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The causes and effects of native advertising clutter in social media

ABSTRACT | Advertising clutter has long been a thorn in the sides of marketers. Amidst the overwhelming amount of advertising messages that consumers are exposed to every day, they struggle to make their own communication efforts stand out. Previous research has examined the effects and causes of clutter in more traditional settings, coming to the findings that clutter can have significant both affective and cognitive effects on consumers, and that clutter itself is attributable to three components; quantity, intrusiveness and competitiveness of advertisements. Looking at unfamiliar brands and focusing on the non-competitive aspect of ad clutter (quantity and intrusiveness), this study investigates similar such relationships but pertaining specifically to native advertising clutter and within social media. This was a quantitative, survey-based study with N = 152 participants. The media vehicle under investigation was Instagram. The stimuli consisted of 4 different "feeds" where the experimental manipulation was the quantity of in-feed ads. The key concept around which we centred our theoretical framework and findings was perceived clutter, a subjective interpretation of clutter. The other parameters investigated were attitude towards ads, attitude to brands, attitude to media vehicle, ad avoidance, brand recall, ad skepticism, and ad relevance. Findings confirm how intrusiveness and quantity of ads dictate perceptions of clutter even for native ads. They further imply that perceived clutter broadly affects consumer perceptions and behaviours, and that the intrusiveness component of clutter in turn could be lowered by more relevant advertising. This has significant implications for marketers and social media platforms alike and suggests that exceptional targeting may help unfamiliar brands overcome the daunting effects of clutter.

KEYWORDS: Advertising, Clutter, Social Media, Native Ads, In-feed Ads, Unfamiliar Brands, Ad Attitude, Brand Attitude, Ad Skepticism, Ad Avoidance, Instagram

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Definitions

Advertisement (ads): A type of marketing communication utilised by firms to sell or promote a product or service.

Advertising Clutter: Used in a marketing context to describe what an excessive amount of advertising is. Commonly divided into competitive and non-competitive dimensions, with non-competitive clutter being further divisible into the two components intrusiveness and quantity of ads.

Native advertising: A type of branded content very common on social media platforms, referring to advertisements present in a format "native" to the vehicle. Typically recognized by its resemblance and merger with surrounding content.

In-feed ad: A form of native advertising characterizable by its particular integration into media content streams.

Medium: The communication mechanism, such as television, radio, or social media, through which marketers deliver a message to its target customers.

Media vehicle*:* The specific medium in which a message is placed, such as a particular TV channel, radio station or social media platform.

Ecological validity: Not innately a validity type, refers to the call for the materials, method and setting of experiments to better reflect and be applicable to real-world conditions.

Noise: That which interferes with the delivery of marketing communication messages.

1. Introduction

Advertising messages are all around us. We encounter them in the subway when we go to work, when we navigate the internet or use a 'free' mobile app, on flyers shoved into our mailboxes or passed out on the street, and in the commercials spliced in to our TV programs and YouTube videos. Although they can be as obvious as a neon billboard in Times Square, they can equally be as subtle as a fruit-shaped logo on your products.

For a long time, we have learned to coexist. With the unprecedented growth of the advertising landscape, however, more and more messages flood our society and gush in to fill the remaining 'white spaces'. The noise that is created effectively drown out any individual communication efforts. To stay afloat, marketers need to use all their cunning.

With the dawn of digitalization, the floodgates have opened once more, providing yet another venue through which marketers can push their content. Unsurprisingly, some consumers shout, "No more!" to the constant blitz of advertisement. But as ads become more personalized, some rejoice at the convenience they bring. Either way, the love-hate relationship between consumers and ads is being strained, and the question on everyone's mind is, how much more advertising can mediums support?

1.1 Background

1.1.1 Advent of the adpocalypse

Advertisements are a given factor of today's day and age. There is furthermore general agreement that the number of advertising messages are continuously on the rise (Grusell, 2012). Although it is difficult to determine exactly how many advertising messages we see per day, estimates peg this number to have been over 5000 in 2014, compared to about 500 in the 1970s (Yankelovich cited by Subramanian, 2015)[1]. More alarmingly, someone born today will have seen over 2 million commercials before the age of 65, the equivalent of a 2 yearlong binge of advertising content (Al Shuaili, 2016). This phenomenon of high ad saturation in our society has been embodied by the term *advertising clutter*. The figures are however all subject to change depending on where you reside; for example, in the Philippines, the level of ad

[1] Note: these figures reflect the broadly encompassing definition for advertising exposure rate adopted by the studies, which extends in this context to also include brand exposures, such as product labels, logos, signs, etc. (Media Dynamics, Inc cited by Johnson, 2015)

saturation is on average 4 times higher than in Ireland (Al Shuaili, 2016). It is probably safe to say Times Square is much worse.

Needless to say, consumers are not capable of either paying attention to or processing all these ads, and if they were they would undoubtedly have time for little else (Rosengren, 2008). They are required to filter out the excess visual and aural stimuli—which not seldomly is composed of marketing messages targeted at a different demographic altogether (Rumbo, 2002). Less than 25% of ads we are exposed to are in fact remembered, and this is in and of itself likely to be an understatement (Kumar, 2000). Moreover, many consumers are simply irritated by the high level of clutter (Nan and Faber, 2004; Ha and McCann, 2008; Grusell, 2012). It has become common practice for consumers to cope with the plethora of ads by simply diverting their focus to other activities or content. During a TV commercial break people can leave the room or start talking with friends, they may also change channels or switch to consuming media on their mobile device instead. Today, with the shift towards subscription-based, commercial-free services, advertising avoidance has made even more headway (Fulgoni, Pettit and Lipsman, 2017).

The objective of marketing communication is to shape consumers' brand knowledge, either through increased awareness or by improving associations and perceptions about the brand, with the ultimate goal of getting consumers to purchase the marketed brand (Rossiter Percy, 1997; Percy and Elliot, 2005). The continuous upsurge in advertising clutter hampers the achievement of this objective since the noise it produces makes it more difficult for individual advertising messages to be heard. The direct effect of this noise combined with the indirect effect of evasive consumer behaviour can thus make salience—let alone engagement—a seemingly unattainable goal, especially for smaller, unfamiliar brands (Al Shuaili, 2016).

Hoping to compensate for this and break through the clutter, advertisers respond by further increasing spending and pumping out more advertising messages (Rossiter and Percy, 1997; Al Shuaili, 2016), effectively exacerbating the problem and contributing to a self-sustaining spiral. As conventional means no longer get the job done, more creative and aggressive tactics are similarly adopted to reach end consumers (Speck and Elliot, 1997; Subramanian, 2015). Notably, with even higher levels of clutter, avoiding ads takes more effort and causes more frustration for consumers. Rumbo (2002) refers to the difficulty of resisting persuasion in face of advertisement's occupation of cultural spaces in society.

When advertisers compete amongst themselves for consumer attention, the resulting clutter undermines their respective advertising effectiveness (Al Shuaili, 2016). Conversely, a lower overall clutter in the market would increase the impact of advertising messages, yielding

a higher return on investment (Rotfeld, 2006; Subramanian, 2015); all parties gain if all advertising is reduced. Trying to circumvent the issue, firms have meanwhile begun seeking out means of marketing other than advertising, such as public relations (PR) or sales promotions (Rosengren, 2008).

The increasing saturation of ad in relation to non-ad content is explainable through basic media economics. As mass media has deteriorated into more segmented, targeted alternatives, the average audience has proportionately diminished. To make up for this, media providers need to sell additional space or time to maintain profitability (Subramanian, 2015). However, these same providers have a dual responsibility. Not just do they need to cater to the firms who buy advertising space, but also to the consumers of the media who have certain expectations on quality, and to whom advertisements are simply the string attached to consumption (Ha and McCann, 2008). For media providers to receive continued support from both parties (which in the case of consumers may be both monetary and how they indirectly attract advertisers) and maximise the value of the media service or product, they must appropriately balance the space allocation of advertising and editorial content (Al Shuaili, 2016; RealEyes and FWC, 2018); for example, in magazines the ideal distribution is found to be half-half (Ha and McCann, 2008)

1.1.2 Dawn of digitalization

Fully saturated with advertising messages, mediums such as TV, billboards and radio offer fierce competition, and so media space can be priced very high. Furthermore, young individuals who grow up using online media (e.g. Generation Y and Generation Z), find much less appeal in radio or prime-time television, and equally so have become more used to tuning them out. On the other hand, online advertising can be accepted with open arms as it has potential to be personalised to be more relevant and fun (Subramanian, 2015).

This has paved the way for the propagation of advertisement in online media. In the US alone, Internet advertising revenues reached a record high 40.1 billion USD in the first half of 2017, up 22.6% from a year before. At the same time, social media advertising revenue has skyrocketed to 9.5 billion USD, an almost 800% increase since the first half of 2012 (IAB, 2017). Advertising in social media has widespread recognized effects over more traditional media, one of the most significant being its relatively low cost per impressions (Lyfe Marketing, 2018). Meanwhile, there has been a significant movement from desktop to mobile platforms, the latter for the first time surpassing the other and attaining a 54% share of online advertising revenue in 2017, comparable to a 7% share in 2012 (IAB, 2017). Apart from mirroring the trend of worldwide usage (StatCounter, 2016), this shift to mobile is furthermore

motivated by marketers due to its targeting capabilities, reach, engagement, cost effectiveness, and its proven effectiveness (Fulgoni, Pettit and Lipsman, 2017).

Nonetheless, the digital medium is not without clutter, and so have brought on their own share of advertisement avoidance. In face of a mass adoption of ad-blocking software, marketers again tweak their business model to try and work their way around the resistance (Marshal, 2015; Fulgoni, Pettit and Lipsman, 2017; Huang and Huh, 2018).

An important distinction between the online and offline environments is the conceptualisation of the consumers of media. Online, these consumers are referred to as "users" as opposed to an "audience", reflecting their active and more goal-oriented consumption and use of the medium. This is opposed to an "audience" primarily used to depict the more passive recipients that are consumers of offline media content, such as TV or radio. Still, these divisions sometimes blur in the online world; online media vehicles may in fact allow for both self-paced consumption and a certain degree of captivity (Ha and McCann, 2008).

1.1.3 The concept of clutter

Paying homage to Rosengren's (2008) efforts in developing a shared language for discussion of clutter, this paper likewise draws upon a variety of literatures to attempt as comprehensive of a conceptualisation of the term as possible.

Both academics and practitioners employ clutter to denote a large or excessive amount of advertisements in a medium (Speck and Elliot, 1998; Ha and McCann, 2008; Rosengren, 2008). With advertising space high in demand, media providers are incentivized to cram in as much advertisement as possible. The level of advertising eventually reaches a breaking point, where it exceeds that which is desirable or even tolerable by consumers and so becomes clutter. It is perceived to be undesirable not only to consumers, but by consequence also advertisers and media providers (Ha and McCann, 2008).

