TARGETED VISUALS IN ONLINE SOCIAL MEDIA ADVERTISING THROUGH THE LENS OF BIG DATA

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A research Paper submitted to the University of Dublin,
in partial fulfilment of the requirements for the degree of
Master of Science Interactive Digital Media

2020

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Acknowledgements

First and foremost, I would like to thank my supervisor, Robin Fuller, for the guidance, advice, and patience he has shown me throughout my research and writing process. His expertise and constructive feedback were essential to the completion of this paper.

I would like to thank Mads Haahr for his help and understanding throughout this year.

I am especially grateful to my friends, Sophie Smereczynski and Breanne Pitt for their support through this process and this entire year.

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MSc Interactive Digital Media
Thesis Title: Targeted Visuals In Online Social Media Advertising Through The Lens Of Big Data
Supervisor: Robin Fuller
Year: 2020

Abstract

This paper is intended to explore targeted visuals in online social media advertising through of data collection. Current online-targeted advertising techniques are leading viewers away from platforms. Companies face the challenge of needing to adapt, and solve the issue. The hypothesis posed as a solution is that targeting visuals in online social media will null, or greatly diminish the amount of viewers leaving. History and general concepts of targeted advertising through research in field are observed, and find the importance of relevance and invasiveness of advertising. The semiotics of graphic design are analysed, through the examples of colour and typeface to explore how targeted visuals would affect an audience, and find that companies must observe the complex multi-layered meanings of both of these elements to manage to target visuals in a correct way.

A case study on Netflix gives a contemporary example of targeted visuals, and the ideas observed on transferred onto a hypothetical application of the concepts analysed in the paper through a fictional advertising campaign by skin-care brand the Ordinary. This helps observe the positives as well as limitations of setting up targeted visuals. The fictional campaign further helps hypothesise the use of algorithms not only to collect data, but also to create the advertisement themselves.

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1. Introduction

This first chapter aims to introduce the question at the heart of the topic, and explain the background motivations, and goals of this paper. It analyses the various different concepts surrounding the topic and solidifies the hypothesis and attempt to set into practice. It shows how companies are driven to search for new solutions in their social media advertising systems. This paper offers a solution to the current struggle through the use of targeting visuals to counteract the main pitfalls.

1.1 Background

Digital marketing experts at Forbes say that Americans observe around 4,000 to 10,000 ads each day, from the advertisements on their phones, to the ones on their cereal box (Red Crow Marketing Inc., 2015). Consumers are inundated by advertisement. There is a permanent visual demand to consume. On social media, people are tiring of advertisement and the battle for their attention has been driving people away from certain platforms (AdReaction, 2010).

There are approximately 3.81 billion social media users today, which represent about forty nine per cent of the population (Datareportal, 2020). This represents an immense pool of users that could be reached via social media marketing.

1.2 Motivation and Goals

A 2010 industry-sponsored study on social media advertising showed that visitors were leaving various platforms (AdReaction, 2010). According to that study, 8 per cent of consumers studied had abandoned a social network site because of what they perceived as excessive advertising. Since the year 2010, social media has grown exponentially when it comes to advertisement and the revenue it brings to companies. It is observed that

the numbers have increased exponentially as the numbers of users on social media have grown, as shown in the example of Facebook's growth of ad revenue over the past ten years (Statista, 2020).

This dual momentum of companies wanting to advertise more and more aggressively on social media and the bleeding out of the number of users is a danger firms are attempting to address. It has led companies to look at new ways of reaching its audience by tailoring and crafting its advertising campaigns.

The desperate flurry to get the readers' attention is pushing readers from social media sites. A research found on the fifth of March 2019 states that Facebook has lost fifteen million users in the United States, the decline mostly visible amongst users aged twelve to thirty-four (Edison Research, 2019). The distracting, unwelcome and overbearing visual of those advertisements, when all else is curated to keep one's attention to the screen is bound to rupture the trust with the viewer.

1.3 Research Question and contribution

Companies compete for the same market, and need to ensure that online advertising, as their source of revenue, does not become so intrusive that it drives users away from platforms. What are the main factors surrounding advertisement that drive people away? What tools are at the companies' disposal to perfect their marketing strategies? This paper describes how targeted visuals in online social media curated through specifically collected data could help the outpour of people leaving the platforms by making them more relevant to the users as well as less intrusive to the viewer.

This research attempts to fill a gap in the scholarship surrounding social media marketing. It attempts to look at how various client online activities, personality, and more can be taken into account to personalize advertisement.

1.4 Paper Structure

This research paper is composed of four different parts. The first chapter of this paper introduces the topic, as well as sheds light on the goals and motivations surrounding it.

The second chapter consists of a literature review firstly focusing on targeted advertisement in a general sense and big data, especially through a look at its ethics, to get a deeper understanding of the topic. Then, the paper takes a closer look at the background concepts surrounding the matter of targeted visuals such as its history prior to digitalization. The last subsection looks to explore the semiotics of graphic design by observing both colour and typography.

The third chapter concerns Netflix as a contemporary example relevant to the study. It then concerns setting up the hypothesis into practice by garnering all the data retrieved in the previous chapters. Different ways to setup and automatize this hypothesis is brought up.

The fourth chapter regroups conclusive thoughts to this paper as well as explore the pitfalls of the hypothesis.

2. Background/Literature review

2.1 Introduction

This chapter looks at research from various disciplines that address this paper's core concerns. Firstly, it explores the background to the topic, as researching past iterations of targeted visuals to help give keys to the topic itself. It further explores targeted advertising in a general sense, to better explain the main issues that the current hypothesis works to resolve. Then, it explores the subject of big data, focusing on the issue of ethics. Then, the final part looks at the reasons as to why certain people are affected by certain visual elements of advertising as colour and typography.

