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„This beautiful Instagram: how visually appealing Instagram content influences women's purchase intentions“

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We're in a content renaissance. But data without creativity is just noise.
Josh Stincomb

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I am extremely thankful to every single person who helped and supported me through every step of the way.

It was an intense run.

Statutory Declaration

I declare that I have authored this thesis independently, that I have not used other than the declared sources / resources, and that I have explicitly marked all material which has been quoted either literally or by content from the used sources.

Vienna, November 14

Aleksandra Vasilyuk

A handwritten signature in black ink, appearing to read 'Aleksandra Vasilyuk', with a stylized, flowing script.

Annotation

For the better readability of the results section all the references to the tables were put in footnotes. The words “photo”, “image” and “picture” were used interchangeably.

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Introduction

Celebrity endorsement is a well-known and established way of advertising branded products. Through the development of social media, it has expanded its boundaries and undergone some changes turning into influencer or blogger endorsement. There are plenty of reasons why this shift is taking place. Wiley (2014) names several of them, among these are, for example, the costs and trust that bloggers have.

Instagram is a perfect social media platform for this kind of branding because of the platform's simple interface, which is built around visuals and personalized content. Most of its users follow different kind of celebrities, brands or bloggers. According to Dana Rebecca Designs (n.d.) among 2000 responders, who participated in the survey, 85% follow Instagram accounts that are related to fashion, lifestyle or style. It is not surprising that 90% of these followers are women. When it comes to fashion, style or purchasing behavior, especially in relation to social media and celebrity endorsement, female respondents are prevailing (Danniswara, Sandhyaduhita, & Munajat, 2017; Djafarova & Rushworth, 2016; Naumanen & Pelkonen, 2017; Stevens & Maclaran, 2005).

Consequently, this research focuses only on females within the age range of 22-37 years. This age range was chosen on purpose. This is exactly the age of millennials, who are believed to be the most active users of social media (Dana Rebecca Designs, n.d.).

Previous research focused mainly on celebrity endorsement, source credibility and purchase intentions of users (Naumanen & Pelkonen, 2017; Djafarova & Rushworth 2017; Rebelo, 2017). Yet there was little research that had taken Instagram content into consideration.

Jaakonmäki, Müller, and Brocke (2017) tried to answer the question: “What kind of Instagram content is the most engaging?”. Syrdal and Briggs (2018) investigated the same field, although not focusing solely on Instagram. Hu, Manikonda, and Kambhampati (2014) discovered eight types of Instagram photos and five user types. Nevertheless, nothing has been done to discover what makes Instagram images appealing to users. Especially what makes a product picture made by an Instagram blogger attractive for a female user? And how do these attractive product images influence women’s purchase intentions?

To investigate this matter, firstly a profound literature review was done, which served as the basis for an empirical part that covered several steps. First there was a collection of stimuli i.e. product photos made by different Instagram bloggers depicting to a certain extent similar round watches “Cluse” with a light clock face. Influencers’ faces and bodies were excluded from the sample because an attractive endorser could influence participants decisions (Rebelo, 2017), which could lead to a particular bias in results. A second step was an assessment of photos by two practicing designers and four consumer photographers. Then a semantic analysis based on word frequency was performed. It helped to extract the three most common features used for Instagram product photo evaluation. A fourth step was a selection of the photos that had been sorted out by at least four professionals. Using the most commons features the selected photos were edited in Photoshop. All the resulted images (original and edited) were evaluated by the participants. After that a frequency analysis test in SPSS was performed. That was necessary for selecting out the two most appealing photos for the experiment itself. The last step was the final experiment, in which two different groups of females evaluated visually appealing images and their less appealing editions in

combination with their purchase intentions. Three programs were used during all the stages: Photoshop CS6 for editing the material, EFS Survey for creating the surveys and collecting the answers, IBM SPSS Statistics (SPSS) for evaluating the collected data. It was expected that if a picture is more visually appealing women are more inclined to make a purchase of a depicted product compared to if a picture is less visually appealing.

Literature Review

Purchase Intentions and Celebrity Endorsement

Previous research on purchase intentions and celebrity endorsement is very solid. While exploring the correlation between an endorsed product, celebrity branding and how this image influences millennials, Karla McCormick (2016) found “that using a familiar celebrity endorser elicited an intent to purchase the advertised product, but did not aide in a positive attitude formation toward the brand or advertisement” (p.43).

The recent research by Naumanen and Pelkonen (2017) also indicated that the advertised product should fit the celebrity. Focusing primarily on Instagram they concluded that the presence of such “match” is strongly correlated with purchase intentions. However, the amount of Instagram celebrity followers has no correlation with their purchase intentions.

The latest research by Kudeshia and Kumar (2017) showed that positive eWOM, brand attitude, and purchase intention are strongly correlated. It goes along with the outcome of the research by Murphy (2014), which indicated that brand attitude and purchase intentions are strongly correlated with eWOM on Instagram and Pinterest. In other words, a good influencer with a positive eWOM can help to win new loyal customers.

Djafarova and Rushworth (2017) found that Instagram celebrity product endorsement leads to purchase behavior. According to the authors, “The majority of participants (all but one) stated that they had purchased an item that had become known to them solely through a celebrity whom they trusted on Instagram” (Djafarova & Rushworth, 2017, p.4). In the study by BlogHer (2011) it was revealed that in the United States more than 50% of people who constantly read blogs had made a purchase basing their decision on the read material.

Purchase Intentions and Source Credibility

The credibility of a source has been investigated for a long time. Ohanian (1990) even proposed a scale to measure the celebrity’s source credibility: expertise, trustworthiness, and attractiveness. Ideally, source credibility studies should be regarded as a whole separate area of research.

Rebelo (2017) found that influencer’s trustworthiness and attractiveness are correlated with Instagram users’ purchase intentions. At the same time, Naumanen and Pelkonen (2017) showed that the expertness of an Instagram influencer is positively correlated with the purchase intentions of a user. Moreover, they indicated that Instagram influencers are more trustworthy than the celebrities that became popular before Instagram. This finding was supported by Djafarova and Rushworth (2017). Furthermore, Djafarova and Rushworth (2017) indicated that a sufficient number of followers leads to a higher credibility of an Instagram influencer. Also, according to BlogHer (2011) people trust bloggers more than traditional celebrities. And Murphy (2014) stated that consumers usually trust user-generated content more than the content generated by brands.

The importance of so-called B-Listers was also highlighted by Harrison (2017). She pointed out that nowadays there are different kinds of Instagram influencers, from well-known celebrities like Justin Biber to “local heroes”, implying that there is no need to reach out to well-known endorsers.

Source Attractiveness

As stated above, one of the facets of source credibility is source attractiveness (Ohanian, 1990), which can have a great impact on users when it comes to online interactions and perceptions. For example, Naumanen and Pelkonen (2017) found that attractiveness, as well as the trustworthiness of an Instagram celebrity, has an influence on users’ engagement rates. In their turn, Djafarova and Rushworth (2017) indicated that the attractiveness of an influencer is the most important trigger for a user to become a follower. They also found that the composition of used pictures, their quality and the correspondence between an endorsed product and celebrity leads to a celebrity’s greater impact on users.

This particular study also focuses on attractiveness, however, not on the attractiveness of an endorser, but of the published content. This paper aims to investigate product images that were posted by Instagram bloggers in order to understand what makes these images appealing for women and how these images are related to women’s purchase intentions.

Social Media Content

When it comes to the social media content itself, a lot of facets are still missing because even if content was subjected to research, the character of it would be rather general than specific. This problem is understandable since the notion “content” is

multifaceted: texts, pictures, videos, animated pictures etc. Moreover, content is also always an object (for example: image) and a subject (what is depicted or described).

So, when it comes to assessment of content there are several questions that arise:

1. What should be assessed – an object or a subject?
2. Which features should be used?
3. How to assess: using a computational approach or subjective one, which also implies detecting of semantic meanings?
4. After all, should semiotics come into play?

In this particular research, only Instagram photos made by Instagram bloggers who explicitly stated that on their pages were taken into consideration.