Advertising clutter can also be operationalized as a state of high intrusiveness and a high quantity of advertisements in a media vehicle (Ha and McCann, 2008). In fact, these are the two components which effectively make up the non-competitive dimension of advertising clutter (Kent, 1993) and can be defined more specifically: *Quantity* concerns the physical number of ads present as well as the relative proportion of ad space in the media vehicle. Clutter quantity has a cumulative and negative effect on consumer attention and processing; too many ads will overload consumers with information (Ha, 1996; Al Shuaili, 2016). *Intrusiveness* represents the extent to which advertisements interrupt the flow of editorial content in the

media vehicle. Consumers of the media might react negatively to these intrusions and consciously try to resist persuasion or altogether avoid the ads (Ha, 1996; Rosengren, 2008).

There rests, however a third component to clutter, that is the competitive dimension of advertising clutter: *Competitiveness* or competitive advertising interference (Kent and Allen, 1994), represents the degree of similarity between ads from brands competing in the same category, and the proximity of these ads in relation to one another in the medium (Ha, 1996; Kent and Kellaris, 2001). The closer the resemblance or placement the more likely it is they will breed confusion amongst consumers (Rosengren, 2008).

1.4 Purpose

This paper aims to contribute to the topic that is advertising clutter, by building on previous studies on more traditional mediums and expanding into the context of social media and the relatively new phenomenon of *native advertising*—referring to ads existing in a format inherent or "native" to the vehicle, typically characterized by their resemblance and seamless merger with the rest of the editorial content (Fulgoni, Pettit and Lipsman, 2017).

The study more specifically investigates how increases in quantity of advertisements and the intrusiveness aspect of advertising relate to perceptions of clutter, and how this in turn affects consumers both affectively and cognitively. These effects will be further examined by the representative variables; attitude towards ads, attitudes towards brands, attitudes towards the media vehicle, ad avoidance and finally brand recall. Variables that may affect intrusiveness will also be investigated in search of other relevant insights. With the aid of our findings, we hope to update and enrich the current literature and add to the framework that is advertising clutter, as well as shed some light on this niche. We also seek to provide practical insight for media providers and marketers.

1.5 Delimitations

As discussed, clutter is made up of the three components quantity, intrusiveness and competitiveness, which literature also has compartmentalized into two other dimensions, non-competitive and competitive advertising clutter. This study will focus solely on non-competitive advertising clutter, thus including the quantity and intrusiveness aspects. The competitive aspects of clutter are outside of the scope of this study. Consequently, efforts are made to keep competitiveness as controlled and non-existent as possible.

To narrow our study further, we decided to look specifically at weak—as opposed to strong—brands. Other researchers have used several different proxies to denote these two terms. Most commonly they are explained using outcome-oriented measures such as market share, or through *brand familiarity* (Keller and Hoeffler, 2003) which refers to the amount of interactions that the consumer has accumulated with the brand (Alba and Hutchinson, 1987). This paper adopts the latter, i.e. our investigation exclusively examines *unfamiliar brands*.

Our motivation for this choice is twofold. According to literature, unfamiliar brands are harmed more by clutter than familiar brands and must work harder to overcome it (e.g. Kent and Allen, 1994; Kent and Kellaris, 2001; Al Shuaili, 2016). This should yield more discernible results. Al Shuaili (2016) emphasizes that one of the major reasons for this discrepancy is that unfamiliar brands have issues with distinguishing themselves from competitors, especially if these are familiar brands. Secondly, as unfamiliar brands struggle more with breaking through clutter, this means that insight into this area is more interesting and beneficial for practitioners.

Lastly, this paper aims to look at a particular type of native advertisement, in-feed ads. In-feed advertising is one of the most effective and promising manifestations of native advertising (IAB, 2015; Fulgoni and Lipsman, 2014). In-feed ads are designed to be interspersed throughout the platform's natural activity stream, mirroring the underlying format and blending in with the rest of the content (Murphy and Schram, 2014).

1.6 Research 'White Spot'

Despite the issues of advertising clutter being a hot topic of discussion (Pollack, 2017; Li, 2018; Sound Publishing, 2018), it has been generally quite sparsely covered by research (Nan and Faber, 2004; Tellis, 2005). These latter sources may be quite dated, but although recent years have produced more time-relevant studies (e.g. Al Shuaili, 2016; Fan, Lu and Gupta, 2017; Fulgoni, Pettit and Lipsman, 2017), there has been—to the best of our knowledge—no comprehensive framework developed to thoroughly conceptualise or provide solutions for advertising clutter. Moreover, there appears to be very limited research on consumer reactions on clutter in the context of social media and in-feed advertisement (Fan, Lu and Gupta, 2017). In-feed ads are a promising-looking form of native advertising, slowly taking over the online scene (Murphy and Schram, 2014; Smith, 2014; IAB, 2017). This makes it an interesting and significant topic for investigation. This thesis attempts to fill this void in the literature, and by building on the shoulders of giants, act as springboard for further research in this relatively uncharted terrain.

Furthermore, this thesis looks at non-competitive advertising clutter; which could be academically more useful as, historically, competitive advertising clutter has received more focus (Rosengren, 2008). Most previous studies have also examined ads in isolated settings (Tellis, 2005) in terms of *absolute* effectiveness (Nan and Faber, 2004), which is counterintuitive since ads exist in mediums full of both other ads and non-ad content, and consumers consider brands that are superior *relative* to other brands. In fact, advertising theories looking to be backed up empirically in a non-cluttered setting may not be externally valid (Nan and Faber, 2004). On this same note, although the common experimental approach to advertising research offers causality, it may lack real-marketplace relevance and be unable to hold up in more complex settings (Tellis, 2005). Scholars everywhere call for more realistic, ecologically valid approaches to marketing communications (Dahlén, 2005; Tellis, 2005; Rosengren, 2008). This trade-off of control for ecological validity is embraced by this study and is a reason for why it not only is interesting, but relevant to the academic scene.

1.7 Practical Relevance

Every year, firms all around the world invest substantial amounts into advertising their brands. In Sweden during 2017, advertising spending totalled 78,2 billion SEK (8,8 billion USD), a 5.5% increase from 2016 (IRM, 2018). With such large investments it is important that they pay off. Advertising clutter thus has important real-life implications which motivate its study. The (at the time) largest radio station in the US in 2004, decided to shield itself from too high levels of clutter by setting a ceiling for accepted advertising (Hernandez cited by Ha and McCann, 2008). In this thesis we are open to discovering a similar such threshold but pertaining to social media, which may aid platforms to make these sorts of decisions in due time.

On the growing digital scene, ad clutter is becoming a similar conundrum. According to multiple studies done in 2016 (eMarketer, 2016), clutter was the biggest hindrance to multi-screen digital advertisement.

The increasing popularity of social media makes it a fitting target for investigation. Today 94% of adults have at least 1 social media account on which they are active. Moreover, a third of all time spent online is on social media. For “digital consumers” this amount averages at nearly 2 hours a day, with the highest values being for individuals between ages of 16 and 24 (GWI, 2016). This goes to show just how fruitful targeting through social media channels can be and forecasts their future importance for marketers.

2 Theoretical frameworks

In the following section, relevant theoretical background and past research pertaining to advertising clutter is acknowledged and used to develop hypotheses specific to this study and its delimitations; that is native non-competitive advertising clutter with unfamiliar brands in the context of social media.

2.1 Theoretical background

An increasing quantity of advertisement can initially be something beneficial for social media providers as it primarily constitutes their main source of revenue. However, as the density of advertisements surpasses a certain threshold and user support declines, both ad revenue and user base may drop.

The general belief by advertisers and the premise on which this paper is grounded is that, in the cluttered environment that ensues, advertisements are given less attention because (1) consumers are irritated by the advertisements and avoid them (2) due to limited memory capacity consumers won't be able to remember the ads. This is a problem for both marketers and media providers, as firms are unable to get their message across.

Clutter can be conceptualised further across different levels of aggregation. On the highest, most encompassing level is *societal* clutter, which refers to the total amount of advertising messages the average person is exposed to (Rosengren, 2008). Regardless if marketeers succeed in finding new channels that are sparse in advertising, through which they can effectively communicate with their target audience, societal clutter cannot be evaded and will add on and compete with any existing message for the limited attention of consumers (Dahlén, 2006; Rosengren, 2008). *Media* clutter denotes all advertising messages within a specific media vehicle and is more manageable from an advertiser's perspective, who through careful media planning can avoid the most competitive channels (Kent, 1993; Rosengren, 2008) Finally, the narrowest conceptualisation is *immediate* clutter, which concerns advertising messages in close proximity to one another, e.g. in the same ad break on TV. Here control is once again limited, as advertisers are mostly unable to influence what other brands are advertised in the same space or time slot (Rosengren, 2008).

2.2 Quantity of ads and perceived clutter

Quantity of ads can be used as an objective measurement of the amount of advertising clutter, typically compared in relation to the average or norm (current or historical) for the medium (Ha and Litman, 1997; Ha and McCann, 2008). More frequently however, clutter is treated as a subjective phenomenon, reflecting the density of advertisements as interpreted by consumers. This variant refers to what is termed *perceived* advertising clutter and assumes that consumers believe amount of advertising to be excessive (Ha, 1996). It is also this term which will be used to capture advertising effects in this study.

As perceived clutter is influenced by individual differences outside of the control of advertisers or media providers, it will not necessarily resemble its objective counterpart (Ha and McCann, 2008). However, intuitively, and supported theoretically by Ha and McCann (2008), the sheer number of ads still affects the perception of ad clutter. We therefore hypothesize the following:

H1: Quantity of ads is positively related to perceived clutter in social media.

2.3 Memory effects and brand recall

For marketers to succeed in their marketing communications, they require for consumers to pay attention to their messages and remember the brand and offering which were included. However, clutter severely constrains such consumer abilities. This is partially explainable by information theory. All individuals have a limited capacity for processing information; pertaining to attention, comprehension, and future recall. Consequently, they only attend to a select set of signals in their surroundings. Individuals have little interest or ability to process the other signals, which constitute noise.

Selective attention theory more specifically posits that our selective attention is an innate protective mechanism that ensures our limited attentional resources are efficiently allocated to our needs. It implies that consumers choose to ignore advertising when these resources are reserved for non-advertising content or if the ads lack relevance (Ha and McCann, 2008).

Another, overlapping school of thought is overload theory, which states that—given our processing constraints—an excessive number of ads will overload consumers, thereby decreasing the chance of any message being processed let alone remembered, and hence reducing the individual effectiveness of each ad. (Nan and Faber 2004, Riebe and Dawes, 2006). Processing has an opportunity cost; intake of one piece of information will occur at the

expense of another (Ha and McCann, 2008). It is particularly difficult for consumers to remember product and brand information originating from ads of new brands situated in advertising-dense mediums. It is also possible that this is a contributing factor the high failure rate of new products (Kent and Allen, 1994).

Findings show that a greater number of advertisements will generally result in a lower brand recall (Ha and McCann, 2008). Similarly, clutter has been found to decrease attention, memory, recognition and cognitive responses amongst consumers (Nan and Faber, 2004). Considering these findings, and the theory presented above, we also hypothesize that:

H2: Perceived clutter is negatively related to brand recall in social media.