2.2 Targeted Visuals in Advertising prior to the Digital era

This subsection looks at the history of targeted visuals in advertising and their evolution since the first observable forms of targeted advertising. Studying the way it shifted over history shows how the topic has gone through a funnelling system as it reached the current highly targeted advertising, and how currently targeting visuals is essential.

Advertisement with targeted visuals truly took root in the 1950s as mentioned in the book the *1950s* (H. Young & K. Young, 2004). Advertisement campaigns shifted from targeting groups of the population based mainly on gender, with a generalized view of it, and started targeting specific demographics. This happened with the appearance of a new age to target to: teenagers. This major shift would change the face of advertising, as well as consumerism. The author highlights this concept by explaining that it was during that time that teenagers gained sizable disposable incomes and were an untapped consumer base. So marketing started targeting them through the media that they consumed, shifting the visuals they used.

Illustrating this point are two print advertisements by the company 7-Up, one from 1951 (Appendix 1) and the other from 1957 (Appendix 2). The difference between these two advertisements illustrates the shift that happened during from a general family type advertisement, to targeting the teenage categories. The advertisement from 1954 has the tagline 'the All Family Drink!' whereas the next campaign from 1957 has the tagline '"Fresh up" with Seven Up!' that Seven kept until 1963. However, visually the differences are also important to note. The oldest advertising style is visually dominated by the imagery of the family values that are represented by the two children. The young woman is represented in a domestic apparel and role visually signified by her apron. She is a visual imitation of women's thin waistline fashion, and set curls. This was designed to appeal to parents who would see them reflected in this advertisement. The advertisement of 1957 already shows a different approach when targeting it to teenagers. The imagery is less invasive in the page. The teenager is similarly signified through clothing, wearing bright red trousers and being in a pose that calls back to youth and dynamism. The visuals are aimed to the emancipating youth of the time. We do still see the harsh categorization of various groups however, and the advertisement is targeted less to a personality, but an assumption of what a certain age group and category would be interested in. This was the very first transformation that targeted advertising went through.

An article written in 2015 claims that the shift towards what can be considered truer targeted advertisement, arrived at the turn of the 1970's (De Souza, 2015). The article explains that the arrival of computer technology in marketing changed the current scene. It further says that during decades before the 1970's, the goal of advertising was to appeal, and to persuade the masses. Whereas after, the use of psychographics, defined by the Cambridge dictionary as the study of customers in relation to their opinions, interests, and emotions, gave advertisement agencies new tools to adopt in the industry. It explains how the computer technology has fragmented audiences into smaller niches, giving birth to new media created solely for that audience, and as such new advertisement created for those niche audiences.

Such a shift in marketing is identifiable with the 7-Up campaigns of that time (McDonald, 2017). The sixties had been a time of uncertainty and change for the American population. The Civil rights movement, as well as the Vietnam War protests amongst the younger generations meant that marketing had to shift to better speak to them. To advertise to the emerging new youth counter culture, Seven Up decided to rebrand themselves as 'Un-cola', in responses to brands such as Coca Cola and Pepsi who were institution names, as well as famous war-time beverages from World War II (Weiner, 1996). So Seven Up, follow the successful branding as part of the counter-culture, launched design campaigns to create billboards with famous graphic designers of that time to truly reflect the new market they were reaching. One of those billboards is the 'Wet Un Wild' billboard poster created by Ed George (Appendix 3). This sunshine yellow poster unmistakably recalls the Yellow Submarine animated film of 1968, inspired by song by the Beatles of 1966, proving yet again an understanding that the visual style has of their ever more specific audience; a younger audience again, but this time it is yet again a narrower category by aiming a counter culture rising amongst this youth. Years later, this marketing choice proves to be on the side of history, as that aspect of Americana, with the psychedelic choices proved to be the memorable aspects of that time period. However, the brand went further to align themselves with the views of their audience. Seven Up were during those times the first to feature black actor and dancer Geoffrey Holder in their television advertisement campaigns.

These advertisement campaigns show how a company has known how to renew itself visually when targeting narrower audiences. Today, as seen earlier, specific viewers are targeted by advertisement, especially with the advent of algorithm-based advertisement. Just as advertising has evolved over the course of history to follow the way the marketing techniques were going, visuals are following suit, and becoming subject to algorithms.

2.3 Overview of General Targeted Advertising

Targeted advertisement can be defined as a displayed medium about a product or service using tools to better curate the content of the advertisement to it's prospective buyer. As

mentioned, this paper focuses on the visual aspect of advertisement, i.e. images created to appeal to the viewer, typeface choice to better affect the viewer, imager composition and how these elements interact.

Social media companies market their primary role is not one of advertising or selling products. Social media networks often promote concepts of community building, sharing and message goals. However, their business models hinge on exposing viewers to advertisement. That means that unlike for a billboard, social media advertising must appear as a secondary factor and not the main framework. The advertisement faces the unique challenge of living up to the social media brands' images of communities, and users to advertising in a way that does not feel at odds with that stated purpose. Many different facets of targeted advertisement are important to keep in mind when considering them.

Many papers have been written on the consumer's response, positive or negative to online-targeted advertising. Positive responses to social media advertising have been observed in 2009 (Zeng, Huang, & Dou, 2009). Their research observes social network sites and how they need to develop strong identity so that the advertising is made more relevant to the community users. The research found that online advertisement better affects the users in positive ways when they are relevant. This positive reaction proves that social media advertising is effective when it is perceived as relevant. Henceforth, questioning creating a relevant advertising towards specific clients is an interesting aspect to follow upon. The concept of relevance is not, however, explored with concrete clarity by the research and needs further exploration. What does a relevant advertisement for a specific customer entail?