Instagram Content

It is no secret that Instagram is popular nowadays. According to Statista (2018), Instagram is ranked 6th among the most popular social networks worldwide. In general, Instagram is primarily built upon visuals and unlike forums its main idea lies in sharing of visual material i.e. images or videos (in this way it is very similar to another social media – Pinterest) with other people. Although visual material on Instagram is usually accompanied with some text from the user who posted it, in this particular study it was decided to focus only on the images shared. Other content elements were therefore excluded from the research.

In advertising branch, it is believed that sometimes Instagram images can work and perform better. The main point is the impression of authenticity that these images can give (Kantrowitz, 2014). Schroeder (2008) also highlighted the topic of authentic content yet not talking about Instagram specifically. The author implied that snapshots can be very affective in advertising of brands. He described snapshot as follows:

The snapshot, a straightforward, generally unposed photograph of everyday life, has emerged as an important style in contemporary marketing communication. Many recent ads portray models in classic snapshot poses—out of focus, eyes closed, poorly framed—in contrast to more traditional and historical patterns of formal studio shots or highly posed tableaux. (p.281)

Furthermore, the author implied that snapshots make an impression as if they have been made by consumers themselves (what the consumers sometimes even do). Basically, the line between brands and consumers becomes unclear. So, in general, one can see some similarities between Instagram content made by not non-professionals and snapshots described by Schroeder (2008).

Some attempts have been made to explore Instagram content more specifically. Hu et al. (2014) focused on Instagram images and concluded that there are eight common types of them and five user types. Hu et al. (2014) claimed their research to be the very first one in this area and made some other interesting conclusions that are somewhat correlated with the previous studies. For example, the number of followers of a user is not related to the content he or she publishes. Taking into account the finding about the attractiveness of an influencer made by Djafarova and Rushworth (2017) the outcome of research by Hu et al. (2014) seems to be a contradiction. It is noteworthy that the latter study was conducted in 2014 when the user interface of Instagram was different. For example, they write that “users consume photos and videos mostly by viewing a core page showing a “stream” of the latest photos and videos from all their friends, listed in reverse chronological order” (Hu et al., 2014, p.596). Since 2014 this order (as well as the Instagram interface itself) underwent some changes. The suggestion is to make a revision and extension of this study. The timing of the research could be a

reason for some outdated data, which doesn't correlate with the outcomes from the newest studies.

Jaakonmäki et al. (2017) regarded the relation of various Instagram contents to the users' engagement. It was found that the number of followers is positively correlated with the engagement. Moreover, the authors implied that the shared content itself leads to a greater engagement from the users' side. They indicated that images that depict people are strongly correlated with the engagement rate. Moreover, according to Jaakonmäki et al. (2017), "pictures that include text and scenery have a high impact on the number of likes and comments received" (p.1158).

Visually Appealing Content

However, neither Jaakonmäki et al. (2017) nor Hu et al. (2014) explained what features make Instagram pictures visually appealing. Savakis, Etz, and Loui (2000) also highlighted that there was little research devoted to a visual appeal of images, although the image quality has gained more attention. The authors named nearly the same reason as stated above: "image quality is viewed as an objective attribute that can be estimated using objective measures, while image appeal is considered subjective, and therefore very difficult to estimate reliably" (Savakis et al., 2000, p.111).

A small step ahead towards visually appealing content on social media was recently made by Syrdal and Briggs (2018). Authors focused both on content and engagement and concluded that the genuine, funny, sensational content (both in a positive and negative sense), along with the content from friends or people they know and attractive content is the most engaging. The authors also noted that the meaning of how users understand engagement is different from the marketers' perspective. According to Syrdal and Briggs (2018), users describe engagement as a "state of mind in

which they often feel a sense of enjoyment coupled with a high degree of involvement” (p.17) while marketers tend to understand users’ engagement in terms of interaction with the content.

Savakis et al. (2000) made an interesting experiment where participants were asked to choose which photographs they would put into a photo album and which not, using numbers and descriptions. Moreover, they were asked to select the most appealing photo and explain why. Thus, the authors collected a list of attributes and then put them into categories. Such categories as “composition” and “people” are predominant when picking up the most favorite photo.

Hall (2007) distinguished between three categories of photos: “people”, “still life” and “landscape”. In each category there were four images, which respondents evaluated using 10 items provided by the author. It was found that in “people” category “subject”, “quality of light” and “impact” play the most important role. Hall (2007) defines “impact” as “the emotional reaction that the viewer has to an image, grabbing power that makes the viewer want to look at the image” (p.4). In “Still life” category “sharpness”, “composition” and “color” are of importance, and in “Landscape” – “quality of light”, “color” and “composition”.

Aesthetics and Aesthetic Response

The lack of research devoted to visual appeal of images is not surprising since the notion “visually appealing” is a dimension of aesthetics, which is a very vague notion. For example, Palmer, Schloss, and Sammartino (2013) implied that people tend to confuse aesthetics with art, however these two concepts are only partially similar. Furthermore, aesthetics response includes some individual level of perception (Cai & Xu, 2011). People can evaluate the same image completely different basing their

decisions on different judgments (Palmer et al., 2013). In addition, their assessments can differ from the assessments of professional photographers (Datta, Joshi, Li, & Wang, 2006).

In his famous essay “Camera lucida: reflections on photography” Barthes (1982) underlined multiple times the importance of personal subjective approach when it comes to assessing a photo. Distinguishing between *studium* and *punctum* of a photo image, where studium is just a simple surface semi-interested study of what is depicted in the photo and punctum is something that touches the soul or contributes to the creation of a moment when the spectator feels connected to the image, the author highlighted that the personal subjective approach is fundamental in the perception of the punctum itself. A detail perceived as a punctum by one spectator may not be the same for another. According to Barthes (1982) photography assessment is a very individual experience.

In general, one can say that aesthetics is directly linked to the notion of beauty. According to Cambridge Dictionary (2018) aesthetics can be described as “relating to the enjoyment or study of beauty” and “an aesthetic object or a work of art is one that shows great beauty”. The association of aesthetics with beauty was also established by Augustin, Wagemans, and Carbon (2012).

Visual Appeal in HCI Studies

What is interesting, visual aesthetics received more attention in the Human-computer studies (Lavie & Tractinsky, 2004; Heijden, 2003; Cai & Xu, 2011; Schnurr, Brunner-Sperdin, & Stokburger-Sauer, 2016; Bloch, Brunel, & Arnold, 2003). The most famous research is the one made by Lavie and Tractinsky (2004). They split perceived website aesthetics into two dimensions - “classical aesthetics” and “expressive aesthetics”. The first dimension is more about clarity/clear structure of a website and the

latter refers to its creativity, richness or design. Lavie and Tractinsky (2004) implied that the first dimension contributes to a users' better understanding. At the same time, the latter dimension contributes to the involvement of a user. It was also found that both of the dimensions are associated with the user's feeling of pleasure. The authors concluded that although these two dimensions are seemingly different, they are positively related and constitute one whole perceived visual attractiveness of a website.

Cai and Xu (2011) took over and adapted some scales from the Lavie and Tractinsky (2004) research, at the same time using their own developed items. They concluded that both classical aesthetics and expressive aesthetics of a website is positively associated with consumer shopping enjoyment. Moreover, they indicated that "when subjects shopped for a hedonic product, the effect from expressive aesthetics on shopping enjoyment was more significant than when subjects shopped for a utilitarian product" (Cai & Xu, 2011, p.177).

When it comes to branded products on Instagram, it is worth mentioning that they vary from influencer to influencer. Even if nowadays it is possible to sell everything online, not every product on Instagram can be sold *pari passu*. According to the research by Dana Rebecca Designs (n.d.), there are several types of products that people tend to buy after they saw them on Instagram. To be more precise, these are "clothing", "makeup", "shoes", "jewelry" and the category the authors named "unknown". According to Cai and Xu (2011), such products can be regarded rather as hedonic than utilitarian.

Heijden (2003) found that attractiveness of a website, which was defined as "the degree to which a person believes that the website is aesthetically pleasing to the eye" (p.544) is related to its color scheme as well as the layout in general. Furthermore, the

author indicated that attractiveness influences enjoyment in using the website, which correlates with the previous studies.