2.4 Ad, brand and media vehicle attitudes

Advertising clutter may have a noteworthy impact on consumer attitudes, including but not limited to those towards ads, brands, and the medium which is perceived as "cluttered". Seeing too many ads may, for instance, cause annoyance amongst consumers (Nan and Faber, 2004). Kent (1993) found links between quantity of ads and ad likeability and persuasiveness. Ha and McCann (2008), however, interestingly suggests that objective measures of quantity of advertising alone is insufficient to create any such negative effects, but rather that it needs to be mediated by perceived clutter, applicable to both on- and offline media. This is since perception of non-competitive clutter is dependent not solely on quantity, but its other component, intrusiveness.

According to the findings presented by Speck and Elliot (1997), perceived clutter has significant effects on several different attitudes pertaining to both advertisements and the media vehicles in which they are displayed (which in their study were TV and magazines). In more detail, they found that an increasing amount of perceived advertising clutter eventually decreased attitude toward the media vehicle, ultimately even impacting its usage. If the clutter got too high users would opt out in search for better sources of entertainment or information. Ha and Litman (1997) likewise discovered that high advertising clutter levels have a negative effect on magazine circulation, warning that less successful magazines are most susceptible to this effect. Accordingly, we hypothesize:

H3a: Perceived clutter is negatively related to attitude towards ads in social media.

H3b: Perceived clutter is negatively related to attitude towards media vehicle in social media.

It is neither unreasonable to believe that any negative (or positive) attitude effect may also carry over to the brands:

H3c: Perceived clutter is negatively related to attitude towards brands in social media.

2.5 Intrusiveness

In addition to the quantity of advertisements in a medium, Ha (1996) emphasizes the role of intrusiveness in affecting perceived advertising clutter, particularly *perceived* intrusiveness, since to achieve a subjective interpretation of clutter, one most also have a subjective interpretation of the level of intrusiveness. Perceived high clutter is essentially a consumer reaction towards too much or too intrusive advertising (Rosengren, 2008). What is excessive in the minds of consumers is dependent on the type of media (Elliot Speck, 1998), and it is also relative to the other available media vehicles in that medium (Ha and Litman, 1997).

Intrusiveness is created when advertisement exposure is forced upon consumers, as opposed to consumers seeking it out for themselves to educate themselves about a product or brand (Ha, 1996; Ha and McCann, 2008; Sara Rosengren, 2008). There exists a grey area, however, where consumers did not desire advertisement but found it useful or relevant nonetheless.

Intrusiveness of ad clutter can more specifically be explained from *interruption* or *task interference*, which measures the degree to which an ad is perceived as disruptive as opposed to supplementary information (Ha and McCann, 2008). Irritation caused by advertising clutter is for example most prevalent when the media consumption can be described as disrupted by the ads (Rosengren, 2008). This disruption may in turn originate from various places, including but not limited to, in different contexts; the length, frequency, placement, grouping, and relevance of ads. Whereas the disruptiveness of commercial breaks in TV can be perceived as rather high, this issue is not as prevalent in magazines due to consumer control over ad exposure (Speck and Elliot, 1997). Social media may fit in somewhere in between; but specifically pertaining to in-feed ads, the way they are made to seamlessly blend with the rest of the feed means that they are in general perceived as less intrusive than other types of ads (Mane and Rubel, 2014). Still, we hypothesize:

H4: Intrusiveness is positively related to perceived clutter in social media.

2.6 Ad relevance

A study by Grusell (2012) revealed that people are more positively disposed towards advertising that is relevant to oneself. Grusell suggests that ads associated with our personal interests no longer are perceived as merely ads, but rather as information that we wish to take part of. Consumers might in fact appreciate certain advertisements to the extent they are no longer perceived as intrusive (Ha, 1996). The type of medium can be a contributing factor; Grusell (2008) found that advertising was more welcome in newspapers and movie theatres than for example on television or on the internet.

Nevertheless, thanks to the internet in conjunction with other technological advancements, marketers can access collected user data which reveal these interests, and so can produce personalize ads that fulfil this criterion. Due to the context of this thesis (social media) then, we expect:

H5: Relevance of the ads is negatively related to intrusiveness in social media.

2.7 Ad avoidance

In face of intrusive and large amounts of advertising consumers may opt to filter out some of the excess clutter so as to prevent being oversaturated; Rumbo (2002) alludes to the preservation of the sovereignty of one's *psychic space*. This could entail avoiding some or all ads altogether. From a consumer perspective, avoidance decreases exposure to the undesirable content (ads), simultaneously increasing their exposure to the other (non-ad) content they find desirable and deserving of their limited attention resources (Speck and Elliot, 1997). Ad avoidance has additional roots in reactance theory. Individuals who feel their freedom is threatened or violated by the intrusion of these ads might be encouraged to resist persuasion as a form of protest (Ha, 1996; Ha and McCann, 2008).

Consumers have always found ways to avoid advertising messages, and as discussed in the introduction, new ad-blocking software and subscription-based services have made this increasingly possible. This is a very real threat to advertisers. Ads that are avoided will evidently not contribute to brand saliency, nor to any positive associations or perceptions towards the brand (Rossiter and Percy, 1997). Ad avoidance is particularly prevalent in context of television, in contrast to magazines (Speck and Elliot, 1997). Again, social media likely fluctuates between the two.

Further, the means of avoidance are also subject to change depending on medium; *banner blindness* is a concept that comes from the online environment and denotes how consumers may choose to avert or avoid fixating their gaze on anything that resembles an ad on a website (Cho and Cheon, 2004).

In accordance with findings by Speck and Elliot (1997) and Cho and Cheon (2004) that perceived clutter leads to ad avoidance, we also hypothesize:

H6: Perceived clutter is positively related to ad avoidance in social media.

2.8 Negative attitudes towards advertising

While consumers may embrace advertising as part of their media experience, they may also be more negatively predisposed to advertisement, so much so that they find all ads to be intrusive—no matter how small, few, short or discrete (Rosengren, 2008). Calfee and Ringold (1994) discovered that an approximate 70% of consumers believed advertising to be untruthful and looking to trick them into buying unnecessary things. A negative attitude towards advertising in general, including advertisers' motives or claims, has been conceptualised in literature through ad skepticism (Nan and Faber, 2004; Ha and McCann 2008).

Ad skepticism is a reflection of our values; consumers who, for instance, value the past and tradition are much more negative towards advertising than others (Ha and McCann, 2008). Hence it may be picked up by socialization through parents, peers and even mass media (Boush *et al.*, 1994; Nan and Faber, 2004). Ad skepticism can be further explained with the aid of the Persuasion Knowledge Model (PKM). This model posits that consumers gain insight into advertiser persuasion from many social interactions and consumer experiences, only to access this intel when processing and responding to advertisement. Ad skepticism can thus be learned and alter how consumers react towards persuasive efforts (Nan and Faber, 2004).

An individual negatively inclined towards advertisements will generally give them less attention (Mehta, 2000), and actively make choices that oppose them; in Sweden it is estimated that, of the population living in the larger cities, 28% have a "No Advertising Please" message over their mailbox (Grusell, 2006). The same individuals tend to be less influenced by ads relative to those indifferent or more positively disposed, making it more difficult for marketers to create brand perceptions and associations (Rossiter and Percy, 1997; Mehta, 2000).

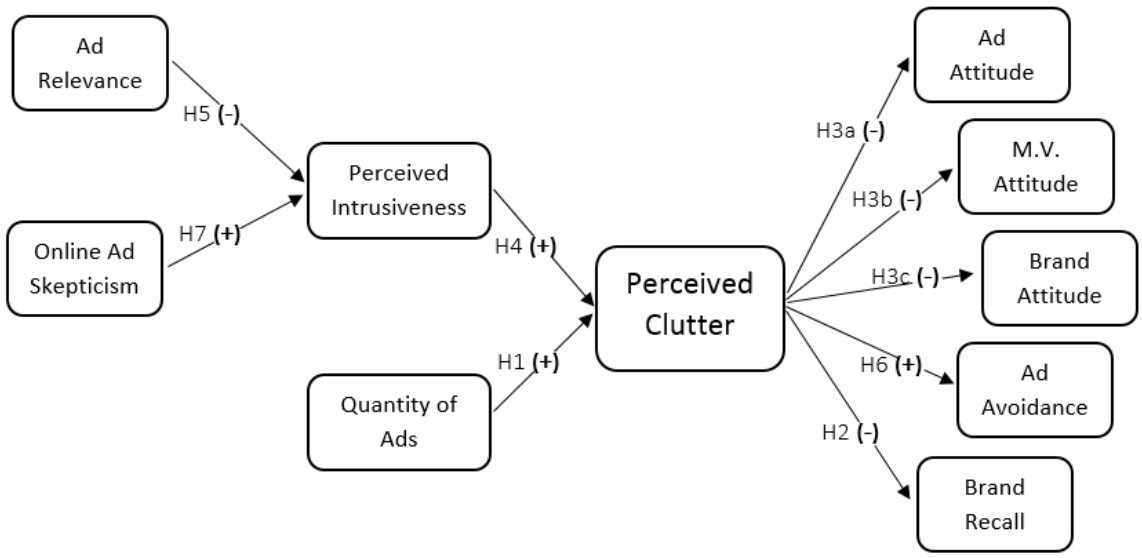
Ha and McCann (2008) found that perception of clutter is dependent on attitudes towards advertising in general and to explicit media contexts. In this study we are interested in any preconceived general, negative attitude in an online setting, which we decide to conceptualise

through *online ad skepticism*. Additional studies connect ad skepticism with finding advertising to be interfering, bothersome and invasive (Rosengren, 2008). This relationship seems to work both ways; advertising clutter also has the capability to breed skepticism (Grusell, 2008), especially over time. This is based on *learning theory*, perceived clutter causes irritation, and each time consumers are irritated it becomes more probable that they will be negatively inclined towards ads in general or at least in that context (Speck and Elliot, 1997). We hypothesize that:

> **H7:** Negative attitude towards online ads in general (online ad skepticism) is positively related to intrusiveness in social media.

Figure 1: Theoretical model including hypothesises

A conceptualisation of the above-discussed theory.



3 Method

In this section of the thesis pre-studies, scientific approach, validity checks and statistical methods will be presented.

3.1 Method overview

The way of testing our hypotheses was through survey-based experimentation. The main study employed a quantitative method. For context purposes; this consisted of exposing respondents to 4 different social media feeds (1 each) with various quantities of ads. To ensure homogeneity

in the sample group, only Swedish student participants were used (Calder et *al.*, 1982). People who took part in any pre-study was excluded from taking part in the main study.

3.2 Further delimitation - choice of medium

The media vehicle in which we decided to conduct our study was Instagram, a Facebook-owned social-networking service and application or 'social media platform, used for posting pictures and videos (Wikipedia, 2018). In Sweden today, Instagram has the potential to reach 4 600 000 users in the age group 18 to 65+ which is comparable to the Facebook platform having a reach of 6 300 000 users (Facebook, 2018a). Thus, it is natural that companies want to market on this platform.