One study found that consumers finding advertising 'informative' on social media as well as 'good for the economy' has a tendency to bring a higher amount of clicks. (Mir, 2012). Advertising needs to be informative about a product on social media to be able to entice the visitor to click on the advert. The concept that a product is told to be good for the economy affects the attitude of consumers on social media in a positive way.

Another study found other factors that benefit ad click-through rates (C. Idemudia, 2014). It researched that advertisement has a better click-through rate if it is perceived as useful, secure and personalized. Product usefulness is linked to whether or not it addresses the users' immediate wants and needs. Secure address whether or not payment for the product is secure and won't lead to any payment issues such a stolen cards or other piracy cyber attacks. Personalised means adapted to the persons taste and preferences. These three elements work in conjunction with each other to make an advertisement's engagement higher.

Therefore, this overview of these three papers tells us that the important pitfall for an advertisement on social media is relevance. Relevance here was found with the last three point added to the previous two mentioned in the previous paragraph to create a complete picture of the positive aspects of advertisement. They must strive to satisfy these five elements (informative, positive for the economy, useful, secure and personalized).

These aspects of advertisement are related to, not only the content of the advertisement, but also to the visuals of them. It is seen below that visuals control the way an advertisement is perceived, but that depends on the person to whom it is displayed. Hence, we come again to the importance of the exploration of targeting visuals in online advertisement.

On the other hand, a negative response to social media advertising has been studied many times. One such issue is from research 2009 (M. Edwards, Li, & Lee, 2002). They explain how advertisement leads to irritation and henceforth leads to the site-visitors to leave the platforms. This analysis also examined that such actions towards advertisement is similar to traditional advertisement, i.e. print or posters. Furthermore, the research highlights many times the concept of intrusiveness as the main downfall to why advertisement fails. Advertisement appearing overwhelming and invasive leads viewers to overlook and avoid them. This paper observes how advertisement appears to meld into a social network page to feel less invasive as well as making sense as part of the visitors

feed. This would lead to advertisement being more effective because the fall-off of from the webpage would diminish.

The concept of advertisement being is solidified by further research from 2011 (Goldfarb & Tucker, 2011). It shows that obtrusive or invasive advertising linked with a targeted technique fail to lead to a purchase. On one hand, obtrusive advertisement does in fact work on it's own. However, when it concerns a targeted advertisement, it fails. This links back to a privacy problem, where the user feels invaded, and is then unwilling to trust and purchase a product.

Therefore, we here see that for target advertisement to work in its optimal way, obtrusiveness and invasiveness are another main falloff to them. Therefore, curating an advertisement for it to appear curated to someone's taste, as well as for it to blend in better in with the social media content that it around it would help it in it's endpoint.

2.4 An Overview of Big Data and its Ethics

The Cambridge Dictionary describes Big Data as very large sets of data that are produced by people using the Internet, and that can be stored, understood, and used with the help of special tools and methods. Many academic articles comment on the complexity of data collection when it comes to ethics. As it is a central key topic to this academic paper, it is important to explore the ethics of such concepts before working further on the project. This part sets up an understanding of the debate around Big Data and it's ethics ad well as create a foundation to build upon when working on gathering data later in this paper.

One such article touches upon the complexity of data collection when it comes to epistemic, in other words relating to knowledge, and ethical issues (Alemany Oliver & Vayre, 2015). This research gives different approaches by which to use Big Data in the realm of marketing research. However, it here helps to highlight the complexity of Data Collection ethics. It proposes, 'to consider data as digital traces that consumers leave,

most of the time, without consent.' This concept of consent, and data taken without a persons' knowledge of it creates the crutch of the issue of Big Data. Further in the paper, it is mentioned that Big Data detects someone's 'deepest secrets'. Online communities and social media offer a front of anonymity that gives free reign to many people. Then, through Big Data, companies collect what the paper calls 'shadow information'. People wish to avoid the states of cognitive dissonance that would arise when their belief system is shattered by the information being revealed to them in a harsh light. It poses a problem of discovering data that could be useful to advertisers, but must be handled with great care. Seeing complex the topic is concerning consent and also concerning hidden personalities, it seems important to explore a guideline for an ethical conduct.

This is mentioned further in the book *Ethics of Big Data* (Davis & Patterson, 2012). The authors first highlight the importance of treating Big Data itself as ethically neutral, like a tool would be. They do however point out that 'individuals and corporations, however, do have value systems' (Page 8), and that is where the complexity of data collection lies. This also creates an issue when a corporation's way to gather data aligns with their values, but doesn't align with the values of the subject that is being researched.

An important step for a company when handling data, Davis and Patterson continue, is for companies to articulate their values in clear ways for the clients to be able to build a trusting relationship with them. The concept of transparency and clarity are themes that come up often in data handling. When the value principles are setup, they make a solid foundation to build up from. The actions and decision-making that comes from the company will always be in line with such ethical code that they have setup.

It is also important to stay aware of the current laws surrounding Big Data and privacy laws. They reflect the government's long ethical discussions on what is protected data. The European government instated the GDPR that has strict laws in 2018 (HSE, 2018), hence why the research on codes of ethics that predate this law do not mention it so. Data must be processed in clear and transparent ways. The main principles of the law are to protect an individual from data theft and abuse from a corporation. They are as follows.

A specific purpose must be given by a company in order to collect data surrounding from a user, and that data must serve that specific purpose. Data can only be kept as long as the company needs it to execute its clear plan of action. Lastly data must be kept secure, which means companies must invest in cyber-security.

As this research submits a concept of advertising that depends on data collection, finding the right practices to identify the best ways to collect the data that is necessary to create the targeted visuals in advertisement.