Exploring not only visual appeal of websites and print advertisements but also visual appeal of a product placed in such contexts, Schnurr et al. (2016) concluded that the websites as well as print advertisements, which scored higher in classical and expressive aesthetics, were perceived as more attractive. Moreover, they discovered that when consumers encounter an unfamiliar product put in an attractive context they evaluate higher the attractiveness of the product itself. However, context does not play any significant role when it comes to evaluating a familiar product. They also concluded that the perceived visual appeal of a product is positively correlated with perceived product quality. The most important conclusion is that “the higher ratings of product attractiveness translate into higher intentions to purchase the product” (Schnurr et al., 2016, p. 242).

Angeli, Sutcliffe, and Hartmann (2006) also studied website visual aesthetics. They played with interfaces of a website, making it more static and in another case more animated. According to Angeli et al. (2006):

The metaphor-based website adopted a playful and engaging interaction style, with animated picture characters providing information by speech bubbles, and generating other pictures and information from inside their head. The menu-based style adopted a more serious interaction style, displaying a static picture instead of the animated head, and with no humorous effects. (p.272)

The authors took over the aesthetics items from the Lavie and Tractinsky (2004) research and concluded that the metaphor-based website was rated better on expressive aesthetics, while the menu-based website on classical. In general, the metaphor-based

website appeared to be more attractive to respondents. However, respondents remembered more of a content after interacting with the menu-based website, while metaphor-based website triggered the memory of the overall flash-elements of the interface. According to Lavie and Tractinsky (2004), “The most common reason for preferring the metaphor-based interface made explicit reference to a more engaging ($N=8$) and more interactive ($N=7$) style” (p.277). At the same time, the menu-based website was easier to use.

Bloch, Brunel, and Arnold (2003) studied the aesthetics of products as well as the “overall level of significance that visual aesthetics hold for a particular consumer in his/her relationships with products” (p.552), which they called CVPA. The authors implied that aesthetically pleasing products have a great influence on consumers. Moreover, they suspected that consumers who are more sensitive to the perception of visual aesthetics might be inclined to purchase the products they find visually appealing. According to Bloch et al. (2003), the concept of CVPA consists of several facets:

- (1) the value a consumer assigns to product appearances in enhancing personal and even societal well being, (2) acumen, or the ability to recognize, categorize, or evaluate product designs, (3) the level of response to visual design aspects of products, and (4) the determinancy of visual aesthetics in affecting product preferences and purchase satisfaction. (p.552)

The outcome of their research showed that, indeed, consumers who are more visually oriented i.e. the “high CVPA respondents” (Bloch et al., 2003, p.561) tend to purchase the products that are more visually appealing.

Vieira (2010) also studied visual aesthetics, however, her focus shifted to exploring the store environment and how consumers perceived visually appealing

environments. Vieira (2010) adopted dimensions of CVPA, proposed by Bloch et al. (2003) and suggested the following concept of visual store aesthetics:

CVSA is assumed to have three related facets: (1) the value a consumer assigns to a store environment in enhancing personal and even societal well being, (2) acumen, or the ability to recognize, categorize, or evaluate product designs, and (3) the level of response to visual design aspects of products. (p.366)

It was found that CVSA is positively correlated with consumers' intentions. In general, the research stated that there is "a positive relationship between CVSA and consumer satisfaction, loyalty, items bought, minutes visiting the store, and \$ spent" (Vieira, 2010, p. 371).

In general, the described pool of research regarding consumers' purchase intentions can be illustrated as depicted in Figure 1.

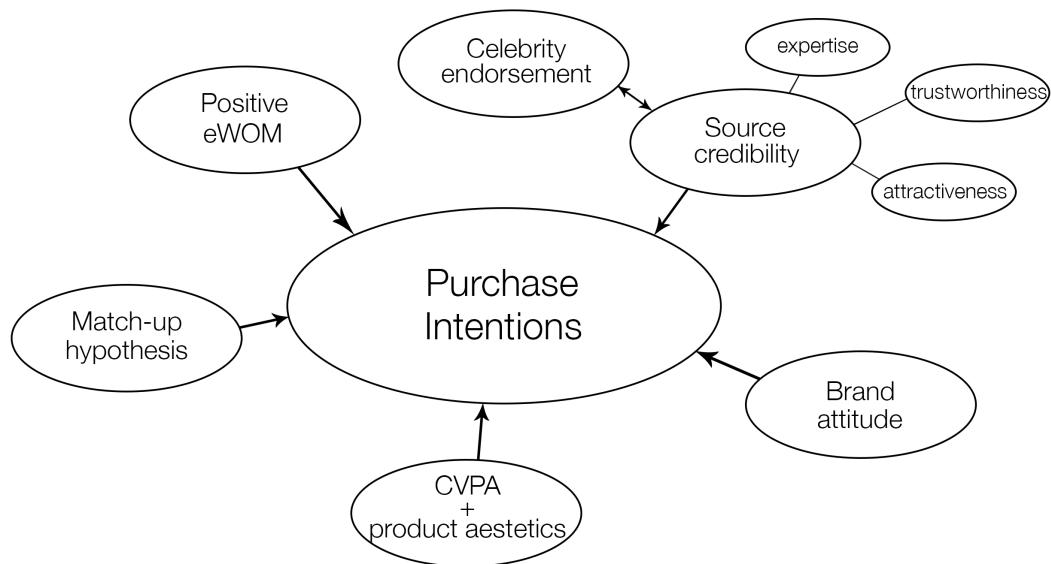


Figure 1. The described research on purchase intentions and their triggers.

Visual Appeal in Computational Photo Assessment

For this particular research, classical and expressive aesthetics are still very broad notions. These features are perfectly suitable for something that consists of compound parts as, for example, websites, where one can assess two distinct areas - design and usefulness - at the same time. But in order to assess visual appeal of a photo image these two dimensions are still very general. That is why it was decided to review the literature devoted to computational photo assessment since for that task it is necessary to have very precise and structured attributes that, moreover, overlap with the features usually described in photo books, manuals and guides for photographers (Langford & Bilissi, 2008; Dunlop, n.d.; Lee, 2014).

For example, Datta et al. (2006) implied several features in order to distinguish visually appealing photos from non-visually photos. Among all the features are: “Exposure of light and colorfulness”, “Saturation and Hue”, “The Rule of Thirds”, “Familiarity Measure”, “Wavelet-based Texture”, “Size and Aspect Ratio”, “Region Composition”, “Low Depth of Field Indicators”. In general authors highlighted the importance of colors, light and composition for the overall evaluation of photo aesthetics.

Ke, Tang, and Jing (2006) developed features for distinguishing between professional photos (images of a good quality) and snapshots (images of a bad quality) and then tested them on the photos collected from DPChallenge. The features that were used are the following: “Spatial Distribution of Edges”, “Color distribution”, “Hue Count”, “Blur”, “Brightness” and “Contrast”. The most significant attribute for the distinction between mentioned two types of photos appeared to be “Blur”.

The research made by Dhar, Ordonez, and Berg (2011) seems to have some commonalities with the research by Ke et al. (2006). However, here the authors developed an automatic method of determining visually appealing and interesting (or causing the most interactions) images. Dhar et al. (2011) used features related to composition of photo such as “presence of a salient object”, “Rule of Thirds”, “Low Depth of Field” and “Opposing Colors”. Furthermore, they worked with the features related to image content such as “presence of people”, “portrait depiction”, “presence of animals”, “Indoor-Outdoor classification” and “Scene type”. The third bunch of features were related to light used in the photo: “clear skies”, “cloudy skies” and “sunset skies”. As stimuli, they used images collected from the Flickr and, as Ke et al. (2006), DPChallenge.

Gadde and Karlapalem (2011) developed a system for robots to make photos of a good quality. Some of their features they took over from ones usually employed by professional photographers, namely ‘color’, “contrast”, “light”, “composition” (The Rule of Thirds and The Golden Ratio Rule) and “focus control”. For the future studies, they proposed to add “symmetry” implying that “images with some symmetry are rated higher than the rest and with more complicated composition guidelines of professional photography” (p.2065).