Instagram further utilises the native, in-feed ads typical to social media, and it has in recent years introduced more and more ads (e.g. Wagner, 2016). It is also still relatively new and unexplored within the field of clutter. Collectively, this makes Instagram a prime candidate for being the media vehicle subjected in our clutter studies, with good potential for our findings to be useful for marketers and media providers across other social media platforms. A fictive platform could equally have been developed and could have been motivated since research has shown that new, less successful media vehicles are more vulnerable to, for instance, adverse attitudinal affects (Ha and Litman, 1997), likely due to lower brand equity. In other words, theory supports stronger or more noticeable effects in our results. This would however jeopardize the ecological validity of the study, since—if respondents cannot believe the feed, they might be unable to convey honest reactions towards clutter.

We further restricted our study to the "Home Feed" of the Instagram application, and not for example the "My Story" component, a different type of media with different functions which will likely generate different reactions towards clutter. We also restricted both ad and non-ad stimuli to single pictures only. Equally, the type of ads was constrained to the "sponsored" ads that like clockwork appear in the feed and controlled to exclude any directly or indirectly sponsored advertising by media influencers.

Advertising on Facebook and Instagram is done through a tool called Facebook Ads Manager and this relatively new way of advertising is gaining in popularity with advertisers. In the current version of Instagram, there is an ad space after every five user posts in the home feed, which marketeers have an opportunity to use for their marketing communications. This ad space created is constantly being bid for on an auction (Facebook, 2018b). If Facebook in

the future decides to sell more advertising on Instagram, this study could further prove useful in hinting to marketers how users react to an increased quantity of ads in their Instagram feed.

3.3 Pre-studies

3.3.1 Pre-study 1 - gathering information for stimuli

A qualitative pre-study was launched to investigate the qualities pertaining to both the ads and the user-posted (non-ad content) present in the Instagram feed. The aim was to use this knowledge to create realistic stimuli for our treatments. In a focus group, 10 participants were initially presented a large amount of screenshotted Instagram posts to brainstorm on a common ground for student preferences in terms of the accounts they follow (are subscribed to). They were prompted to screen for variables such as relevance and non-offensiveness. The participants were composed of equal number male and female to try to get an equal, gender-neutral mix of content. This screening process provided us with 15 optimal posts to use in our experiment. The same process was then repeated using the same focus group, but for ads, which yielded around 30+ ads which passed on to Pre-study 2.

3.3.2 Pre-study 2 - checking for unfamiliarity

It has been suggested in previous studies that advertising for familiar brands may not work in the same way as advertising for unfamiliar brands (Machleit, Allen and Madden, 1993). This pre-study was meant to in advance control for unfamiliar brands. It consisted of showing 10 people 30+ different ads taken from Instagram that we believed to have low familiarity. To determine familiarity we screened for exposure, knowledge and ownership of the brands, as it is commonly conceptualised (Keller and Hoeffler, 2003). An unfamiliar brand is rated very low in all three regards.

Out of 10 respondents, none had previous ownership or knowledge of any of 7 brands. Of these brands, only one had been recognized and by only one of the respondents. These 7 brands were hence utilised to create the stimuli in the main study (see 10.1 in Appendix).

3.3.3 Pre-study 3 – ‘look and feel’ tests

The final pre-study conducted consisted of 10 participants taking the survey. Participants were asked to “think out loud” and voice their opinions or concerns on the questions and the stimuli. For participants to not influence each other’s responses, the surveys were taken separately. We

screened for comprehension of questions, and again for non-offensiveness and relevance of feed-related content (both ad and non-ad). Participants were asked to take the survey on different devices to ensure the surveys multi-compatibility. After minor improvements to the survey, enabled by the feedback, all collected data in Qualtrics was cleared.

3.4 Main study

3.4.1 Investigated variables

Quantity of advertisements

The manipulated variable in this experiment was the quantity of ads the respondents were exposed to. It was initially recorded as a variable named 'feed type' with values 1, 2, 3, and 4 after the treatment received through the randomizer. These values were converted to the quantity of ads the feeds contained, 1, 3, 5 and 7, respectively, to calculate our results.

Perceived clutter

Respondents was asked*: "regarding the amount of ads in the feed, I found them:"* where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scales: *"(1)excessive - not excessive(7)", "(1)more than it should be - about the right amount(7)"* and *"(1)too much space is devoted to ads - too little space is devoted to ads(7)".* These parameters were derived from Ha's (1996) study and from Speck and Elliot (1997). The responses to these questions were compiled into an index with the corresponding values 1-7, where 1 signified a low perception of clutter, and 7 signified a high perception of clutter (note that the scale had been inversed). The Cronbach's alpha between the three questions was 0.87.

(Perceived) intrusiveness

Intrusiveness was measured subjectively with interruptiveness as a proxy, as supported by literature (e.g. Ha and McCann, 2008). Values were derived from three representative questions, as used in Speck and Elliot's (1997) study; asking if *"ads broke up the feed", "ads disrupted the flow of the feed"* and *"ads divided the feed into many parts".* Respondents rated their answer on a 7 point Likert scale with the following adjectives pairing the end points of the scale *"(1)strongly disagree - strongly agree(7)"*. An index for intrusiveness was computed using these three parameters. The Cronbach's alpha between the three questions was 0.91.

Brand recall

Brand recall was measured with the question: *"In the feed you were shown an ad for a language learning application, what was the name of the company advertising this? (If you don't remember just write: 0)"* The variable was recorded as 0 for a wrong answer and 1 for a correct one, giving us a numerical variable for measuring brand recall.

Ad attitude

To measure attitude towards advertisements a focal ad was used. Respondents were asked: *"How would you describe your feelings towards the WordDive ad?"* Where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scales*: "(1)bad - good(7)", "(1)negative - positive(7)"* and *"(1)not likeable - likable(7)".* These are standard measurements utilised through literature to capture attitude (e.g. Åkestam, Rosengren and Dahlen, 2017). The Cronbach's alpha between the three questions was 0.92.

Brand attitude

To measure brand attitude respondents were asked: *"How would you describe your feelings towards the advertised brand(s) shown in the feed?"* Where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scales: *"(1)bad - good(7)", "(1)negative - positive(7)"* and *"(1)not likeable - likable(7)".* The Cronbach's alpha between the three questions was 0.95

Attitude towards media vehicle

To measure attitude towards the media vehicle (Instagram) respondents were asked *"What is your overall attitude towards this version of Instagram?"* Where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scales: *"(1)bad - good(7)", "(1)negative - positive(7)"* and *"(1)not likeable - likable(7)".* The Cronbach's alpha between the three questions was 0.98.

Ad relevance

To measure this variable respondents were asked: *"regarding the advertisements I found them:"* Where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scale: *"(1)Not at all relevant - Very relevant(7)"*.

Ad avoidance

To measure ad avoidance respondents were asked in regard to the advertisement: *"I immediately scrolled past the ads", "I ignored the ads"* and *"I avoided the ads"*. These questions were used to capture ad avoidance in Speck and Elliot's (1997) study. The respondents rated their answers on a 7 point Likert scale in each case with the following adjectives pairing the end points of the scale: *"(1)Strongly disagree - Strongly agree(7)".* The Cronbach's alpha between the three questions was 0.89.

Negative attitude towards online advertisements in general (online ad skepticism)

To measure online ad skepticism the question *"How would you describe your feelings towards online advertisements in general?"* was used, where the respondent rated their answer on a 7 point bipolar scale with the following adjectives pairing the end points of the scales: *"(1)bad - good(7)", "(1)negative - positive(7)"* and *"(1)not likeable - likable(7)".* The lower the attitude towards online advertisements in general, the more negative it is or the higher the online ad skepticism is, where (1) is maximum online ad skepticism. The Cronbach's alpha between the three questions was 0.96.

3.4.2 Survey design

Qualtrics was used to create the survey. The full length and questions used in the survey can be found in 10.2 in Appendix. The survey was optimised for mobile devices to ensure that stimuli could be viewed in its natural setting, adding to the ecological validity of this experiment.

In the beginning of the survey respondents were given instructions and other important information. For instance, they were provided with a premise, that this was *their* Instagram home feed, and that they should do their best to envision so. They were also told that this was a slightly different (updated) version of the app than they are used to, thus covering for any potential inconsistencies. The ecological validity of this study was very reliant on the success of this envisioning, and was screened for at the end of the survey. There was also a disclaimer to deter people outside of our target group from participating. After answering general usage questions regarding Instagram, respondents could then proceed to the stimuli section, where they were shown a long image of an accurately replicated Instagram feed, which they could scroll down through to effectively simulate the original application. In total there were 4 differently treated feeds. A randomizer allocated the respondents among these feeds in the

survey to randomly and evenly distribute the responses. All feeds had identical non-ad content comprised of 15 posts. The manipulated difference between feeds was the number of ads each, which were either 1, 3 ,5 or 7. This corresponds to an ad saturation ratio (ads per total no. of posts) of 6.25, 16.7, 25, and 31.8%, respectively, with the second figure reflecting Instagram's current state. This was deemed appropriate to cover the spectrum of what any user realistically thought was acceptable, and to provide sufficient differences in reactions to allow for the test of the hypotheses. The ads were also evenly spaced in between non-ad stimuli in their respective feeds, such as is in the original application.

3.4.3 Stimulus development

See 10.3 in Appendix for a full visual representation. When designing the four different feeds, care needed to be taken to make them as indistinct as possible from their live-versions, thus ensuring sufficient ecological validity. This was ensured by using screenshots of real user-posted (non-ad) content and in-feed ads that had passed through our screening processes (Pre-study 1 and Pre-study 2) and stitching them together in a long image with basic Paint software.

The outdated timestamps present under both ads and user-posted content were altered to be appropriate regardless of the time in present day the respondents completed the survey, and to reflect newly generated content just like a normal Instagram experience would (e.g. x hours/days ago).

Being that this study is constrained to *non-competitive* advertising clutter, our most important controlled variable is keeping level of competitiveness in the feed as low or as close to zero as possible. As explained by Ha and McCann (2008), competitiveness is created when different brands are communicating their respective messages in the same product category and near each another—which in this study's case would relate to the entire feed. Thus, it is important that each advertisement maintains not only product exclusivity, but that they did not feature any products or services that are even so much as indirect substitutes of each other. This was evaluated using our own marketing expertise, and sound judgement.

3.4.4 Data collection and analysis

The data collecting process consisted of acquiring respondents to our online survey partly through our own social network, partly by visiting university campuses (e.g. SSE, KTH, SU) and other student hubs such as "Student Palatset", and partly using Facebook Ads.

The latter was done by advertising participation and a link of the Qualtrics survey. The desired student sample pool was acquired by targeting people aged 18-30 and were currently listed as attending a university education on their profile.