2.5 The Semiotics of Graphic Design

This sub-chapter of the paper focuses on researching the various different elements that make up visuals and how they affect various different users. This allows us to create a basis of knowledge on how to create a system of targeting visuals on social media that better affects the viewer, or otherwise better pass as inconspicuous depending on the need to reach the goals that this paper has suggested towards targeted advertising. This part goes through an analysis of colour, typeface and symbols through cultural, psychological,

2.5.1 Colour

There are many varied way to study view and study colour. In this part, this paper observes colours through the lenses of physiological responses, psychological cues and lastly cultural traditions to give them meaning. It also helps in the research to understand how to use colour when creating targeted visual advertisement.

Firstly colour is to be analysed through the physiological responses that humankind have as mammals. A study on colour and emotions did an observation of the colour red in nature (Elliot & Maier, 2013). It first observes red coloration in the animal kingdom, and observes that alpha males display the largest amount of red as a testosterone-based indicator of male dominance in those separate species. Similarly, it observes that in humans, testosterone surges in conflictual situations and results in a reddening of the

skin, especially in the face. Red thusly in nature has a basis in aggression and is also linked to dominance. These physiological responses, it observes, drive the use of the colour red in sporting events, or any other events linked to competition. Using visceral cues when creating advertisement is powerful tool. It is part of what makes colour so integral and important when designing (Berghoff & Spiekermann, 2017), and why humans respond so readily to it.

On the other hand, we find proofs that physiological explanations alone cannot account for how humans today use colour. Social and cultural are essential not to ignore. Once again the paper on *Colour Psychology* helps us further on this concept (Elliot & Maier, 2013). It explains that repeated matching of certain colours with specific meanings over a very long time could have created these meanings. A book by Yup Lee observes the original meaning of red ochre for human's prehistoric ancestors (Lee, 2000). He explains that red ochre was used to paint faces and other body parts during mating seasons. He further observes that the pigment was very easy to use because the mineral would crumble and could be turned into mixtures to paint with. This association so early on amongst the great apes between the red pigment and the sexual experience may explain the social learning that has carried through the millennia to our societies today. Social learning however doesn't negate the physiological reactions. Rather social learning has come to reinforce the original physiological responses to these colours (Elliot & Maier, 2013). This is how we can see today a red dress today as representing sexuality. The dominating aspect, and physiological response coming from a testosterone surge leads quite naturally to the understanding. However, it shows the newer socially-learned examples of meanings of the colour red. It observes the negative feeling of the colour red as it is assigned to stop signs, and sport fails.

Culturally, it is important to denote that various different cultures have just as varying meanings to colours. For example, in modern Hollywood films adaptations, red is used as a symbol for violence as in films such as Dracula (Coppola, 1992) or Kill Bill (Tarantino, 2003) where violent scenes are represent with complete overlays of red to imply the spilling of blood and the dominating violence that happens (Appendix 6 & 7). This linear

meaning is traced back to the meaning explored just above. However, in the critically acclaimed film In the Mood for Love (Kar-wai, 2000) explores through it's bathed scenes in red a reference to fire (Appendix 8). In China, red denotes fire, but not the consuming destructive fire but the one that brings life and prosperity. So in a film so high in emotion where everything seems to happen against the main characters, the vibrant colours emulate their hope of joy. Brand must have a keen awareness of culture, and socially-learned concept about colour when creating visuals for targeted advertisement.

Red is one of the strongest colours however to have such a visceral reality, denoting blood and being so close to human nature. However, it is also important to explore other colours to get a better view of the topic, as they reveal further important concepts to be aware of when designing, further than simple truisms about certain colours. Here, blue and magenta are observed to reach important conclusions about this topic.

Blue is colour that societally denotes respect, royalty and the divine. The Virgin was traditionally represented wearing red, representing her born humanity, cloaked in blue denoting her divine status that she had accepted by becoming the Immaculate Conception (Da Vinci, 1503). Historically, blue has this sense of greatness linked to the ocean and the skies, which could not be captured fully. A theory was the Greek did not actually have a term for the colour blue (Maxwell-Stuart, 1981). Homer described the sea as being 'wine-dark'. Blue is a colour that denotes power. Today, corporations and also social media such as Facebook and Twitter have taken it up for their online presence. According to *Colour Psychology*, blue used by corporations denotes high competence. It is important to analyse that the denotation of a form of power has stayed throughout it's meaning, but shifted through time. The meaning of colour is rooted so much in our history, that a layered effect has taken part to their meanings. Companies should be aware of the levels of meaning, which in conjunction with the points made above for red, do vary from culture to culture. So colours have varying meanings depending on culture, but also contain varying iterations of meanings in of themselves in a singular culture.

Magenta is a complicated colour to discuss in a wider societal sense. The analysis of magenta is complicated because magenta is does not actually exist on the visible spectrum, and as humans we don't actually have the cones to physically see the light (Parkin, 2016). The human brain interprets those wavelengths as magenta or other pink reddish tones. The magenta, fuchsia and pink pigments and do not exist readily in nature, or were expensive to produce. Aniline dyes, the first synthetic dyes, were discovered in 1959. The arrival of aniline dyes transformed the Victorian era and became famous over Europe (Ball, 2001). This also gave way to the feminization of pink colours through women's fashion (Berghoff & Spiekermann, 2017). Proper women were not to 'let themselves be swayed by colour', but again, the arrival of the aniline dyes changed those views for women who could wear gowns of bright colours. Furthermore, the strict elegance that was *de rigeur* amongst the masculine upper class was a reason to avoid colours. This bleeds into current strict gender roles that are still enforced today. However, a study does affirm that gender does not have preferences when it comes to colours (S. Schindler, 1986). People do not react differently linked to their gender despite the standardised colours of advertisement, notable when it comes to pink being heavily marketed towards women. Two main points are raised here. The first is that brands should be weary of gender constructs when creating advertisement. However, it is also important to know that certain colours can be considered younger, and so the social-learning mentioned earlier has had many less years to take effect. The socially learned ideas of fuchsia and pink being feminine colours are less than two hundred years old. Compared to the sexual connotations of red dyes that have lasted since prehistoric times, it is sensible to take note that certain socially-learned concepts are weaker.

