and an influencer with a medium number of followers to a low number of followees (ML). An influencer with a medium number of followers to a high number of followees (MH) is perceived as the least credible. This explains that a higher number of followers leads to higher perceived influencer credibility and a higher number of followees to lower perceived influencer credibility.

The second result was that influencer credibility positively influences attitude toward the Instagram post. Subsequently, attitude toward the Instagram post has a positive impact on attitude toward the promoted brand. The next insight was that attitude toward the promoted brand positively influences both viral intentions and purchase intention of the consumer. In addition, we executed some tests about two specific viral intentions, namely the intention to like and the intention to comment on an Instagram post. Our first additional test indicated that respondents have more intention to like Instagram posts compared to commenting on them. The second extra test revealed that there is no significant difference in the intention to like and comment between young adults (19 to 24 years old) and adults (25+ years old). The third extra hypothesis was rejected, as the relationship between the intention to like and comment and gender depends on the type of product.

Moreover, we wanted to check if there are potential links between the interest in the product category, the social media usage and the socio-demographic profile of a person and how influenceable the person is. In sum, someone who has a high interest in the product category, or someone who owns a Snapchat

account, or lastly a female person, is more easily influenced by an Instagram influencer compared to others. These insights can be of a certain added value for the knowledge about consumer behaviour.

Briefly, one of the most important findings was that the F/F-ratio of Instagram influencers positively impacts influencer credibility. Influencer credibility is an important factor in our research, because it positively influences Aad, which has a positive impact on Abr. Abr has in turn a positive effect on the viral and purchase intentions. In other words, all the successive behavioural variables are positively based on influencer credibility. That is why we can base our following arguments on the relationships with influencer credibility as a variable.

In sum, our results present some practical knowledge for managers who are interested in doing influencer campaigns. We would give the advice to these managers to cooperate with an influencer with a high number of followers to a low number of followees (HL) and/or an influencer with a high number of followers to a high number of followees (HH), because these influencers gained the highest credibility. We would strongly discourage to appeal to an influencer with a medium number of followers to a high number of followees (MH), because consumers perceive this type of influencer as the least credible. Our results also indicated that this advice is valid no matter which product type the influencer must promote, because the product category is not a moderator in the relationship between the F/F-ratio and influencer credibility. However, managers must pay attention, because the product category does have a general significant impact on perceived influencer credibility. People perceive the Instagram influencer as more credible when he/she promotes a camera or smoothie compared to promoting a car. In practice, a trend we often see on Instagram is that influencers are promoting healthy drinks. Fit Tea, for example, is an American company who constantly runs campaigns on Instagram with multiple influencers who promote their detox tea (Neal, 2015). We have stated that these type of influencer campaigns promoting a low involvement product (e.g. the smoothie) will have great results, since people will perceive the Instagram influencer as credible and have high viral intentions. An Instagram influencer promoting a car is perceived as less credible, which suggests that people will not easily fall for the attempt of an Instagram influencer who promotes a high involvement product. Probably because the consumer finds this an important product and he/she prefers to search for more information online or ask others, instead of relying on an Instagram influencer to make a purchase decision for this type of product. So although we often see Instagram posts promoting a car or other high involvement products, we state that for this type of product it is not a good choice to conduct an influencer campaign, as it will probably not give good results.

Nevertheless, it can still be a good idea for creating brand awareness, but it will not lead to high viral intentions or purchase intentions.

We can conclude that most of our hypotheses could be confirmed. We believe that these insights will add knowledge to the literature of influencer marketing, and more specifically to Instagram influencer campaigns. In this way, we can share our knowledge with companies and explain them which type of Instagram influencer that they must ideally cooperate with and which type not. Also, we could deduct for which type of products influencer campaigns work better and for which products an influencer campaign is not a good idea.

7. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although our research presented some significant results and a number of insights, some limitations apply to our study.

A first limitation is the online character of the survey. The feeling and the experience that the respondent gets while he/she uses Instagram during his/her free time are different than during the survey. The respondent might be aware of the fact that we measured how influenceable he/she is and maybe that is why the respondent did not indicate his/her real viral or purchase intentions. Because the respondent did not want to show or admit that maybe he/she can easily being influenced. Thereby, other results might be obtained in the real social media environment of Instagram. However, measuring the actual viral and purchase intentions of Instagram users when they see an influencer's post can be complicated.

The second limitation is the fact that our sample particularly consisted of 19-24 year olds. This perfectly corresponded to the actual average age of Instagram users, leading to a high internal validation of our research. But, if we wanted to improve the external validation, we also could have tried to attract more older people to fill out our survey. In addition, a total of 141 respondents, who were randomly divided in the different conditions, completed the survey. At first we thought we obtained more respondents, but apparently a lot of people clicked on the survey link out of interest or did not completely fill out the survey. Despite the fact that this research was conducted with a sufficient number of respondents, a bigger sample would do no harm.