Marketing via social media means giving up control over the situation and the stimuli around the respondent, however, this adds ecological validity. In a real-life situation, it is common for the social media user to view his or her Instagram feed in a public place surrounded by other people. The respondents answering the ad will be in a more realistic situation with regards to social media exposure in comparison to if they took the survey in a more sterile environment under more forced conditions, prompted to take the survey by another student.

Participation of the survey was incentivized with monetary rewards. Data collected from the experiment through the same program used for the survey, Qualtrics. The data was then transferred over to and analysed in SPSS.

3.5 Validity and reliability

3.5.1 Validity

By only varying one independent variable between treatments, and keeping everything else constant, we ensured that changes in the measured variable were attributable to this independent variable. To make sure our questions further measured the correct variables, we took questions used in previous research with documented such effect.

To check for instructional validity a question was posed regarding what social media platform the survey concerned. Respondents were asked: *"You have been asked questions about the feed from a social networking service (app). What was the name of that service?".* The respondent could select "*Instagram"*, "*Facebook*", "*Snapchat"* or "*Pinterest"*. Another such control question was: *"What did the questions you were asked primarily concern?".* Respondents could answer *"Your attitude towards advertisement", "The dangers of social media"*, *"Your favourite celebrities"* or *"The posts you regularly upload"*. Respondents who selected anything other than "*Instagram"* and *"Your attitude towards advertisements",* respectively, did not get their responses accounted for in this study.

3.5.2 Reliability

Multiple questions were used to gauge every measurement variable. Thus, a wider spectrum where more aspects were accounted for was obtained. By having multiple measurements for

each variable, we could discount errors eventually caused by choice of wording. Cronbach's alpha for the items of every variable was measured in all cases to be greater than 0.7.

3.5.3 Ecological validity

To assess such a complex phenomenon as clutter, it is necessary to trade off some control to attain ecological validity (Speck and Elliot, 1997). Following in the footsteps of Rosengren (2008), we too invite clutter into our study by using real brands and advertisements, as well real embedded stimuli. We furthermore replicate the setting of an existing social media platform, with all the preconceived notions and other different stimuli that such entails. Ecological validity was tested with a manipulation check.

In search for ecological validity, however, we had no control over receiver context; that is where, when, and with whom the respondent is when exposed to the ads (Puntoni, 2005; Brodin, 2007; Rosengren, 2008). Similarly, societal clutter is both inevitable and uncontrollable (Rosengren and Dahlén, 2006)—it may vary significantly depending on time of day or activities of the person and may add to perceptions of clutter.'

4. Results

This section presents our manipulation checks and whether the hypotheses investigated in our main study were accepted or rejected. When finding that means were not equal ($P<0.05$) we examined each pair with Scheffe's post hoc test, and this approach revealed which pairs were subject to significant differences at the 0.05 level.

The hypotheses were tested by comparing means in a one-way ANOVA, Pearson's coefficient was afterwards retrieved as a complement to our findings. The 95% confidence interval has been accounted for to show if there is a significant difference at the 0.05 level in the mean between groups. Only significant differences in mean were discussed.

4.1 Manipulation checks

4.1.1 Manipulation check: quantity of ads

This manipulation check was done to determine that the treatment had intended effect. We had a different number of ads in each feed and now by doing this one-way ANOVA we screen for respondents noticing this difference from a between-groups perspective.

Table 1: One-Way Analysis of Variance of Perceived Number of Ads by Number of Ads in Feed

Number of ads in feed	N	Mean perceived no. of ads in feed	SD	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1	45	2.96	2.25	2.28	3.63
3	38	3.29	1.89	2.67	3.91
5	37	3.46	1.57	2.93	3.98
7	32	5.25	4.06	3.79	6.71

Notably, there is a discrepancy between actual number of ads seen and perceived number of ads. For example, respondents on average believed to have seen 2.96 ads when only shown one. suggesting that they had either difficulty in remembering the number of ads or they had trouble distinguishing them from other content.

The differences in mean between groups that were significant at a 0.05 level were between the treatment groups with 1 ad, M=2.96 (SD=2.25), and 7 ads, M=5.25 (SD=4.06). This shows that the respondents perceived the treatment with highest quantity of ads to also have the highest number of ads and the treatment with lowest quantity of ads to have the lowest number of ads, as we had intended.

4.1.2 Manipulation check: unfamiliarity

To check that the brands used were of low familiarity, respondents answered 3 questions pertaining to exposure, knowledge and ownership as suggested by Keller and Hoeffer (2003). To measure *exposure* respondents were asked: *"Do you have a distinct (clear) recollection of being exposed to any of the advertised brands prior to this survey? If so, to how many (of the brands)?"* To measure *knowledge* respondents were asked: *"Do you have any prior knowledge regarding the*

brand(s) or any of its/their services/products? If so, for how many (of the brands)?" To measure ownership respondents were asked: *"Have you yourself purchased or used any of the services/products belonging to the brand(s)? If so, from how many (of the brands)?"*

Table 2: Manipulation Check Results for Brand Familiarity (N=152)			
Brand familiarity	Avg Previous Exposure	Avg Previous Knowledge	Avg Previous Ownership
Percentage of Respondents	36.08	12.63	10.04

The calculations are based on responses to the above-mentioned questions; i.e. the number of brands the respondents have previously been exposed to, have knowledge about, and have had ownership of; *in relation* to the number of ads (dependent on the treatment type) the respondents were shown, respectively. These ratios were than averaged and are expressed above as a percentage.

Only 10.04% of the brands displayed had seen previous ownership by respondents, and similarly respondents only knew information about 12.63% of the brands. Although 36.08% may seem like a high degree of prior exposure, we can look at the results of the manipulation check for unfamiliar brands in Kent and Allen's (1994) study and make a comparison. From their study's mean score of 2.05 on a 5-point scale, they concluded that their findings were not contaminated by prior exposure to ads. Since this corresponds to a 41% degree of prior exposure, we similarly conclude that our results are not contaminated by brand familiarity.

4.1.3 Manipulation check: ecological validity

This manipulation check was conducted to account for ecological validity. The final question of the main survey read: "Was the feed a realistic representation of the Instagram feed you are used to (number of ads not considered)?" to which respondents answered either "yes", "not sure", or "no".

Table 3: **Answers to the question "Was this a realistic representation of an Instagram feed...?**" N= 152				
Responses	Yes	Not sure	No	Total
Percentage of Respondents	63.8	27.6	8.6	100

A clear majority (63.8%) of respondents thought that the feed used in our survey realistically replicated that of the original media vehicle. Only 8.6% thought it was unrealistic. This is sufficient to state that unrealistic stimuli did not contaminate the results.

4.2 Main study

4.2.1 Quantity of ads is found to be positively related to perceived clutter.

Table 4: One-Way Analysis of Variance of Mean Perceived Clutter by Number of Ads in Feed[2]					
Number of ads in feed	**N**	**Mean perceived clutter 1(Low)-7(High)**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	45	4.27	1.27	3.89	4.65
3	43	3.49	1.35	3.07	3.90
5	38	3.08	1.28	2.66	3.50
7	36	2.94	1.45	2.45	3.44

A significant difference in mean at the 0.05 level between those respondents who viewed a feed with 1 ad, M=4.27 (SD=1.27), compared with those who viewed 5 ads, M=3.08 (SD=1.28), and 7 ads, M=2.94 (SD=1.45), was found. Thus, we can with 95% confidence say that the manipulation of quantity of ads influenced how respondents perceived the level of clutter.

> Respondents in groups exposed to more ads perceived the feed to be more cluttered than those exposed to fewer ads; **H1 has empirical support.**[3]

A linear regression analysis of the two variables shows that number of ads is a predictor for the average perceived clutter. The R-square in this analysis amounts to 0.12, implying that quantity of ads can explain 12% of the variance in mean of perceived clutter.

2 Although only 152 complete responses were recorded, additional valid data from incomplete surveys could still be used, explaining the slightly larger sample sizes for many of the One-Way ANOVA tests.
3 Please note that no significant difference was found at the 0.05 level between respondents shown either 3,5 or 7 ads. Notably, this weakens the empirical support for H1, effectively limiting the use and applicability of these results.

4.2.2 No relationship between perceived clutter and brand recall could be found.

Table 5: One-Way Analysis of Variance of Mean Brand Recall by Perceived Clutter					
Perceived clutter 1(Low)-7(High)	**N**	**Mean Brand Recall (1)Recall (0)No Recall**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	0.00	0.00	0.00	0.00
2	9	0.11	0.33	−0.15	0.37
3	26	0.08	0.27	−0.03	0.19
4	46	0.02	0.15	−0.02	0.07
5	34	0.00	0.00	0.00	0.00
6	30	0.00	0.00	0.00	0.00
7	14	0.00	0.00	0.00	0.00

No significant mean difference at the 0.05 level can be found in this analysis. Only 4 instances where the brand was successfully recalled were recorded.[4]

> No relationship between perceived clutter levels and brand recall could be found in this study; **H2 lacks empirical support.**

4.2.3 Perceived clutter is found to be negatively related to attitude towards ads.

Table 6: One-Way Analysis of Variance of Mean Ad Attitude by Perceived Clutter					
Perceived clutter 1(Low)-7(High)	**N**	**Mean Ad Attitude 1(Bad)-7(Good)**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	5.00	1.73	0.70	9.30
2	9	3.78	1.30	2.78	4.78
3	26	4.31	1.05	3.88	4.73
4	46	4.07	0.95	3.78	4.35
5	34	4.15	0.74	3.89	4.41
6	30	3.93	1.26	3.46	4.40
7	14	2.71	1.38	1.92	3.51

4 Groups were reconstructed to be based upon perceived amount of clutter, the focal variable for the relationships investigated. Investigating solely with quantity of ads as an independent variable would according to theory and previous research yield no significant relationship with attitudes, as well as in the opinions of the authors make for an insufficiently comprehensive study of clutter.
Note that some groups at the lower and higher ends of the spectrum respectively (1,2 and 7), have lower than 25 respondents in them which severely limits the usefulness of their implied results.

There is a significant difference at the 0.05 level between the group of respondents who perceived clutter to be the highest (7), M=2.71 (SD=1.38), and those who rated clutter 5, M=4.15 (SD=0.74), 4, M=4.07 (SD=0.95), and 3, M=4.31 (SD=1.05). This result is significant at the 0.05 level.

Ad attitude was lower when perceived clutter was higher; **H3a has empirical support.**

A linear regression analysis of the two variables shows that perceived clutter is a predictor for the average online ad attitude. The R-square in this analysis amounts to 0.06 indicating that online ad attitude can explain 6% of the variance in mean of intrusiveness.