Totti, Costa, Avila, Valle, Meria Jr., and Almedia (2014) investigated the popularity of images, which was expressed in amount of reshares made by platform users, on content-sharing platform Pinterest. They worked with three groups of features – aesthetic, semantic and social-network. The aesthetic pool of features was very bright: starting from colors and their tonality and ending with compositional rule of thirds. However, the authors found that social features play the most important role when it

comes to predicting the popularity of image on Pinterest. As for aesthetic features, they become a greater predictor only when images are already popular enough.

Research Question

Basing on the reviewed literature one can say that there are a lot of features that influence the aesthetical assessment of images. The most common among them however seem to be composition, colors and light (brightness). If to consider them in more detail, composition, for example, is a very vague notion. It would be imprudent to reduce it only to frequently mentioned “The Rule of Thirds”. Barthes (1982), for example, did not give it a lot of attention. Arnheim (1974) focused more on the organized and balanced space inside the picture. In the recent studies, it was revealed that for an image to be visually appealing the Rule of Thirds is not as important as everyone tends to think (Amirshahi, Hayn-Leichsenring, Denzler, & Redies, 2014). Composition can also imply a Golden Ratio, Fibonacci Sequence and many other rules (Lee, 2014).

According to Ke et al. (2006) there are different features used for assessing different kind of photography genres. Hall (2007) explicitly distinguished between three categories of photography and highlighted that there are different visual attributes recipients use for assessing the photos from each category. This particular research was aimed at investigation of the question: What are the most important features used to assess visual appeal of Instagram product photos made by Instagram bloggers?

Due to the fact that the image category investigated in the present research is rather specific and the approach used in almost all of the previous studies about image visual appeal was computational, whereas the present study sought to have more subjective approach, it was decided to ask two practicing designers and four commercial

photographers about the features they use while assessing Instagram product photos made by Instagram influencers. All the invited professionals were females.

Research Design and Methodology

Stimuli Collection

The empirical part of this work was divided into several parts. In the first part, all the stimuli - 63 photos made by Instagram bloggers depicting the watches of women's jewelry and watches brand "Cluse" - were collected (see Figure 3). For this purpose, Instagram search engine itself and hashtags "#cluse" and "#clusewatches" were used. It is important to underline that only influencers who explicitly called themselves bloggers on their profiles were chosen for the sample.

All the images were similar in the construction of the frame (close-ups) so one could clearly read the name of the brand. Furthermore, only round-shaped watches with light clock faces were selected. Such a shape was chosen on purpose because according to Arnheim (1974) people are attracted to the perfect but simple round shape of objects. Watches with the black clock faces were excluded from the sample because in Western cultures it can cause different, often negative, associations like death or funerals and, moreover, is usually perceived as a formal color (Patel & Puri, n.d.).

Selection of the Stimuli for the Pre-Test

The second part covered the selection of stimuli for the pre-test and, consequently, the experiment itself. It was necessary to sort out the photos that were going to be shown to the future respondents. For this purpose, two practicing designers and four practicing commercial photographers from Austria were asked to select 10-15 the most visually appealing images out of those picked up in the first step and shortly describe why they made such a choice (see Table 1).

Furthermore, the photographers were asked to answer the two following questions: “What do you think are the most important features consumers use to evaluate a photo of a product? What features/attributes are the most important for you as a photographer while you make a commercial product shot?” (see Table 3). At last they had a possibility to give some comments to the reviewed content. That last task was optional.

The image was added to the final sample when at least four professionals had chosen it at the first place (see Table 1). The selection resulted in six photos at the following numbers 4, 14,15,18, 25, 40 (see Figure 3).

Feature Extraction

Then it was necessary to understand, which features should be manipulated for the photos to become less visually appealing. Using the given answers from professionals, a semantic analysis based on word frequency was performed. It exposed three top features - “Color”, “Composition” and “Accessories” (see Table 2).

However, composition, as was previously described, cannot be reduced only to one particular rule (Lee, 2014; Savakis et al., 2000) and, thus, it was decided not to use this feature. At the same time, accessories are related to the image content, which can hardly be edited or erased from the picture. Moreover, it remained unclear what the difference between “Accessories” and “Details” was. Therefore, it was decided to work only with colors. This decision was also supported by the reviewed pool of literature where “colors” was one of the most frequently mentioned feature. Moreover, two photographers (photographer D. and photographer V.) who participated in the survey mentioned that they didn’t like the composition of the sampled material.

Furthermore, colors are believed to play a great role in branding and advertising. They can trigger different emotions and associations (Palmer & Schloss, 2016) but also influence consumers' purchase intentions (Stanger, 2012; Patel & Puri, n.d.; Smith, n.d.; Lin & Heer, 2014). Patel and Puri (n.d.) stated that color plays a crucial role for 85% of buyers in deciding whether to finally make a product purchase or not. Furthermore, according to the authors, it takes only 90 seconds for a consumer to understand whether he/she likes a product or not and up to 90% of this assessment process is built upon color evaluation. In general, Patel and Puri (n.d.) highlighted that visual appearance is a determining factor for consumers' decision to make a purchase (around 93%).

Of course, different people can like different colors. For example, it is believed that female consumers prefer blue, purple and green while men like blue, green and black (Patel & Puri, n.d.). According to Palmer and Schloss (2011a) men prefer more saturated colors and women, on the contrary, more muted colors. Also color-associations and preferences can vary across cultures (Lin & Heer, 2014; Patel & Puri, n.d.). Lin and Heer (2014), for example, indicated that in China the color of luck is red, however in European cultures it is mostly seen as the color of danger whereas for luck green is used.

Thus, once again, it was decided to manipulate colors and to increase their level of saturation (approx. up to 80%) using Photoshop CS6 so they would look intensely vivid (see Figure 2). It is believed that highly saturated colors are perceived less harmonious (Palmer & Schloss, 2011b; Szabó, Bodrogi, & Schanda, 2010). Of course, one could also work with desaturated colors. However, black and white photography has its own aesthetics (Barthes, 1982), and that is beyond the scope of the present study.

It was also decided to exclude photos depicting influencers' faces or bodies from the study. According to the previous research, attractiveness of an endorser can influence consumers' purchase intentions (Rebelo, 2017) and engagement rates (Djafarova & Rushworth, 2017; Naumanen & Pelkonen, 2017). Moreover, the online names of Instagram bloggers were also not visible because of the recognition factor that could possibly affect the respondents' answers, especially in the future experiment, where purchase intentions were going to be explored (Karla McCormick, 2016; Djafarova & Rushworth, 2017). In general, the present study sought to focus only on visual content itself and the attitude towards it (not towards influencer).

Pre-Test: Procedure and Results

Participants were asked to evaluate the six original photos and six saturated photos¹ using a 5-point scale ranging from (1) “very unappealing” to (5) “very appealing”. For this matter EFS Survey Interface was used. The participants were gathered through the group on Facebook connected to the University of Vienna (“Uni Wien Studentinnen und Studenten”) and needed to be females within the age range of 22-37 years living in Austria, Germany or Switzerland (DACH countries). In the beginning of the survey they got informed about the matter of this study, the material they were going to assess and where it was collected. Furthermore, the participants were assured the collected data were going to be used for the purpose of the research only and the survey itself was anonymous. Also, the respondents could not skip any questions. They needed to answer the first question in order to move on to the second one and so on.

¹ See Figure 4, Figure 5, Figure 6, Figure 7, Figure 8, Figure 9



Figure 2. The original photo vs. saturated photo. The original image was retrieved from https://www.instagram.com/p/BpB5S9uHcKf/?utm_source=ig_share_sheet&igshid=1qnb0v0urqonc. Copyright 2018 by @aerielka.

In general, 30 ($n = 30$) participants (all from Austria) took part in the pre-test with the average age 25.80 ($M = 25.80$, $SD = 3.20$) (see Table 17). The first thing, which became clear after the frequency test was performed and the mean, median, mode and percentiles were obtained, is that the mean value for edited images and the images before color change in Photoshop is significantly different. If the original images got a mean range from 3.2 to 3.8 the mean score of edited ones fell to a range from 1.3 to 1.7 respectively. According to the median values all the non-edited images received 3 and 4 whereas the edited ones only 1 and 2. At the same time, the mode (the most common value) results showed that the original images received 3 and 4 while the modus of images after color change was equal to 1 (see Table 4).