Colour cannot be ignored to solidify a brands' identity however. A study on people's reaction to advertisement caught through a blur explores that advertisement's need to be backed by a concrete and colourful branding (Wedel & Pieters, 2014). They discovered that brand identities marked the users when in full colour and not when the colours were inverted, and neither when the colours were in grey-scale. This study on colour and branding help bring to light the way colour interferes when visitors are scrolling trough social media and interact with advertisements through their out-of-focus peripheral

vision. A rapid but clear perception of the adverts, the study concludes, is essential for the advertisement to be effective in grabbing the attention. Advertisement catch attention by the use of colour that is constant throughout their branding to continue solidifying their branding in the visitors imagination.

To conclude, this part observed that colour has roots in physiological realities, which are then reinforced by socially-learned truths. Brand should be conscious that different cultures would have different meaning for a same colour. Furthermore a single colour, due to its history, carries in of itself many different meanings. Lastly, because of the history of dyes, colours do not all have the same socialisation, and brands should be aware of that when utilizing them in visuals.

2.5.2 Typeface

This subsection explores the importance of typeface, and the difference responses consumers have to the varied different typefaces. The Cambridge Dictionary defines typeface as letters and numbers in a particular design, used in printing or on a computer screen. Our analysis of typography focuses mainly on the way typeface is received through digital mediums, however it would be impossible to divorce the concept from the printing industry. A main key to the analysis of how typeface is received is semiotics in typography.

Typography is purely a product of humanity, and so it ebbs and flows with human history. The Irish Times wrote an article that mirrored important moments of the world's history through five different typographies (McNeil, 2017). However, it is important to note that this article refers to western history and not a worldwide look at global events. As an element that is purely human, and has no direct basis in nature, it seems important to ask if there are common grounds across various different people, and what those are. A study in 2015 found common grounds to viewing of typography (Velasco, T. Woods, Hyndman, & Spence, 2015). It researched how different people would give words used for taste to describe various different fonts. The synaesthesia-like analysis of typography

helps find common grounds over different typography that brands should be aware of when targeting their audiences. It reports that people who enjoy a taste such a bitter, sweet or salty tend to give those terms to the typographies with more rounded shapes. On the other hand, when they are inclined to dislike tastes, they apply those taste descriptors to angular shapes. We can see here a common ground concerning certain shapes, and that they are associated with common receptions towards them.

A study explored how to make basic impressions to the viewers of an advertisement. They looked at feelings that the typefaces in the advertisement elicit such as pleasing, engaging, reassuring, or prominent. They elaborated their research by studying the various reactions to a reaction of the Hilton's logo as a typescript (Appendix 10 & 11). Script typefaces are shown by the study to give off a more reassuring and pleasing feeling. However, it goes further in the research by observing that it is seen as subtler and less engaging. Changing the logo into a friendlier design had a multi-layered effect to the design and not just a single one. Companies must avoid having a narrow view and observing a single possible response to a typography style because there are always multiple responses to a single design. They must accept that all of these impressions must be addressed when selecting fonts but certain compromises must be reached when looking for specific responses to typography. In an ideal scenario, the viewer would have multiple responses that are in line with the companies' desires (W. Henderson, L. Giese, & A. Cote, 2004).

Another factor that the article concerning the history of the world viewed through typography brings to light is the importance and prevalence of change in the media we consume. Aesthetic trends in any advertising are essential to analyse. An interesting trendsetter was the very famous title card for the Stranger Things TV series (Appendix 9). The title card was created by It uses a font-face called ITC Benguiat created back in 1978, which is an art nouveau inspired design, as well as recalling famous Stephen King novels from the same time period that show takes place in (Brownlee, 2016). After the success of the title sequence, which won an Emmy Award, the eighties aesthetic style turned into a trend. A research by Ernst Moriarty has the added analysis that in traditional

print, special-interest magazines were the ones that benefitted from following these trends (Ernst Moriarty, 2015). The applicability of a concept applied to special-interest magazines' advertisement to online targeted advertisement seems natural after the previous observations of the natural conduct of advertisement through history in previous parts. Brands must be conscious of trends when working on targeting advertisement as well, not just always just working to specific people as to have the best results.

A research in 2011 looked at the symbolic meaning of various typefaces concerning marketing by companies (J. L. van Rompay & T. H. Pruyn, 2011). They observed of the importance of careful consideration of typefaces and when it comes to their symbolic meanings. They further stress the harmony between their meaning, the products and the consumers' personalities. These tools allow the 'influencing perceptions of brand credibility, brand aesthetics, and brand value'. Product shape and typeface designs also affect the perception of what the price of a product is. This means that the choice of typography could give a message of luxurious goods along with it. In essence, this goes to show that even when attempting to align typography to be adjusted to an audience through targeted advertisement, it is also important for the typography to be faithful to the product.

To conclude the observations of the semiotics of typefaces in online advertisement, viewers react positively or negatively depending on taste, but that common grounds are found in these tastes. Furthermore, a multi-layered response is elicited, not just a single one. Brands must be aware of these responses, and be ready to work through compromises. Typefaces follow changes in human society closely, and brands should take that change into consideration when creating designs, and adopting various different design trends. Lastly, it was shown that typography relays message about the product and brand values and that they should be consistent thorough, especially when it comes to pricing.