Another limitation could be the choice of products, namely the car, the smoothie and the camera. Although we executed a pretest to know which products were the perfect fit for a low, a medium or a high purchase decision involvement product, a smoothie (or a healthy drink in general) is a product that is often promoted by Instagram users. Therefore, respondents could be more used to Instagram posts with this product compared to the other products and could experience higher viral or purchase intentions for this product. Moreover, an extra test showed that men were more interested in cars, compared to women. Women, on the other hand, were more interested in healthy food and drinks and also slightly more into photography and camera gear, compared to men. As a result, it appears that the smoothie was maybe more appealing to women and the car more to men, even though the pretest showed no differences between purchase decision involvement of men and women for the three chosen products.

Thus, we have to be careful to accept or generalize the significant relationships that made use of the profiling variable gender, because they could simply be explained by the interest in the product category. In this opinion, other, more gender-neutral products were maybe a better choice, for example a TV for the high involvement product, but the results from the pretest revealed that this product did not significantly differ in purchase decision involvement from the camera. That is why we did select the car instead of the TV.

Also, as each respondent got to see three Instagram posts with each time the same questions (to measure influencer credibility, Aad, Abr, viral intentions and purchase intention) in the same order, this could lead to our survey repeating itself too much. The result could be that our respondents did not answer in an honest way the second or third time around when they saw the same questions. However, at first sight this did not seem to be the case.

A last limitation of our survey is particularly about the form of the used Instagram posts. We manipulated the F/F-ratio each time, even though we maintained the same name of Instagram influencer ('Charlie Jones') for each Instagram post, because we did not want to have an extra changing factor. This could have brought confusion to the respondents, because in real social media life an Instagram influencer does logically only have one F/F-ratio. By working with the same Instagram influencer name, respondents could have had the feeling that everything was simulated and that the Instagram posts were no actually existing ones. Also, the description text 'Excited to try out this new car/smoothie/camera!' maybe did not sound so credible or enthusiastic to some respondents, leading to lower influencer credibility or lower viral or purchase intentions. This field of work, namely examining which description text and its connotation have the biggest influence on consumers, can be an idea for future studies.

Another idea for future research could be to examine more in depth the link between the degree or education of a consumer and how influenceable this person is. Maybe someone who did not experience a high education, is more likely to be influenced by an Instagram influencer, because they do not know how to withstand the selling attempts. Although, our results indicated no significant effect of the highest degree on our influenceable variables. However, in fact we could have known beforehand that we could not make valid tests with the highest degree as a profile variable. Because of the manner we asked about their highest degree in the survey, this characteristic could simply be linked to age. For example, respondents with a Master's degree are regularly older respondents. Younger persons, for example under the age of 18, could simply not already have obtained a Bachelor's or Master's degree.

A last idea for future research could be to conduct a similar study with either more than three different products or either just concentrating on only one product. For example, we think that a research about the impact fashion influencers on Instagram have on consumer behaviour, would be really interesting. We did not choose fashion, or make-up or cosmetic products as product category, although we were aware that these products are often promoted on Instagram. The reason for this was that for example people who have a high interest in fashion would experience clothes as a high involvement product compared to someone with a low interest, who would experience clothes as a low involvement product. Also a problem of the preference of high-end, designer, or low-end clothes and brands would occur and we would also have to separate pictures for male and female respondents. We chose the car, the smoothie and the camera because different types of respondents experienced the same purchase decision involvement for each product.

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Appendices

A.1.1 Scales

Scale	Source
Credibility	Ohanian (1990)
Attitude toward the ad	Madden, Allen and Twible (1988)
Attitude toward the brand	MacKenzie, Lutz and Belch (1986)
Viral intentions	MacKenzie et al. (1986) and Alhabash et al. (2013)
Purchase intentions	Baker and Churchill (1977)

A.1.2 Pretest

Dear participant, The following survey attempts to understand purchases of products. Your participation in this study is voluntary and will only take approximately 10 minutes. This research project is conducted by Julie Messiaen for her Master's thesis at the University of Ghent. Your responses to this survey are anonymous and remain confidential. The results of this study will be used for scholarly purposes only and may be shared with University of Ghent representatives. If you have any questions about this survey, please contact Julie Messiaen (Julie.Messiaen@UGent.be). Thank you for your participation.

Prod 1: Assume you are in the market for a new TV.



Q1: Do you think that the various types and brands of TVs available in the market are all very alike or are all very different?

They are alike They are all different

Q2: In selecting from many types and brands of TVs available in the market, would you say that:
I would not care at all as to which one I buy I would care a great deal as to which one I buy

Q3: How important would it be to you to make a right choice of TV?

Not at all important Extremely important

Q4: In making your selection of a TV, how concerned would you be about the outcome of your choice?