Two photos at the numbers 4 and 40 got the highest mean value whereas the photos at the numbers 25 and fifteen 15 the lowest one. Frequency results of every single image showed that the image 4 and the image 40 got the highest scores in the category

“very appealing” – 26.7% (see Table 12) and 23.3% (see Table 13) respectively. For all the other images the scores were not higher than 16.7% and in general were significantly lower (6.7% or 10%).

According to mean the two least appealing photos appeared to be at the numbers 25 and 15 after changing the saturation of colors. Image 25 (saturated) got the highest score in the category “very unappealing” – 76.7% (see Table 14). At the same time image 15 (saturated) got 73.3% (see Table 9).

Thus, it became clear that color plays a significant role when it comes to the assessment of product image visual appeal. The images where colors are disharmonious i.e. increasingly vivid look less appealing.

Experiment

Research Hypothesis

Then it was necessary to understand if visually appealing images have an effect on women’s purchase intentions. In other words, the present study sought to investigate the relationship between image visual appeal and female user’s purchase intentions. Taking into account the described pool of research, the following hypothesis was proposed: women are more inclined to make a purchase of a depicted product if a picture is more visually appealing compared to if a picture is less visually appealing.

Procedure

Basing on the results of the pre-test, the two most appealing images and their edited versions were sorted out. Thus, picture 4 and picture 40 were selected. It was decided to split respondents ($n = 60$) into two groups – 30 each. One group was shown those pictures before color change (more visually appealing) and the other group was shown the same two pictures but with saturated colors (less visually appealing). Two

different Facebook groups connected to the University of Vienna (“Publizistik Studierende Univie” and “Soziologie Uni Wien”) were used in order to collect respondents. Once again, the participants needed and, therefore, were asked right away to be females within the age range of 22-37 years living in Austria, Germany or Switzerland (DACH countries). First 30 respondents who needed to evaluate their purchase intentions after seeing more visually appealing images were collected from the group “Publizistik Studierende Univie”. Another 30 respondents who needed to evaluate their purchase intentions after seeing less visually appealing images were collected from the group “Soziologie Uni Wien”. The system used (EFS Survey Interface) did not allow the same person to pass the questionnaire twice.

At the beginning of the questionnaire the respondents got informed about the matter of the study, the material they were going to evaluate and that it was collected from Instagram bloggers. Once again, the participants were assured that the collected data would be used for the purpose of the research only whereas the survey itself was completely anonymous. And, as in the pre-test, the respondents could not skip the questions.

In both cases the following situation was created: “You are searching for a new watch. Your budget is around 130 Euros². You got to know that with such a budget you can get watches from the Dutch brand “Cluse” and you got interested. Now, please, rate, how likely it is that you would purchase the product in the following pictures?”. The respondents were given a 5-point scale ranging from (1) “very unlikely” to (5) “very likely” to assess their purchase intentions after looking at each of the pictures. Moreover, the respondents were asked about how often they used Instagram with the

² The maximal price per a Cluse watch.

following answer-options: “Several times a day”, “Around once a day”, “A few times a week”, “Around once a week”, “Less than weekly”. All the collected data was analyzed using SPSS.

Results

Before comparing purchase intentions of watches in two groups it was necessary to check whether these two groups were similar regarding the age range, Instagram usage, and country. Therefore, the randomization check was needed.

The first independent-sample t-test with an independent variable “age” was performed. The results showed that there was no significant difference in the scores for the group that was shown the normal pictures i.e. more visually appealing ($M = 25.43$, $SD = 3.06$)³ and for the group that was shown the saturated ones i.e. less visually appealing ($M = 26.57$, $SD = 3.92$); $t(55) = -1.25$, $p = 0.217$ ⁴.

After that the second independent-sample t-test with an independent variable “Instagram usage” was performed. The results showed that there was also no significant difference in the scores for the group that was shown the normal pictures i.e. more visually appealing ($M = 1.50$, $SD = 1.01$)⁵ and for the group that was shown the saturated ones i.e. less visually appealing ($M = 1.97$, $SD = 1.75$); $t(46) = -1.27$, $p = 0.212$ ⁶.

There were only two participants from Germany in the first experimental group which was shown the more visually appealing images. Other participants (in the first group as well as in the second group) stated they were from Austria. However, it was decided to perform the third independent-sample t-test with an independent variable “country”. The outcome revealed that there was also no significant difference in the

³ See Table 19

⁴ See Table 20

⁵ See Table 21

⁶ See Table 22

scores for the group that was shown the normal pictures i.e. more visually appealing images ($M = 1.07$, $SD = 0.25$)⁷ and for the group that was shown the saturated ones i.e. less visually appealing editions ($M = 1.00$, $SD = 0.00$); $t(29)=1.44$, $p = 0.161$ ⁸.

Hence, it became clear that scores for age, Instagram usage and country in two groups do not significantly differ from each other, and therefore there should be no bias in the final examination of respondents' purchase intentions. Thus, an independent-samples t-test was conducted to compare purchase intentions of watches in two groups. One group of 30 people was shown two images before changing the saturation of colors and the other group of 30 people was shown the same two images but after changing the saturation of colors. It was sufficient to understand whether or not there was a significant difference between purchase intentions Means.

In case of picture 4 there was a significant difference in the scores for the group that assessed their purchase intentions after seeing the original image ($M = 3.10$, $SD = 1.03$)⁹ and for the group that assessed its purchase intentions after looking at the same picture but saturated ($M = 2.33$, $SD = 1.16$); $t(58) = 2.72$, $p = 0.009$ ¹⁰.

In case of picture 40 there was a significant difference in the scores for the group that assessed its purchase intentions after seeing the original image ($M = 3.20$, $SD = 1.32$)¹¹ and for a group that assessed its purchase intentions after looking at the same picture but saturated ($M = 2.17$, $SD = 1.26$); $t(58) = 3.10$, $p = 0.003$ ¹².

These results suggest that visual appeal of images does have an effect on purchase intentions. Specifically, the results suggest that when women see an Instagram photo

⁷ See Table 23

⁸ See Table 24

⁹ See Table 25

¹⁰ See Table 26

¹¹ See Table 25

¹² See Table 26

that is more visually appealing they are more inclined to purchase the product depicted on that picture. Thus, proposed hypothesis was supported.

Conclusions

The present study had two primary goals. The first goal was to explore visual appeal of product images made by Instagram bloggers and to answer the following research question: “What are the most important features used to assess visual appeal of Instagram product photos made by Instagram bloggers?”. Although the perception and evaluation of everything, not only photos, is a very subjective matter, the present study made an attempt to sort out some common features that can be used to assess Instagram product photos. The literature review showed that there are many features that are used in assessment of image visual appeal. The most common among them seemed to be composition, colors and light (Hall, 2007; Datta et al., 2006; Ke et al., 2006; Dhar et al., 2011; Gadde & Karlapalem, 2011; Totti et al., 2014). However, since the photo category investigated in this particular research is specific, and since the approach used in almost all of the studies was computational, while the present research sought to have a more subjective approach, the professional designers and commercial photographers were invited to participate in the study. They assessed images collected from Instagram bloggers by selecting up to fifteen photos and explaining why they made such a choice. It was indicated that the most frequently used features are “color”, “composition” and “accessories”. The resulted features mostly interweave with the features used in other researches. However, “accessories” became an unexpected outcome.

Since composition is a very vague notion and accessories are very hard to manipulate, it was decided to change the product photos’ appeal working only with color, which was, moreover, the most frequently mentioned feature not only in the

literature review but also by invited professionals. Furthermore, colors are believed to play a great role in branding and advertising and, hence, influence customers' purchase intentions (Stanger, 2012; Patel & Puri, n.d.; Smith, n.d.; Lin & Heer, 2014).

It was revealed that color does play a significant role in visual appeal of product images on Instagram. The highly saturated photos got much lower scores than the photos without color change. This outcome goes along with the outcomes of previous studies, where it was revealed that highly saturated colors are perceived less harmonious (Palmer & Schloss, 2011b; Szabó, Bodrogi, & Schanda, 2010).