4.2.4 Perceived clutter is found to be negatively related to attitude towards media vehicle.

Table 7: One-Way Analysis of Variance of Mean Media Vehicle Attitude by Perceived Clutter

Perceived clutter 1(Low)-7(High)	N	Mean M. V Attitude (1)Bad-(7)Good	SD	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1	3	4.67	1.16	1.80	7.54
2	9	5.33	1.32	4.32	6.35
3	26	4.65	1.60	4.01	5.30
4	46	4.50	1.38	4.09	4.91
5	34	4.44	1.35	3.97	4.91
6	29	4.07	1.49	3.50	4.63
7	14	2.43	1.83	1.37	3.48

The respondents who perceived clutter levels to be the highest (7), M = 2.43 (SD = 1.83), had a significant mean difference at the 0.05 level in media vehicle attitude compared with the respondents who rated clutter as: 6, M = 4.07 (SD = 1.49), 5, M = 4.44 (SD = 1.35), 4, M = 4.50 (SD = 1.38), 3, M = 4.65 (SD = 1.60) and 2, M = 5.33 (SD = 1.32).

Attitude to media vehicle decreases as perceived clutter increases; **H3b has empirical support.**

A linear regression analysis of the two variables shows that perceived clutter is a predictor for the average attitude to the media vehicle. The R-square in this analysis amounts to 0.11 implying that online ad attitude can explain 11% of the variance in mean of intrusiveness.

4.2.5 Perceived clutter is found to be negatively related to attitude towards brands.

Table 8: One-Way Analysis of Variance of Mean Brand Attitude by Perceived Clutter

Perceived clutter 1(Low)-7(High)	N	Mean Brand Attitude 1(Bad)-7(Good)	SD	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1	3	6.00	1.73	1.70	10.30
2	9	4.11	1.54	2.93	5.29
3	26	4.50	1.03	4.08	4.92
4	46	3.96	0.94	3.68	4.24
5	34	4.18	0.94	3.85	4.50
6	30	3.70	1.02	3.32	4.08
7	14	2.57	1.87	1.49	3.65

Respondents who perceived clutter to be a 3 in terms of index rating, M=4.5 (SD=1.03), had a significant difference in mean at the 0.05 level in relation to those who rated it 6, M=3.7 (SD=1.02), a significant difference in mean was also found between those who rated clutter 7, M=2.57 (SD=1.87) in relation to 5, M=4.18 (SD=0.94), 4, M=3.96 (SD=0.94), and 3, M=4.5 (SD=1.03).

> Respondents who perceived clutter to be high had lower brand attitude than respondents experiencing low clutter levels; **H3c has empirical support.**

A linear regression analysis of the two variables shows that perceived clutter is a predictor for the average brand attitude. The R-square in this analysis amounts to 0.13 indicating that online ad attitude can explain 13% of variance in mean of brand attitude.

4.2.6 Intrusiveness is found to be positively related to perceived clutter.

Table 9: One-Way Analysis of Variance of Mean Intrusiveness by Perceived Clutter					
Perceived clutter 1(Low)-7(High)	**N**	**Mean intrusiveness 1(Low)-7(High)**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	3.67	2.89	−3.50	10.84
2	9	3.67	1.87	2.23	5.10
3	26	3.77	1.66	3.10	4.44
4	46	4.48	1.49	4.04	4.92
5	34	4.50	1.44	4.00	5.00
6	30	5.37	1.33	4.87	5.86
7	14	6.50	1.40	5.69	7.31

The difference in mean between the different perceived levels of intrusiveness for the different levels of perceived clutter is significant at the 0.05 level between respondents who had rated clutter as 3, M=3.77 (SD=1.66), and those who rated it as 6, M=5.37 (SD=1.33), between those who had rated 3 and those who rated 7, with M=6.50 (SD=1.40), between those who rated 4, M=4.48 (SD=1.49), and those who rated 7, as well as between those who rated 5, M=4.50 (SD=1.44), and those who rated 7.

> An increase in intrusiveness relates to an increase in perceived clutter; **H4 has empirical support.**

A linear regression analysis of the two variables shows that perceived clutter is a predictor for the average intrusiveness. The R-square in this analysis amounts to 0.18 implying that intrusiveness can explain 18% of the variance in mean of perceived clutter.

4.2.7 Relevance of the ads is found to be negatively related to intrusiveness.

Table 10: One-Way Analysis of Variance of Mean Ad Relevance by Intrusiveness					
Intrusiveness 1(Low)-7(High)	**N**	**Mean ad relevance 1(Low)-7(High)**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	2.33	0.58	0.90	3.77
2	19	4.74	1.33	4.10	5.38
3	23	3.87	1.29	3.31	4.43
4	25	3.48	1.08	3.03	3.93
5	37	3.46	1.43	2.98	3.93
6	27	2.48	1.25	1.99	2.98
7	28	1.96	1.23	1.49	2.44

The following relationships can be found significant at the 0.05 level; Respondents who scored 2 on intrusiveness, M=4.74 (SD=1.33), found the ads to be more relevant than those who scored 4, M=3.48 (SD=1.08) regarding the feed being intrusive. Respondents who scored 6 on intrusiveness, M=2.48 (SD=1.25), found ads less relevant than those who scored 4, M=3.48 (SD=1.08). The relationship is clear and significant at the 0.05 level between the two variables. There are once again multiple differences between mean of groups.

> Respondents who thought the ads were relevant perceived a lower level of intrusiveness than those who did not find the ads relevant; **H5 has empirical support.**

A linear regression analysis of the two variables shows that intrusiveness is a predictor for mean perceived relevance of ads. The R-square in this analysis amounts to 0.13 implying that relevance can explain 13% of the variance in mean of intrusiveness.

4.2.8 Perceived clutter is found to be positively related to ad avoidance.

Table 11: One-Way Analysis of Variance of Mean Ad Avoidance by Perceived Clutter					
Perceived clutter 1(Low)-7(High)	**N**	**Mean Ad Avoidance 1(Low)-7(High)**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	5.33	2.89	−1.84	12.50
2	9	5.11	1.76	3.76	6.47
3	26	4.27	1.56	3.64	4.90
4	46	5.35	1.23	4.98	5.71
5	34	5.15	1.21	4.73	5.57
6	30	5.73	1.44	5.20	6.27
7	14	5.50	2.21	4.22	6.78

There is a significant difference between the means of respondents who perceived clutter to be 3, M=4.27 (SD=1.56), and 4, M=5.35 (SD=1.23) in terms of index rating, respectively. This suggests some effect on ad avoidance when perceived clutter is increased.

Ad avoidance increases as perceived clutter increases**; H6 has empirical support.**

A linear regression analysis of the two variables shows that perceived clutter is a predictor for the average ad avoidance. The R-square in this analysis amounts to 0.04 implying that ad avoidance can explain 4% of the variance in mean of intrusiveness.

4.2.9 Negative online attitude towards ads in general (ad skepticism) is found to be positively related to intrusiveness.

Table 12: One-Way Analysis of Variance of Mean Online Ad Attitude by Intrusiveness					
Intrusiveness 1(Low)-7(High)	**N**	**Mean Online Ad attitude**	**SD**	**95% Confidence Interval for Mean**	
				Lower Bound	**Upper Bound**
1	3	5.67	1.53	1.87	9.46
2	19	4.37	1.74	3.53	5.21
3	23	3.96	1.22	3.43	4.49
4	25	3.80	1.26	3.28	4.32
5	37	3.59	1.32	3.15	4.04
6	26	2.96	1.31	2.43	3.49
7	28	2.64	1.57	2.03	3.25

The data shows that the attitude towards online advertisements in general, and by consequence also online ad skepticism, can explain intrusiveness. Respondents who scored the maximum degree of intrusiveness (7), M=2.64 (SD=1.57), had significantly (at the 0.05 level) lower mean attitude towards online advertisements in general than respondents who scored 4, M=3.80 (SD=1.26), and those who scored 3, M=3.96 (SD=1.22), and 2, M=4.37 (SD=1.74), on intrusiveness. Significant difference at the 0.05 level was also found between those who scored 6, M=2.96 (SD=1.31), and 2, M=4.37 (SD=1.74).

> Respondents who perceived higher intrusiveness had a lower attitude to online ads in general (higher online ad skepticism) compared to respondents who perceived a medium or lower degree of intrusiveness; **H7 has empirical support.**

A linear regression analysis of the two variables shows that intrusiveness is a predictor for the average online ad attitude. The R-square in this analysis amounts to 0.13 implying that online ad attitude can explain 13% of the variance in mean of intrusiveness.

4.3 Further analysis

We additionally did a One-Way ANOVA of quantity of ads directly against ad attitude, brand attitude, media vehicle attitude, ad avoidance, and brand recall. The P-values for these tests were 0.62, 0.43, 0.18, 0.73 and 0.78, respectively. In other words, these results were all insignificant, offering no support for any direct relationship between quantity of ads and any of the variables.

We also tested for mediation in SPSS with the extension: PROCESS version 3.0 by Andrew F. Hayes with perceived clutter index as a mediator between quantity of ads and other variables. Closest to getting significance was once again with brand attitude but the results were not significant enough for us to accept them within a 95% confidence interval.

5 Discussion

In this section we discuss our findings in relation to previous research and theoretical frameworks, as well as their possible implications for marketers and media providers.

5.1 Quantity of ads and perceived clutter

The further analysis revealed that quantity of ads does not share any significant correlation with the aspects of consumer reaction investigated in this study. Instead, all the relationships with these variables seem to stem from *perceived clutter*, which in turn data shows correlates directly with quantity of ads. This is supported by literature; e.g. Ha and McCann (2008) found that the sheer frequency of ads was insufficient in causing negative effects, but that it did lead to increased perceptions of clutter. Furthermore, she suggested that quantity of advertisement needs to be mediated by perceptions of clutter, however, our own results could not prove that such a mediating relationship exists. Analysis showed that 12% of the differences in the variance of perceived clutter can be explained by the factor quantity of ads; in relation to the average explanatory power of 6%, as determined in Eisend's (2015) meta-meta-analysis of 7500 marketing studies, this figure is very high.

5.2 Brand recall

An increased perception of clutter did not have a significant effect in regard to brand recall. This disagrees with previous findings that memory effects are lower for higher perceived clutter (e.g. Zhao, 1997; Ha and McCann, 2008); however, these studies neither included nor specified advertising clutter in a social media context, nor are there any mentions of the relatively new phenomenon of native advertising. Nonetheless, according to overload theory, which does not discriminate according to medium, too many ads should still reduce the likelihood that any message is remembered (Nan and Faber, 2004; Riebe and Dawes, 2006). That being said, across all the feeds, only 4 individuals had successfully remembered the focal ad, suggesting

that even when "uncontested" it was too difficult to recall. However, one ad is hardly enough to overload a consumer. One reason that could explain this occurrence is the low recall of unfamiliar brands (e.g. Campbell and Keller, 2003), and their innate low priority regarding consumers' selective attention (Al Shuaili, 2016). Editorial content also competes with advertisement for attention (Ha, 1996; Jun *et al.*, 2003); competition which is possibly intensified by native ads resembling other content. It is thus possible that the ad flew under the consumer's radar because of its in-feed fit, suggesting a downside to native advertising for unfamiliar brands.