Not at all concerned o o o o o Very much concerned
Prod 2: Assume you are in the market for a new camera.



Prod 3: Assume you are in the market for a smoothie.



Prod 4: Assume you are in the market for a new shampoo.



Prod 5: Assume you are in the market for a new car.



Prod 6: Assume you are in the market for a water bottle.



Prod 7: Assume you are in the market for a new watch.



What is the highest degree you have already obtained?

- Master's degree
- Bachelor's degree
- High school degree

What is your age?

- 12-18
- 19-24
- 25-34
- 35-44
- 45-54
- 55+

Please indicate your gender.

- Male
- Female
- I would rather not disclose this information.

Thank you for your participation in this survey. Your answers were properly registered.

A.1.3 Survey

Dear participant,

The following survey attempts to understand social media behavior on Instagram. Your participation in this study is voluntary and will only take approximately 10 minutes. This research project is conducted by Julie Messiaen for her Master's thesis at the University of Ghent. Your responses to this survey are anonymous and remain confidential. The results of this study will be used for scholarly purposes only and may be shared with University of Ghent representatives. If you have any questions about this survey, please contact Julie Messiaen (Julie.Messiaen@UGent.be). Thank you again for your participation.

Do you own an Instagram account?

- Yes
- No

Please have a close look at this Instagram post.



Excited to try out my new car from @CarsonCars #ad

Condition car HH



OR Excited to try out my new car from @CarsonCars #ad OR

Condition car HL

unskilled:skilled (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Q3: How do you perceive this Instagram post?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
unpleasant:pleasant (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
unlikeable:likeable (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
boring:interesting (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bad:good (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tasteless:tasteful (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
artless:artful (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4: How do you perceive Carson Cars?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
bad:good (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
dislike:like (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
unpleasant:pleasant (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
unfavourable:favourable (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5: Indicate how likely you are to execute the following actions.

	Very unlikely (1)	Somewhat unlikely (2)	Neither likely nor unlikely (3)	Somewhat likely (4)	Very likely (5)
I will forward this Instagram post to others. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will recommend this Instagram post to others. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will like this Instagram post. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will share this Instagram post. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will comment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

on this Instagram post. (5)					
I will follow Charlie Jones or Carson Cars on Instagram. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6: Indicate to what extent you agree/disagree with the following statements.

	Definitely not (1)	Probably not (2)	Might or might not (3)	Probably yes (4)	Definitely yes (5)
Would you like to try this car or the brand Carson Cars? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Would you buy this car or another product from Carson Cars if you happened to see it in a shop/online? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Would you actively seek out this car or Carson Cars online/in a shop? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7: To what extent do you have an interest in everything about cars?

- No interest at all
- Small interest
- Moderate interest
- High interest
- Very high interest

Instagram
charliejones
21200 followers 32200 followees



Excited to try this new flavour from @Vsmoothies #ad

Condition smoothie HH

Instagram
charliejones
21200 followers 32 followees



Excited to try this new flavour from @Vsmoothies #ad

OR
Condition smoothie HL

Instagram
charliejones
2100 followers 32200 followees



Excited to try this new flavour from @Vsmoothies #ad

Condition smoothie MH

Instagram
charliejones
2100 followers 32 followees



Excited to try this new flavour from @Vsmoothies #ad

OR
Condition smoothie ML



Excited to try out this new camera from @Shot #ad

Condition camera HH



Excited to try out this new camera from @Shot #ad

Condition camera HL



Excited to try out this new camera from @Shot #ad

Condition camera MH



Excited to try out this new camera from @Shot #ad

Condition camera ML

Indicate how often you use Instagram on average.

- every 5 minutes (1)
- every half hour (2)
- every hour (3)
- every few hours (4)
- once a day (5)
- once every few days (6)
- once a week (7)
- less than once a week (8)

How long do you already own an Instagram account?

- Less than 1 year (1)
- Between 1 and 2 years (2)
- Between 2 and 3 years (3)
- Between 3 and 4 years (4)
- Between 4 and 5 years (5)
- More than 5 years (6)

Do you own an account on any of the following social media sites? Multiple options possible.

- Facebook (1)
- Twitter (2)
- LinkedIn (3)
- YouTube (4)
- Pinterest (5)
- Snapchat (6)
- Other (7)

Do you often request information for purchasing decisions on social media?

- Never (1)
- Very rarely (2)
- Rarely (3)
- Occasionally (4)
- Frequently (5)
- Very frequently (6)

What is the highest degree you have already obtained?

- Master's degree (1)
- Bachelor's degree (2)
- High school degree (3)

What is your age?

- 12-18 (1)
- 19-24 (2)
- 25-34 (3)
- 35-44 (4)
- 45-54 (5)
- 55+ (6)

Please indicate your gender.

- Male (1)
- Female (2)
- I would rather not disclose this information. (3)

Thank you for your participation in this survey. Your answers were properly registered.