The second goal was to investigate purchase intentions of female Instagram users within the age range of 22-37 years as the most active social media users (Dana Rebecca Designs, n.d.) in relation to more visually appealing images and less visually appealing images. Previous studies already revealed that purchase intentions are positively associated with celebrity endorsement (Karla McCormick, 2016; Naumanen & Pelkonen, 2017) and product attractiveness (Schnurr et al., 2016; Bloch et al., 2003). Djafarova and Rushworth (2017) even stated that influencer endorsement leads to actual purchase. However, the present study decided to investigate this matter from a different angle and take the posted content itself into consideration. It was hypothesized that if a picture is more visually appealing women are more inclined to make a purchase of a depicted product compared to if a picture is less visually appealing.

The results of the experiment indicated that there is a significant relationship between visual appeal of an Instagram product photo and women's purchase intentions. In other words, women are more inclined to buy a depicted product if a photo is more visually appealing.

Limitations and Discussions

This present study had a number of limitations. First, only one-sided opinion, namely of the professional designers and photographers, about what makes a product photo posted on Instagram by influencers appealing was obtained. Future studies could also ask users in order to examine if there is any difference in features used. Moreover, the answers given by the professionals were often very vague and insufficient (for example, according to the photographer S. the photo “needs to be interesting for longer than 2 seconds” – see Table 3). This is a common problem when it comes to investigating human perception because it is, first, a very subjective matter and as follows the features used to describe it are sometimes very abstract (Ke et al., 2006). The future studies could also ask the opinion of bloggers and respondents themselves and then compare them.

Also, the respondents of the present study were assessing only photos where the colors had been changed. Future studies could use the features singled out in this particular research as the additional variables and, hence, examine how their combinations influence consumer’s perception of image visual appeal and if they influence respondents’ purchase intention. Future investigations could start with the addition of “composition” feature. On the other hand, future studies could also take the features “hue” and “lightness” into consideration. These two are also believed to contribute to the harmony of colors (Westland, Laycock, Cheung, Henry, & Mahyar, 2007).

Furthermore, the present study was focused on females only. Future studies could include males and, thus, investigate the difference between two sexes in their

evaluation of visually appealing photos as well as in their purchase intentions towards the depicted product.

The other limitation of this study was that only round-shaped watches were examined. It would be interesting to examine the differences in respondent's perceptions and purchase intentions when they see the square-shaped, another simple form according to Arnheim (1974), and round-shaped watches. Moreover, it would be interesting to investigate not only the difference between shapes of depicted products in affecting peoples' perception and purchase intentions but also between their color, since different colors are perceived differently (Stanger, 2012; Patel & Puri, n.d.; Smith, n.d.; Lin & Heer, 2014). Future studies could include dark colored watches, for example, to examine consumer's purchase intentions and then compare the scores between light and dark watches.

However, the present study took watches only as an example of a product that could be advertised. The focus was rather on general visual appeal of the product photos than on advertising of a particular product and brand. Thus, future investigations could examine other products. As suggested in the research made by Dana Rebecca Designs (n.d.) there are several object categories that users tend to buy after seeing them on Instagram - "clothing", "makeup", "shoes", "jewelry".

Furthermore, this study did not examine how important visual appeal of the pictures and of the product itself was for the recipients. This is a very important point because it could influence not only consumer's perceptions of image visual appeal but also their purchase intentions (Bloch et al., 2003; Vieira, 2010). Future studies could add this dimension to their research and thus provide some additional insights.

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@austulyys (2018, October 12). [Photo of a Cluse watch]. Retrieved from

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https://www.instagram.com/p/Bo0yW8egd_d/

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@momhope (2018, October 11). [Photo of a Cluse watch]. Retrieved from

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<https://www.instagram.com/p/BoyDScziwpS/>

@heleaan (2018, October 9). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BouWpgZjj1W/>

@mischimohn (2018, October 9). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BotJctbDgmq/>

@intomycloset_ (2018, October 10). [Photo of a Cluse watch]. Retrieved from

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Melan Brunet [@melannbrt_] (2018, September 22). [Photo of a Cluse watch]. Retrieved

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Retrieved from <https://www.instagram.com/p/BovdhQvn772/>

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<https://www.instagram.com/p/Bot8qh6AUXD/>

Audrey Delcroix [@hellosally_] (2018, October 8). [Photo of a Cluse watch]. Retrieved

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@tyska2509 (2018, October 6). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BolfPDpnbzC/>

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<https://www.instagram.com/p/BnyEsd9luIj/>

@wendeliciously (2018, October 16). [Photo of a Cluse watch]. Retrieved from

https://www.instagram.com/p/BpAJ3TJC1_-/

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<https://www.instagram.com/p/BpB5S9uHcKf/>

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<https://www.instagram.com/p/BpBdT-qnxKy/>

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Agnieszka Majka [@_agnes_27] (2018, October 12). [Photo of a Cluse watch]. Retrieved

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@ninooou34 (2018, September 15). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BnwVsLxIHJv/>

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<https://www.instagram.com/p/BoR2QTnn1fT/>

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<https://www.instagram.com/p/BorZ1OhFH0o/>

@allabout_missmarch (2018, October 16). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BpASoZtlCtM/>

@momhope (2018, September 25). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BoKATh5D42W/>

Agnieszka Majka [@_agnes_27] (2018, September 9). [Photo of a Cluse watch].

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https://www.instagram.com/p/Bo_7JKmnsqy/

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@jojadasdiary (2018, October 1). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BoYYG2GA54K/>

@leeeam17 (2018, October 10). [Photo of a Cluse watch]. Retrieved from

<https://www.instagram.com/p/BovxU7FFsQP/>

@savguma (2018, October 11). [Photo of a Cluse watch]. Retrieved from

https://www.instagram.com/p/BoxucKJjer_/

Abstract (English)

Influencer endorsement on Instagram is a common thing nowadays, although the platform itself is relatively new. Some research has already been done in this area. Indeed, purchase intentions, eWOM, celebrity endorsement, source credibility and brand attitude were a subject of investigation way before the social media platform Instagram became popular. However, few studies have been carried out in the area of visual content upon which Instagram is built. Although the Internet is full of articles about Instagram content marketing or engaging Instagram content, a solid research on what makes Instagram content visually appealing and how it influences purchase intentions of users, especially women, is still missing. That is why this paper aims to answer the following questions: “What makes a product photo made by an Instagram blogger attractive for a female user?” and “How are visually appealing product photos produced by Instagram bloggers related to women’s purchase intentions?”. Thus, this research aims to provide a valuable and up-to-date theoretical material for brands and marketers who choose to use Instagram as an advertising tool as well as for influencers themselves who could use a better understanding of the content women find attractive, and what effects it has on their purchase intentions.

Keywords: Instagram, purchase intentions, influencer endorsement, visual aesthetics, visual appeal

Abstract (Deutsch)

Die Präsenz von “Influencer” auf Instagram ist heute nicht mehr wegzudenken. Obwohl die Plattform selbst relativ neu ist, wurden bereits einige Untersuchungen durchgeführt. Gegenstand der Untersuchungen waren unter anderem Kaufabsichten und Markverhalten der Konsumentinnen und Konsumenten, eWOM, Prominente sowie die Glaubwürdigkeit der Quelle. Besonders der Bereich visueller Inhalte, auf dem Instagram basiert, wurde jedoch kaum in Studien untersucht. Obwohl bereits zahlreiche Artikel über Instagram-Content-Marketing oder über Instagram-Inhalte verfasst wurden, fehlt jedoch eine Untersuchung darüber, was Instagram-Inhalte optisch ansprechend macht und wie die Kaufabsichten von Benutzern, insbesondere von Frauen, beeinflusst werden. Aus diesem Grund widmet sich diese Masterarbeit in der Wissenschaft noch nicht behandelten Themenbereich, und beantwortet folgende Forschungsfrage: “Was macht, von einem Instagram Blogger erstelltes, optisch ansprechendes Produktfoto für eine weibliche Nutzerin attraktiv und üben sich diese auf das Kaufverhalten von Frauen aus?”