2.7 Conclusion

This part has conducted a review of the literature relevant to this topic. Concerning targeted advertisement through history, brands have managed to reinvent and renew themselves as advertisement was targeted to continuously more specific groups, going from gender and demographics to very specific slices of society with psychographics. In current times, brands face the challenge of targeting advertising to singular people through the algorithmic world of the worldwide web, and big data.

Furthermore, brands must create visuals for advertisements with the challenge that current techniques of advertisement are leading to members leaving platforms. To avoid this falloff, visuals in advertisements must strive to be relevant, which was seen to mean to be informative, positive for the economy, useful, secure and personalized for the viewer. Obtrusiveness and invasiveness have also been observed to be two main deterrents to effective visuals in targeted advertisement.

Following this, the paper researched literature around data collection and it's ethics. The paper viewed ways for brands to collect data in legal, non-invasive ways from users, to better target visuals for them.

Lastly, the paper researched the semiotics of graphic design, through the examples of colour and typeface. The analysis of colour showed that is was an integral part of design, because of its physiological response, but also had many layered meanings because of years of social-learned meanings that added to the physiological ones. Furthermore, colours were observed to have various meanings depending on culture, but also on its own history. The reality that certain colours are younger also adds to the complexity of the topic. The analysis of colour here shows that a careful understanding of these concepts is essential for brands to grasp to be able to target specific people through targeted visuals.

Through the example of typeface, the paper observed that multi-layered responses to a same typeface were elicited in one person and that a consensus would need reaching when designing. Furthermore, it was discovered that design trends in typefaces were

important when targeting advertisement. Lastly, it shown that typography relays views on the products, especially views concerning pricing, and brands and that consistency through these three elements was essential.

3. Targeted visuals in advertising; case study, propositions and further possibilities

3.1 Introduction

This section observes the theory of this research paper through a practical lens and pulls the necessary conclusions from the theoretical exercise. It first looks at the current example of targeted visuals through a case study of Netflix.
Then the paper applies the research, and the example of Netflix to a theoretical online advertisement campaign where visuals would be targeted for the skin-care brand the Ordinary.

3.2 Netflix: a contemporary case study in targeted visual

Following upon the history of targeted visuals in advertisement, it is important to explore possible current techniques of curated visuals in online media to find a strong footing in modern times. These techniques are visible in the current example of Netflix and their recommendation page. Whereas Netflix cannot fully be considered a social media platform, the way their recommendation page works fits the definition of targeted advertisement given in chapter 2.2.

Netflix overtook the previous giants of home film rental chains like Blockbuster. Founded in 1997, it started its streaming services in 2007. Thanks to its use of data to better recommend films and TV shows, it changed the streaming industry completely.

To further explore Netflix's use of personalized artworks, it's important to first define the term of algorithm in this marketing sense. The Cambridge Dictionary defines it as a set of mathematical instructions or rules that, especially if given to a computer, helps to calculate an answer to a problem. However, here in this context, algorithms take on a greater role. Many research papers points to them as being cultural intermediaries (Morris, 2015). Bourdieu defines cultural intermediaries as different actors that modify

and improve upon cultural products to better and control their reception on the market (Bourdieu, 1979). So Netflix has created a computer based, mathematical intermediary to create visuals to entice its viewers.

Furthermore, it is important to remark that the various designs of thumbnails are not machine generated but are made by a team of engineers as mentioned by the Netflix Tech Blog (Netflix, 2017). Graphic designers working at Netflix create wide pools of visuals for each film on the platform to be able to fit in the algorithm.

The way Netflix's algorithm works is by fracturing it's various films into '100 million different products' by creating various different thumbnails that represent the film in different lights, as mentioned on the Netflix Tech Blog (Netflix, 2017). In different terms, Netflix produces up to hundreds of various different thumbnails (Appendix 4) for each of their films. Depending on a viewers watch history, purchases and intents, the thumbnail changes to better appeal to them.

An example to illustrate this comes from the Netflix Tech Blog explaining a simplified version of the system they would use to recommend the film Pulp Fiction (1994) (Appendix 5). For people who have watched many films with the actress Uma Thurman such as Kill Bill (2003), Prime (2005) or Pay Check (2003), Netflix illustrated the film with a thumbnail showing Uma Thurman's character in the film, Mia Wallace. However, on the flip side, a person fond of John Travolta films would see a thumbnail with his character, Vincent Vega. This personalisation goes further than just linking cast members of various films. Netflix's algorithm uses what is called a contextual bandit approach to its algorithm. Which can be explained as an algorithm learning constantly from the data it's gathering from the user, revising it's current setup, and contrasting it to the previous one. And then the loop starts again and the algorithm learns more about our tastes as that goes on. The context on which the algorithm is based on is the user.

However, Netflix's algorithm has given light to controversies regarding gender and racial issues that are important to take note of. Through the algorithm, Netflix used racial

targeting to get viewers to watch certain films (Berkowitz, 2018). African-American viewers realized that Netflix was targeting films towards them with thumbnails including black actors to appeal to them. However, the actors had minor roles in these films. This gave a feeling of being manipulated, as well as a sense that Netflix was pandering to them and reducing them to their ethnicity. It also gave off a misleading view that the show's portrayed on Netflix were far more diverse than they actually were.

It can be inferred that the reason why the feeling of manipulation stood out comes from a disconnection between what the recommendation system of Netflix was advertising versus what the actual product, here the film, actually was. This highlights an important factor when targeting visuals, especially in an age of algorithm-based advertising. Netflix manages to fulfil the problems raised by current social media advertising by making targeted advertising as inconspicuous as well as relevant to the visitor. However, it also highlights how targeted advertisement is still directed by human values. This case brings to light that sensitive issues, such as race, can be mishandled and backfire on the companies. Sensibility and understanding, two extremely humane emotions that no algorithm has yet to replicate are important concepts to be included in the companies' solving of the issue.