5.3 Intrusiveness

Our results show that perceived clutter was greater for those respondents who found the advertising content to be more intrusive. This positive relationship is in accordance with previous research, which further suggests that intrusiveness of ads *influences* clutter perceptions (e.g. Ha and McCann, 2008). Moreover, 18% of the variance of perceived clutter can be explained by intrusiveness; suggesting that it is even more important than the physical number of ads in explaining clutter. Although the bar for what is intrusive varies across media type and competitive media vehicles (Speck and Elliot, 1998; Ha and Litman, 1997), it makes sense that this positive relationship is intact also for native advertising in social media, since it is based on the core principles of advertising clutter.

5.4 Attitude towards ad, brand, and media vehicle

This study finds that as perceptions of advertising clutter increases, there is a negative effect on attitude towards the in-feed ads, the brands behind them, and the social media platform (Instagram) on which the clutter exists; this reflects the findings by Speck and Elliot (1997), who investigated similar relationships but in the context of TV and magazines and for familiar brands (though also with a student sample group). Specifically, the explained variance of attitude towards ad, brand, or media vehicle in terms of perceived clutter were 6, 13 and 11% in our study, respectively. Comparative to the 6% "industry-average", the latter two figures are quite high. These figures can also be put in relation to those acquired by Speck and Elliot (1997); R^2 for attitude towards the medium was 0.04 and 0.03 for TV and magazines, respectively; R^2 for attitude towards ads were 0.07 and 0.08 for TV and magazines, respectively.

The changes in these attitudes may also lead to changes in purchase (for ad or brand attitude) and media usage intentions (for media vehicle attitude). The Elaboration Likelihood Model (ELM) and the Theory of Reasoned Action (TRA) both insinuate that brand purchase intention is a function of brand attitude (Pradhan, Duraipandian and Sethi, 2016). This causality is also backed up by a lot of research (MacKenzie, Lutz and Belch, 1986; Homer, 1990). Similarly, research has shown that attitude towards media vehicle also effects usage intention (e.g. Lee, Cheung and Chen, 2003).

An eventual increase in attitudes can thus have significant implications in terms of ad effectiveness. Consequently, if ad or brand attitudes decrease advertisers might find the platform less attractive and "jump ship". If media vehicle attitude decreases and users opt out, advertisers will similarly pull their ads. In both these scenarios, the media providers suffer ad revenue losses.

5.5 Relevance

The more relevant the respondent found the in-feed ads to be, the less intrusive they also found them to be. This finding is in accordance with previous theory and research, which agree that ads associated with our personal interest transform from something intrusive to something consumers wish to take part of (Ha, 1996; Grusell, 2012). The explanatory power of relevance was found to be 13%, again, comparative to the 6% average this is quite high.

5.6 Ad Avoidance

Higher perceptions of clutter demonstrated higher degree of ad avoidance behaviour in our study. Perceived clutter itself signifies an assessment of excessive advertisements, and in conjunction with information theory which posits that we have limited processing capabilities (Speck and Elliot, 1997), it is logical that said excessiveness would elicit a protective response. Similarly, as expressed by reactance theory, the avoidance could be a protest of the clutter (Ha, 1996; Ha and McCann, 2008). Our study could however only attribute 4% of the mean variance in avoidance to perceived clutter, low relative to the 6% bar. The figure can also be put in relation to Speck and Elliot's study, which found that variance in ad avoidance could be explained by 10 and 8% of perceived clutter in the context of TV and magazines, respectively, for familiar brands.

A reason for why the relationship was not stronger could be that other factors like past behaviour could be more important for ad avoidance. Adopting learning theory, social media-savvy students may have pre-ingrained patterns to dealing with ads if these consistently cause irritation (Speck and Elliot, 1997). However, this does not really explain the difference in relation to Speck and Elliot's result. It could be related to brand familiarity or context.

5.7 Ad skepticism

The findings show that the lower (worse) the attitude towards online advertisements in general, the greater the perceived intrusiveness. In relation to online ad skepticism this is inverted; the higher the ad skepticism the higher the perceptions of intrusiveness. The explanatory power of intrusiveness in terms of ad skepticism was 13%, twice the 6% industry average. It seems natural that online ad skepticism in this setting is an antecedent of intrusiveness, since the skepticism reflects preconceived notions and values, and acts as the critical lens with which we perceive ads to be intrusive or not.

5.8 Practical implications

Assuming our results are to some extent generalizable across other social media, they may have significant implications for marketers and media providers alike. With perceptions of clutter being dictated by both the quantity of advertisement and their perceived intrusiveness, it suggests these latter two variables may be manipulated to affect consumer attitudes towards ads, brands and media vehicles, as well as ad avoidance. For instance, more advertising could be introduced to platforms if intrusiveness of the ads was lower, thus still maintaining current levels of attitudes and avoidance. This means that advertisers could push more content on consumers and media providers would reap more ad revenue, without fear of consumer backlash. Since both our research and theory supports the notion that intrusiveness can be mitigated by high relevance, this further insinuates that, the more personalized the ads are, the higher number of ads will be tolerated by consumers. Summarizing, at least for unfamiliar brands, better joint targeting efforts by advertisers and media providers should help overcome the effects of native advertising clutter as platforms become more saturated.

Online ad skepticism also seems to effect intrusiveness. However, if the skeptics are hard to convert, it is perhaps most beneficial to exclude or target around this group for more efficient marketing communications. This is particularly relevant for unfamiliar brands, who have a

lower budget and so must be more selective in their communication efforts. Today's younger generations may for example be prime candidates for marketing expenditure through social media, as these people are both the most frequent users of this medium (GWI, 2016) and less sensitive to ads in general (Grusell, 2012).

6 Conclusion

The primary purpose of this study was to examine how native advertising clutter can affectively and cognitively influence consumers on social media, by looking at the quantitative and intrusiveness components of clutter. The findings reveal that perceptions of clutter in social media feeds are explained by both these variables, and that perceived clutter in turn could predict attitudes towards ads, brands, and media vehicles, as well as ad avoidance. Further analysis interestingly also showed that the sheer increase in quantity of ads did not directly affect any of these affective responses. These results mimic previous research pertaining to advertising clutter in more traditional settings, including TV and magazines (e.g. Ha, 1996; Speck and Elliot, 1997). Ad skepticism and relevance were two factors that in turn were shown to be positively and negatively related, respectively, with intrusiveness. This leads us to conclude that both advertisers marketing via native ads on social media, and the platforms which host them, can benefit greatly from exceptional targeting. Considering the general low costs of advertising on social media (and with the previous advice in mind), it should still be an attractive medium for new, unfamiliar brands despite slight increases in clutter, so long as any increases in demand for ad space does not bring with it too high prices of such space.

7 Critique and Limitations

The first noticeable critique of this study was the lack of respondents. Although 152 complete responses were acquired, there was insufficient data to discover mediation linkage effects between any variables. Similarly, no significant conclusions could be made regarding brand recall, as only 4 people had successfully remembered the brand name. However, this could be a testament to the fact that the memory aspect of the survey was too difficult. Perhaps a relationship would have revealed itself if we had hedged into brand recognition as well, which would've allowed for an easier question.

We were forced to decide between keeping a predetermined number of non-ad images identical across feeds, and consequently vary the lengths of the feed, or keep the lengths of the feeds constant and so replace the non-ad content with ads in the more 'cluttered' feeds. Although choosing the first option felt like it offered a more realistic and even controlled setting, its drawbacks involved substantial number of dropouts for the longer feeds. By looking at the completion grade variable in SPSS we could pinpoint that the dropout rate was conditional to the length of the feed. Critique to the survey is the omission of a disclaimer to reassure respondents of the 16-22 post long, *finite*, length in feed

Although we tried to ensure ecological validity, we were still unable to flawlessly replicate the Instagram experience. This is because in Instagram, all the publications in the home feed are from other users one has decided to follow. Creating an individual, personalised feed for all 152 respondents was well beyond the scope and feasibility of this study. Nonetheless, the pre-studies did allow us to develop a generically appealing feed with sufficient resemblance. This was confirmed by our manipulation check.

A major limitation of our survey-based experiment was the use of self-reporting of attitudes. This invites a degree of cognitive bias into the measuring process; results may not indicate a completely affective response (Ha, 1996). For example, when asked about the ads respondents might conform to societal norms which state that it is fashionable to think poorly about advertising (Grusell, 2012).

Respondents may use the knowledge of these norms to guess the hypothesises of the experiment, thinking in turn that if they adhere to these norms their answers will be more rational or "correct", and thus helpful to the student researchers (Rosnow and Rosenthal 1997; Hyatt, Shimp, and Snyder, 1991; Zizzo, 2010). Ironically this may have the opposite effect. Unfortunately, an appropriate remedy for Experimenter Demand Effects[5] is not necessarily to delete hypothesis guessers. Although this would solve the issue of presumed bias, the risk associated with this is that the guessers are systematically different from the non-guessers and hence their removal would lead to selection-bias (Hyatt, Shimp, and Snyder, 1991). Although our broad array of question topics should have contributed to an obfuscation of experimental objectives (throwing off respondents), more filler questions could have been incorporated were it not for time and survey size constraints (risk of drop-out) (Zizzo, 2010). Nevertheless, Shimp, Hyatt and Schnider (1991) warn of overemphasizing the role of this demand-inferred bias, and

[5] Changes in behaviour in response to supposed cues about what is expected of them, is known as Experimenter demand effects (EDE) (Zizzo, 2010).

consequently risking overlooking many errors equally likely to jeopardize the validity of the results, such as mood or other idiosyncratic states of the respondents.

However, the perhaps biggest limitation has to do with time. Firstly, it may take time for ads to elicit a consumer reaction; this study measured the immediate effects by including both stimuli and data collection in the same survey, as opposed to measuring after a delay. Secondly, in a natural setting, exposure to ads is usually recurring, and distributed over time (Nan and Faber, 2004). Previous research highlights the cumulative nature of clutter, suggesting that consumer perceptions may not have fully formed after a single exposure, needing several to "wear in" (Speck and Elliot 1997; Nan and Faber, 2004). The literature is less clear, however, on how ad repetition affects consumers. Nan and Faber (2004) claim an inverted U-shape type relation where repetition positively correlates with a more positive attitude until a certain threshold. This is supported by the *mere-exposure effect*, which states that repeated exposure at least at low levels of attention increase familiarity, and eventually likeability (Fulgoni, Pettit and Lipsman, 2017). This suggests that repetition in fact could have particularly positive effects on unfamiliar brands, which is indeed support by previous studies (E.g. Singh, Rothschild and Churchill, 1988). However, these firms are often those with the most constraints on the budget. Nan and Faber (2004) also found repetition to strongly correlate with memory variables such as recall and recognition. Third, regarding the providers of in-feed media content, whilst increasing the ad-to-content ratio might initially trigger an adverse consumer reaction, it is possible that this resistance to change is temporary; as consumers gradually accustom themselves to the new conditions their perception of clutter might accordingly adjust. In fact, the pattern seems to be that ad exposure over time increases ad acceptance (Grusell, 2012). For these reasons and more, no conclusions can be directly made on the long-term effects of advertising clutter.