Ziel dieser Studie ist es daher, Marken und Vermarkter, die sich für Instagram als Werbemittel entscheiden, sowie für “Influencer” selbst, ein wertvolles und aktuelles theoretisches Material zur Verfügung zu stellen. Dieses soll zu einem besseren Verständnis führen und im Besonderen Inhalte wiedergeben, die User insbesondere Frauen für attraktiv halten. Schließlich sollen die Auswirkungen auf das Kaufverhalten empirisch dargestellt werden.

Schlüsselwörter: Instagram, Kaufabsichten, Einfluss der Influencer, visuelle Ästhetik, visuelle Attraktivität

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Figure 3. All the collected stimuli.



Figure 4. Picture 4_saturated. The original image was retrieved from <https://www.instagram.com/p/BoRfYmeC4hN/>. Copyright 2018 by @lyannemeijer.

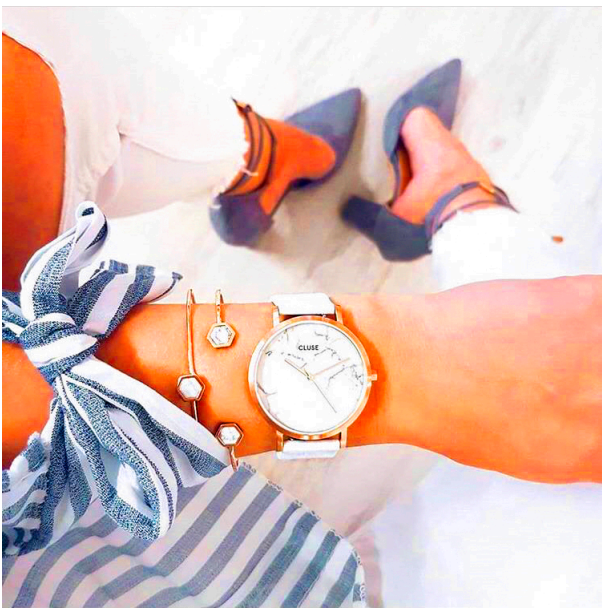


Figure 5. Picture 14_saturated. The original image was retrieved from <https://www.instagram.com/p/BkpGrKGBDi5/>. Copyright 2018 by @nadine.nm_



Figure 6. Picture 15_saturated. The original image was retrieved from <https://www.instagram.com/p/BkmtBTOA6dM/>. Copyright 2018 by @luiisascho.



Figure 7. Picture 18_saturated. The original image was retrieved from <https://www.instagram.com/p/Bo1ERUgnJpJ/>. Copyright 2018 by @austulyys.



Figure 8. Picture 25_saturated. The original image was retrieved from <https://www.instagram.com/p/BovieWhFWW1/>. Copyright 2018 by @intomycloset_.



Figure 9. Picture 40_saturated. The original image was retrieved from <https://www.instagram.com/p/BpB5S9uHcKf/>. Copyright 2018 by @aerialka.

List of Tables

Table 1. Images Sorted Out by Designers and Photographers.

	Designer D.	Designer E.	Photographer r S.	Photographer r D.	Photographer V.	Photographer r E.
1		colors, depth of field				
2	soft gentle colors		good use of frame space, a lot going on but still not distracting from main subject	details - camera, candles, colors		
3	contrast, background					color, accessories
4		colors, composition, symmetry	nice colors, composition	plot, details around, colors of warm autumn	style, atmosphere, composition, details	color, accessories
5						
6						
7	color balance					
8						
9	composition, quality of photo	harmony of colors. Matching gold of watch with zipper				
10						
11	color combination			contrast of the main object and background/ watch' color		

1 2			good framing, a lot going on but still not distracting from main subject			
1 3	style					color, accessories
1 4	contrast			minimalist colors, style	colors, contrast, style	color, accessories
1 5	textural and non-distracting background		nice colors, split composition		atmosphere, composition, details	color, accessories
1 6						
1 7						
1 8		symmetry, patterns	seems spontaneous and unposed	composition, contrast, the whole style of a person	style, composition, details	
1 9	matching diagonal patterns and colors	the diagonally position of the arm is quite interesting				
2 0					color choice	color, accessories
2 1		colors & contrast				
2 2						color, accessories

2 3			seems spontaneous and unposed			
2 4						
2 5	animal print- use (trendy), good colors		seems spontaneous and unposed		style, details, colors	color, accessories
2 6			clean and simple, good focus on watch			
2 7			frame background filled nicely, not too busy yet not empty			color, accessories
2 8	composition, focus on watch			reminds me 90s/like a movie close- up shot		
2 9			stylish (pumpkins are too much thou)	colors, composition, the watch itself	style, colors, composition is ok	
3 0						
3 1						
3 2						
3 3						
3 4	postproductio n (filter), colors					
3 5					focus on watches, details	

3 6					postproduction (filter), pleasant colors	
3 7						
3 8		I like that the watch separates black and white on the arm and the minimalist and straight composition of the elements, symmetry				
3 9						
4 0		harmony of colors (again matching gold of watch with jacket)	seems unposed, everyday shot	colors, composition, sharpness of the hand, skin color correction	style, composition, details, colors	color, accessories
4 1						
4 2						
4 3					style, details, colors	
4 4				colors, the watch itself	colors	color, accessories

4 5		colors, contrast			details, style	
4 6						
4 7	combination of gold and brown colors		good choice of colors and brightness of background to focus on product			color, accessories
4 8						
4 9	color combination, composition					
5 0	soft and gentle atmosphere			daily light, color correction		color, accessories
5 1						color, accessories, details
5 2						
5 3			good choice of colours and brightness of background to focus on product			
5 4						
5 5						
5 6						

5 7		interesting color combo, rule of thirds				
5 8		wristband matches leaves	spontaneous looking, appealing because not too overdone			color, accessories
5 9						
6 0			very nice color choices, appealing image composition		composition, details, colors	
6 1						
6 2						
6 3		colors, texture, compositio n			style, details, focus on watch	

Table 2. Results of the Semantic Analysis. Frequency of Mentions.

Categories	Total quantity of mentions during the assessment
Color	54
Composition	17
Accessories	15
Details	13
Style	12
Watch	10
Contrast	7
Background	6
Atmosphere	3
Subject	2
Pattern	2
Filter	2
Framing	1
Light	1
Texture	1
Depth of field	1
Object	1
Sharpness	1

Table 3. Answers of Designers and Photographers to Additional Questions.

Questions	Respondents			
	Photographer S.	Photographer D.	Photographer V.	Photographer E.
The most important features for consumers in evaluating a product photo	Needs to be interesting for longer than 2 seconds. Aesthetics (the whole look of the image, like do the props fit together, so colors fit together, and so on) or composition need to make you look at it a little longer, but still draw focus on the product itself.		Mood and style	In my opinion the most important criteria for the consumer... I don't really know what the consumers really like) Cause everything depends on what is popular right now. 2 years ago all product photography was being made flat-lay. Now everybody are trying to avoid taking flat-lay photos. 3 years ago in fitness industry was a trend to make photos of the sportsmen with very contrast flash-light from above in a dark space, the athlete should be very pumped and shredded. Now everyone tries to take lifelike photos with positive people standing in a

				<p>bright space who looks like healthy people and not like mr.olympia freaks. So everything depends on the time and trends. The photographer needs to surf in all of them, but also he have to safe his own style. Cause if you are making a commerce photography that depends a lot on the time and views the only way to stay calm and be efficient is to sell your own view and style, cause is such situation the client will order photos from you and he'll have trust, and be sure with the final result. So conclusion – create your own style, choose the spheres that you like, combine your personal style with global trends.</p>
<p>The most important attribute for you as a photographer while</p>	<p>Natural lighting people can relate to. Studio light often looks too alien and</p>		<p>Everything matters: from banal light and composition to showing style of</p>	<p>The most important things for me when I'm doing</p>