3.2 The use of targeted visuals in online advertising

This part of the research looks to apply the hypothesis of this research to a concrete example of targeted visual advertisement for the skin-care company, the Ordinary. It further looks at how the various designs could be received and draws relevant conclusions from each. Then, it explores how to automatize the process through a filtering and algorithmic construction of visuals.

3.2.1 The example of a The Ordinary advertising

The Ordinary is a skin care line part of the umbrella brand Deciem. Their brand offers clinical technologies for skincare at affordable prices, in simple neutral packaging.

The original branding of the company is extremely minimal, and clinical. Their logo is a solid black typographic one, with an added square full stop at the end of the 'Ordinary' (The Original, 2020). The use of this brand to illustrate a possible way to curate the visual of advertisement on social media is sensible for multiple reasons. Much of the brand's reputation comes from social media, especially from glowing reviews on the behalf of influencers. Furthermore, as a skin-care brand, their possible audience is much more far-reaching that other products. Today we even see the emergence of male skin-care products branded especially for that demographic, and that it is rapidly growing as a market base (Technavio, 2018). However, as such a minimal brand, the Ordinary could advertise to different people.

Before designing the product, it is important to recognise what elements need to be figured out.
Earlier, through the research of the literature review, it was observed that advertisement worked best when seen as informative, positive for the economy, useful, secure and personalised.

Informative, in the case of skin care, leads to the necessity of having the essential formulation of the product visible. Here 'Hyaluronic Acid 2% + B5' should be visible on the advertisement, weather through the product packaging or having it written out fully. Useful appears comes through the clinical aspect of the product. It helps immediately short hand the fact the user is facing a treatment. However, it means that the product must be visible in its entirety on the advertisement to achieve that concept.

Furthermore, when studying typography, it was mentioned that brand integrity, product concepts and advertising needed to be aligned with each other to be effective. This brings us to the narrowing of usable typography to sans-serif typographies that reflect the wellness. Furthermore, the logo being such a representative part of the brand, using the original typographical elements helps achieve this typographic concept that we studied above. The Ordinary uses Raleway in various different weights for their logo and texts.

3.2.3 Possible Targeted Visual Advertising for The Ordinary

As observed above in the Netflix case study, the advertisement concept of targeted visuals starts with the designing of the various advertisements. Netflix has a team of engineers working on creating hundreds of designs that the algorithm then uses to learn more about the users. This subsection observes five of the various possible advertisement visual designs executed around the brand the Ordinary and explains de reasoning behind these advertisement visual designs in the light of this topic.

This part assumes that the same algorithm that is mentioned for Netflix is used by this advertising campaign. It also assumes that the content of the advertisement has been properly targeted to the audience. In the sense that the viewers receiving these advertisements have a skin-care advertisement submitted for them through that algorithm. It explores how these visual could better suit various individuals, but also the way the designs fit the hypothesis itself, or on the other hand, does not.

The first design (Appendix 11) is inspired by current trend of open compositions (Adobe Graphic Design Team, 2019). The blue and purple shades work towards a feeling of peace (Elliot & Maier, 2013) in the design. Furthermore, they give off a feeling of entrancement, or magic (Ball, 2001). This feeling is matched by the use of sky motifs to mirror this emotional state following the French romantic era concept of ‘paysage-état-d’âme’ (which literally translates to landscape mood) whereas poets would use imagery of nature to reflect the scenery of their inner world. The surreal effect promotes the magical soothing effect that skin care could have on the epidermis, being faithful to the brand concept of highly effective skin care. The use of such a modern trend to create an advertisement means that this design would target a younger person. With the use of such colours, it goes to show audience that has a sensibility to mysticism.

The next design works towards appealing a different stratum of the population (Appendix 11). By using the visual of an older woman, the brand immediately changes audience.

Branding skincare towards older women as an anti-wrinkle, youth giving remedies is a controversial one in the views of modern feminism (Talbot, 1998). Hence the use of an older woman represented as joyful and appreciating her skin as it is. This portrait is a stock footage photograph to avoid copyright issues with this paper. The blue and green colours recall the ones of the medical field in this image (Pantalony, 2009). This is to create a further trust between the Ordinary, a relatively new company by reinforcing its medical imagery towards its possible older visitor.

The third design (Appendix 11) is the most in line with the company's original branding style but it also highlights its 'green' aspect through the vibrant natural visuals. The Ordinary products are fully vegan and so highlighting the concept through visuals would help bring that part of the market to their company. Veganism is an every growing movement, especially strong amongst millennial, and brands are right to curate products to them (Forgrieve, 2018). The second major element that gives this visual it's character is the presence of the minimalist approach. Minimalism accompanied with colour blocks has also been a trend of 2019 (Adobe Graphic Design Team, 2019). Thanks to the green colour, which has not been gendered by the last century, this advertisement could entice both millennial men and women towards skincare.

The fourth design (Appendix 11) is inspired by Japanese design trends (Stribley, 2020), notably the trend of gradients being heavily incorporated in designs. Having a weak understanding of these trends, the design is not the strongest representation of those designs. The brand the Ordinary has not pierced the Asian markets, because that would place them in direct competition to many skincare moguls from Korea and Japan. However, a vast population of Anglophone Japanese people explore the internet, and such an example of an advertisement would be a subtle way to market to a part of their demography. As seen in the example of Netflix, issues of race are complicated to handle, especially if the way the advertisements are handled is by an algorithm. Proposing to speak to specific cultures without using the complex issues of race could be a way to address such issues. On the hand, representation in advertisement does lead to better

relationships with brands and to better sales (Williams, 2019). So representation is an important factor to take into account when designing advertisement.