Our delimitations also limited the usefulness and applicability of this study. By only testing with unfamiliar brands, the applicability of the results does not extend to familiar brands—which are more resilient to the effects of clutter (e.g. Kent and Allen, 1994; Kent and Kellaris, 2001; Al Shuaili, 2016). Simultaneously, exclusive use of single-ad stimuli signifies that the results may not be representative of for example video ads, which likely are interpreted differently in relation to clutter. Also, in focusing in on the non-competitive part of advertising clutter, we did not either account for any competitive interference, which also may have a significant effect on consumer attitudes (Kent and Allen, 1994; Kent and Kellaris, 2001). Nan and Faber (2004) suggest that the influence of competitive clutter is even greater than that of quantity. Lastly, our sample group consisted of students, whom research has found responds to

advertisement differently than the general masses. Thus, neither marketers nor media providers can act exclusively on this study's revelations when making decisions pertaining to in-feed advertisement.

8 Future Research

Although the findings likely are indicative of how consumers would react in other, similar vehicles, such experiments should nonetheless be undertaken to form a more comprehensive image of how native advertising clutter pertains to all social media. Furthermore, with Instagram's large user base, the platform itself can be assumed to have high brand equity and familiarity. Thus, in addition to looking at familiar brands and comparing the findings with this study, future research can also look at native advertising clutter within unfamiliar media vehicles, and experiment with different combinations and compare these internally. Another natural extension of this study is to look directly into purchase and usage intentions, to provide more practical information for marketers in form of advertising effectiveness.

Future studies can likewise complement this one by considering the competitive aspect of advertising clutter, or try to map out all the direct, indirect, mediation and moderation relationships between the discussed (or other) variables. Researchers who wish to study these effects are advocated to use a larger sample group than this experiment to enable such analysis.

As discussed in the limitations section of this paper, only the immediate effect of advertising clutter was measured in the experiment. More research is needed on the long-term effects of advertising clutter and the role of repetition in mitigating its effect (Al Shuaili, 2016). However, this is difficult to do in conventional experimental settings (Speck and Elliot, 1997). Thus new, innovative ways to study clutter across a longer timespan should be searched for.

This study was constrained to use of single picture ads. Future research may experiment with other stimuli in a similar setting, such as video, carousel or canvas ads, or a realistic mix of all to see if the results hold up in a more complex environment. Size dimensions of ads can also be investigated to see if the quantitative component of clutter is better measured in terms of the ads' occupied surface area as opposed to the number of ads. Moreover, perceptual grouping theory suggests ordering or clustering of ads in the feed can affect perceptions of clutter (Speck and Elliot, 1997).

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10. Appendix

10.1 Pre-study 1 Findings on Brand Familiarity

Scoring lowest in regards to brand exposure, knowledge, and ownership, and hence assessed to be the most unfamiliar brands and thus ideal for the main experiment, were the following 7 brands (brand familiarity measurements are also displayed):

Table 0: Pre-Study 1 Findings on Brand Familiarity (N= 10)			
Brand	**Mean Previous Exposure**	**Mean Previous Knowledge**	**Mean Previous Ownership**
Karunworld	0%	0%	0%
Fjärdlångs vandrarhem	0%	0%	0%
Prydligtsverige	10%	0%	0%
WordDive	0%	0%	0%
Andreasbosthlm	0%	0%	0%
Sbo Däck I Stockholm Ab	0%	0%	0%
Billigfitness.sverige	0%	0%	0%

10.2 Qualtrics Survey

Start of Block: Introduction text

Thank you for contributing to academic research. This survey is aimed to collect data for our thesis work at Stockholm School of Economics (SSE). All your answers are anonymous. Please answer truthfully, and to the best of your knowledge. Please also read all instructions carefully. The survey will take approximately 8-10 minutes. Thank you for your participation.

Gabriel Höglund & Andreas Syvertsson
Disclaimer: This survey is for **Swedish students** only (those currently studying, with

Swedish as their mother tongue, and are or have been recently residing in Sweden), and only responses from such will be accepted. Thank you for your understanding.

End of Block: Introduction text

You will shortly be presented with an Instagram media feed. However, in the scenario ahead, the Instagram app has undergone a minor update, and this new version may deviate slightly from that which you are used to (if you have used the app before).
For the entirety of this survey (starting now), please imagine or try to envision that this is your feed displayed on your own account (and consequently that you have chosen to follow the accounts that appear in the feed).

Please take a couple of minutes (or as much time as you otherwise need) to scroll through and observe the contents of your Instagram feed.

End of Block: Usage questions

Start of Block: Attitude questions

Regarding the advertisements, I found them:

	1	2	3	4	5	6	7	
Not at all relevant	○	○	○	○	○	○	○	Very relevant

End of Block: Attitude questions

Start of Block: Focal ad recollection

In the feed you were shown an ad for a language learning application, what was the name of the company advertising this? (If you don't remember just write: 0)

_____

End of Block: Focal ad recollection

Start of Block: Block 4

The name of the company was WordDive.

How would you describe your feelings towards the WordDive ad?

	1	2	3	4	5	6	7	
Bad	○	○	○	○	○	○	○	Good
Negative	○	○	○	○	○	○	○	Positive
Not likeable	○	○	○	○	○	○	○	Likeable

Start of Block: Brands

How would you describe your feelings towards the advertised brand(s) shown in the feed?

	1	2	3	4	5	6	7	
Bad	○	○	○	○	○	○	○	Good
Negative	○	○	○	○	○	○	○	Positive
Not likeable	○	○	○	○	○	○	○	Likeable

End of Block: Brands

Start of Block: Intrusiveness questions

Regarding the amount of ads in the feed:

	1	2	3	4	5	6	7	
The amount was excessive	○	○	○	○	○	○	○	The amount was not excessive
There was more than it should be	○	○	○	○	○	○	○	There were about the right amount
Too much space is devoted to them	○	○	○	○	○	○	○	Too little space is devoted to them

I could tell advertisements apart from user-uploaded (non-ad) content

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

Regarding the advertisements in the feed:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I immediately scroll past the ads	○	○	○	○	○	○	○
I ignored the ads	○	○	○	○	○	○	○
I avoided the ads	○	○	○	○	○	○	○

Regarding the advertisements in the feed:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Ads broke up the feed	○	○	○	○	○	○	○
Ads disrupted the flow of the feed	○	○	○	○	○	○	○
Ads divided the feed into many parts	○	○	○	○	○	○	○

Regarding the advertisements in the feed:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Ads drew my attention away from pictures in the feed	○	○	○	○	○	○	○
Ads made it harder to focus on the pictures I wanted to focus on	○	○	○	○	○	○	○

End of Block: Intrusiveness questions

Start of Block: Attitudes to media vehicle and on ads in general

What is your overall attitude towards *this version* of Instagram?

	1	2	3	4	5	6	7	
Bad	○	○	○	○	○	○	○	Good
Negative	○	○	○	○	○	○	○	Positive
Not likeable	○	○	○	○	○	○	○	Likable

How would you describe your feelings towards online advertisements *in general*?

	1	2	3	4	5	6	7	
Bad	○	○	○	○	○	○	○	Good
Negative	○	○	○	○	○	○	○	Positive
Not likeable	○	○	○	○	○	○	○	Very likeable

End of Block: Attitudes to media vehicle and on ads in general

Start of Block: Block 8 - Validity Checks

Do you have a distinct (clear) recollection of being exposed to any of the advertised brands prior to this survey? If so, to how many (of the brands)? Answer using only numbers, as accurately as you can.

_____

Do you have any prior knowledge regarding the brands or any of its services/products? If so, for how many (of the brands)? Answer using only numbers, as accurately as you can.

_____

Have you yourself purchased or used any of the services/products belonging to the brand(s)? If so, from how many (of the brands)? Answer using only numbers, as accurately as you can.

_____

How many ads were you shown? Answer using only numbers. (It is ok to guess)

_____

You have been asked questions about the feed from a social networking service (app). What was the name of that service?

- ○ Instagram
- ○ Snapchat
- ○ Facebook
- ○ Pintrest

What did the questions you were asked primarily concern?

- ○ Your attitude towards advertisement
- ○ The dangers of social media
- ○ Your favorite celebrities
- ○ The posts you regularly upload

Was the feed a realistic representation of the Instagram feed you are used to (Number of ads not considered)?

- ○ Yes
- ○ Not sure
- ○ No

End of Block: Block 8 - Validity Checks

10.3 Visual Stimuli

Figure 2

Example-Feed 1

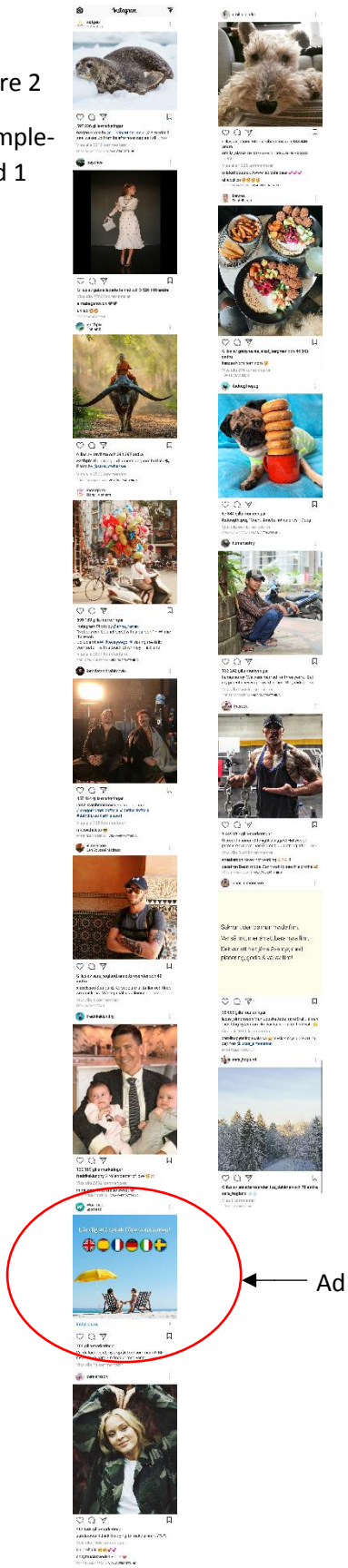
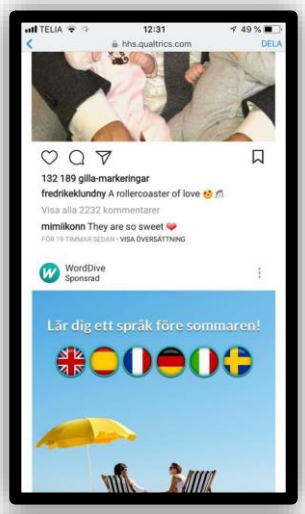


Figure 3a

Screenshot of Stimuli in Survey



Ad

Figure 3b

Screenshot of Stimuli in Survey