<p>making a commercial product shot</p>	<p>out of this world, often not relatable to real life.</p>		<p>company which has produced the product, unusual details which will make a photograph memorable and unusual.</p>	<p>a commerce photoshoot is: light sources and model if we are talking about fitness photography. Product photography: light sources and accessories. I would that light for me is the major part. I like to use up to 7 sources of light combining them and creating different lightning schemes.</p>
<p>Comments to the reviewed content (optional)</p>		<p>What I need to say about the photos is that mostly their composition is not very good (for example, no rule of thirds). It is not surprising since the photos have been made by amateurs. It is hard to grab and evaluate the technical part.</p>	<p>I can say why I do not like the rest of the photos than what I enjoy from the ones I have chosen. First of all, composition. For example, on the photo #13 the first thing I see is legs. It could be interesting, but here it does not work. Secondly, the position of a hand, on the ones I have chosen it is nice, but on a photo #39 it looks too aggressive. Colors and postproduction also matters. As</p>	<p>In all those 15 photos I've found two visually appealing parts on which all the photos are based – color and accessories. I really like when there is one main color on the picture with some tones or there are used two colors that suit each other, like green and red, blue and yellow, etc. Also I am fond of white color and when it's the dominant color on the picture it's amazing.</p>

			well as style, it is better if the clothes on the background is trendy or classic. Again, everything matters!	As for me the composition of the most photos is not very good. I don't like how the hand looks without fingers, subjective it looks a little bit weird.
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Table 4. Mean, Median, Mode and Percentiles Values of Each Picture

Frequencies													
		Picture_14	Picture_15	Picture_18	Picture_14_s aturated	Picture_15_s aturated	Picture_18_s aturated	Picture_25	Picture_4	Picture_40	Picture_25_s aturated	Picture_4_s aturated	Picture_40_s aturated
N	Valid	30	30	30	30	30	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3.2667	3.2667	3.4333	1.7667	1.4667	2.0000	3.2000	3.8333	3.7667	1.3333	1.5333	1.7333
Median		3.0000	3.0000	3.0000	1.0000	1.0000	2.0000	3.0000	4.0000	4.0000	1.0000	1.0000	1.0000
Mode		4.00	2.00 ^a	3.00	1.00	1.00	1.00	3.00	4.00	4.00	1.00	1.00	1.00
Percentiles	25	2.0000	2.0000	3.0000	1.0000	1.0000	1.0000	3.0000	3.0000	3.0000	1.0000	1.0000	1.0000
	50	3.0000	3.0000	3.0000	1.0000	1.0000	2.0000	3.0000	4.0000	4.0000	1.0000	1.0000	1.0000
	75	4.0000	4.0000	4.0000	2.0000	2.0000	2.2500	4.0000	5.0000	4.2500	1.2500	2.0000	2.0000

a. Multiple modes exist. The smallest value is shown

Table 5. Frequency Scores for Picture_14

Picture_14					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unappealing	8	26.7	26.7	26.7
	average	9	30.0	30.0	56.7
	appealing	10	33.3	33.3	90.0
	very appealing	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Table 6. Frequency Scores for Picture_15

Picture_15					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	1	3.3	3.3	3.3
	unappealing	8	26.7	26.7	30.0
	average	8	26.7	26.7	56.7
	appealing	8	26.7	26.7	83.3
	very appealing	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Table 7. Frequency Scores for Picture_18

Picture_18					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	1	3.3	3.3	3.3
	unappealing	2	6.7	6.7	10.0
	average	14	46.7	46.7	56.7
	appealing	9	30.0	30.0	86.7
	very appealing	4	13.3	13.3	100.0
	Total	30	100.0	100.0	

Table 8. Frequency Scores for Picture_14_saturated

Picture_14_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	17	56.7	56.7	56.7
	unappealing	8	26.7	26.7	83.3
	average	2	6.7	6.7	90.0
	appealing	1	3.3	3.3	93.3
	very appealing	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 9. Frequency Scores for Picture_15_saturated

Picture_15_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	22	73.3	73.3	73.3
	unappealing	6	20.0	20.0	93.3
	very appealing	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 10. Frequency Scores for Picture_18_saturated

Picture_18_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	13	43.3	43.3	43.3
	unappealing	10	33.3	33.3	76.7
	average	3	10.0	10.0	86.7
	appealing	2	6.7	6.7	93.3
	very appealing	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 11. Frequency Scores for Picture_25

Picture_25					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	1	3.3	3.3	3.3
	unappealing	5	16.7	16.7	20.0
	average	13	43.3	43.3	63.3
	appealing	9	30.0	30.0	93.3
	very appealing	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 12. Frequency Scores for Picture_4

Picture_4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unappealing	3	10.0	10.0	10.0
	average	7	23.3	23.3	33.3
	appealing	12	40.0	40.0	73.3
	very appealing	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Table 13. Frequency Scores for Picture_40

Picture_40					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unappealing	2	6.7	6.7	6.7
	average	10	33.3	33.3	40.0
	appealing	11	36.7	36.7	76.7
	very appealing	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

Table 14. Frequency Scores for Picture_25_saturated

Picture_25_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	23	76.7	76.7	76.7
	unappealing	6	20.0	20.0	96.7
	very appealing	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 15. Frequency Scores for Picture_4_saturated

Picture_4_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	20	66.7	66.7	66.7
	unappealing	6	20.0	20.0	86.7
	average	3	10.0	10.0	96.7
	very appealing	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 16. Frequency Scores for Picture_40_saturated

Picture_40_saturated					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very unappealing	17	56.7	56.7	56.7
	unappealing	7	23.3	23.3	80.0
	average	4	13.3	13.3	93.3
	appealing	1	3.3	3.3	96.7
	very appealing	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 17. Mean, Median, Mode and Standard Deviation Values of “Age” Variable

Statistics		
age		
N	Valid	30
	Missing	0
Mean		25.8000
Median		25.0000
Mode		23.00 ^a
Std. Deviation		3.19914

a. Multiple modes exist. The smallest value is shown

Table 18. Frequency Table for Participants' Age

age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22.00	1	3.3	3.3	3.3
	23.00	6	20.0	20.0	23.3
	24.00	6	20.0	20.0	43.3
	25.00	6	20.0	20.0	63.3
	26.00	3	10.0	10.0	73.3
	27.00	1	3.3	3.3	76.7
	28.00	2	6.7	6.7	83.3
	29.00	1	3.3	3.3	86.7
	31.00	2	6.7	6.7	93.3
	33.00	1	3.3	3.3	96.7
	35.00	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 19. Group Statistics: Age

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
age	normal pictures	30	25.43	3.059	.558
	saturated	30	26.57	3.919	.715

Table 20. Randomization check: Age

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
age	Equal variances assumed	5.924	.018	-1.249	58	.217	-1.133	.908	-2.950	.684
	Equal variances not assumed			-1.249	54.772	.217	-1.133	.908	-2.952	.686

Table 21. Group Statistics: Instagram Usage

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Instagram	normal pictures	30	1.50	1.009	.184
	saturated	30	1.97	1.752	.320

Table 22. Randomization check: Instagram Usage

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Instagram	Equal variances assumed	7.057	.010	-1.265	58	.211	-.467	.369	-1.205	.272
	Equal variances not assumed			-1.265	46.327	.212	-.467	.369	-1.209	.276

Table 23. Group Statistics: Country

Group Statistics					
Group		N	Mean	Std. Deviation	Std. Error Mean
country	normal pictures	30	1.07	.254	.046
	saturated	30	1.00	.000	.000

Table 24. Randomization check: Country

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
country	Equal variances assumed	9.609	.003	1.439	58	.155	.067	.046	-.026	.159
	Equal variances not assumed			1.439	29.000	.161	.067	.046	-.028	.161

Table 25. Group Statistics: Purchase Intentions in Both Groups

Group Statistics					
Group		N	Mean	Std. Deviation	Std. Error Mean
Picture_4	normal pictures	30	3.10	1.029	.188
	saturated	30	2.33	1.155	.211
Picture_40	normal pictures	30	3.20	1.324	.242
	saturated	30	2.17	1.262	.230

Table 26. Independent Samples Test for Purchase Intentions in Both Groups

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Picture_4	Equal variances assumed	1.357	.249	2.715	58	.009	.767	.282	.201	1.332
	Equal variances not assumed			2.715	57.245	.009	.767	.282	.201	1.332
Picture_40	Equal variances assumed	.148	.702	3.095	58	.003	1.033	.334	.365	1.702
	Equal variances not assumed			3.095	57.868	.003	1.033	.334	.365	1.702