The final design (Appendix 11) attempted to pull the advertisement in a contradiction to the original branding of the Ordinary to see how product could be marketed that way. The design involves a grunge aesthetic that contradicts the clean minimalist aesthetic with the photography. This photograph is of Alice Pondard, a French fashion designer and model who gave approval for use. The design aesthetics however match the original branding trying to match the brand's spirit in affordability. This design contradicts the brand intent in the presence of heavy makeup, which skin care brands tend to avoid using, in an attempt to show the result of the skincare.

Beyond just visual transformation, the practice of the concept of targeting visuals in this example of the Ordinary would need to be accompanied with different taglines for the different advertisement to further enhance the points that are being made. However, this point cannot be generalized to the whole study. It would likely be that brands create a less broad difference in advertisement styles, even when targeting different people through targeted visuals.

3.2.4 A automatized concept to the approach

The main issue when observing this practice to apply the theory is the cost that developing so many advertisement campaigns would cost for companies. The creation of hundreds of visuals for a single product or brand would be difficult to implement at any moment.

However, with further data collection on social media, the creation of such visuals could be worked through an algorithm as well, and not just to discover what users desire to see. Visuals and AI have already made strides forwards in the last few years. Algorithms have been able to identify rightfully the content of images (Addepto, 2019).

To implement this theory, this section explores an attempt to recreate the same aesthetics as the previous five visual advertisements through a design set of rules devised to reflect the workings of an algorithm (Appendix 14).

The advertisement has a fixed picture of the product placed on the advertisement. The logo, brand tagline and explanation of the contents of the product are fixed in their places as well to achieve comprehension. Here the typography used once again is Raleway, that the Ordinary uses as it is their main branding factor. The algorithm, based on taste, would choose the colour of the typography. It would then choose a relevant background, also based on the data collection concerning users. For the search to be as automatic as possible the same descriptive keywords as the first designs were used. Then the first similarly striking image was used. These images are licence free images online. In an ideal case, companies could have banks of visuals that could be used in such cases. Lastly, the use of filters such as contrast, saturation or colorization, in the likeness of Instagram filters, that have becomes prevalent on social media, can be applied to better affect the viewer.

The results (Appendix 14) are similar enough for each of them to visually draw similar conclusions as the designs above, however, it is important to notice that because human intervention was used, it is impossible to know how much creative bias was used. Although, in this case, certain human automatisms are important to point out here. It is important to note that readability of the content through the use of contrasting fonts would have to be coded into the algorithmic approach. The use of a learning algorithm similar to one that learns about audience preferences in the Netflix case study could be implemented to learn how people respond to better itself in design. This algorithm could be implemented in two ways. One when the page loads. Social media advertisement would be created as viewers scroll through their pages. The second possibility would be to have the advertisements created in a database by the company, allowing for error control.

The main drawback to the automatisation of these types of visuals would be their dehumanisation. As viewed in the problem with the algorithm from Netflix, algorithms

are merely sets of rules, and not know how to use sensibility on sensitivity issues such as race or gender.

3.4 Conclusion

To conclude this chapter, the paper has observed the relevant example of Netflix and their recommendation system that uses targeted visuals to better promote relevant films to their audience.

This case study allowed this paper to observe that Netflix created hundreds of different thumbnails for their various films. It promotes different thumbnails depending on the viewers history on the website, their tastes, and their purchases. Furthermore, it was observed that their context bandit algorithm promoted more and more relevant as it was a learning algorithm that constantly compared results to previous ones.

This case study gave a solid foundation for a setup of the hypothesis on targeted visuals in online advertising for a possible advertisement campaign for the skin care brand the Ordinary. Five different designs were created, contrasted to the literature review above and then analysed as to weather or not the targeted advertisement could have a positive effect. Complexity arose when concerning sensitive issues of race and of gender. It was observed that representation is an important factor that could not be ignored in advertisement but that algorithm based advertisement could have contradictory effects when it come to positive diversity.

Five further designs were made to explore the possibility of automatizing the creation of the advertisement through an algorithmic process. However, the process not set in place into a computer, rather a set of rules was followed in the image of an algorithm. It is impossible to know how much human creativity interfered in this process.

Despite these setbacks, a first observation of targeted visuals in social media advertisement was made. The example of Netflix gave a solid foundation to create an analysis of the hypothesis in action. The hypothesis would need a setup in an actual

experiment, where many more designs of the Ordinary brand campaign are created and then actually sent into an algorithm that would target the advertisement to a panel of different people to truly see if this hypothesis responds in it's entirety to the issues raised during the literature review.

4. General Conclusion

This paper sets into light the concept of targeted visuals in online advertisement via data collection.

It was observed in the literature review that brands have renewed themselves to face the problems of marketing strategies targeting narrower groups of the population. Today, with data collection, the next challenge for brands to overcome is targeting visuals in their advertisement. This is linked to current methods of advertisement leading to visitors falling off of platforms. Irrelevance and intrusiveness are highlighted, as well as the importance of making advertisement informative, positive for the economy, useful, secure and personalized for the viewer.

The paper observed the semiotics of graphic design, through the analysis of colour and typeface. The analysis of colour showed that humans garner meaning from colours through physiological reactions. They also have many layered meanings through of years of social-learned meanings. Colour is such an integral part of human society that it is essential for brands to understand them when concerned with interactive visuals. The analysis of typeface also showed that they have multi-layered meanings, and that importance should be places on following trends even in targeted advertising, as well that typography should align with brand identity and the product advertised.

Thereafter, a case study of Netflix was conducted to give better grounds to the hypothesis concerning, as well as aid in the hypothetical creation of targeted visuals for an advertising campaign for the perfume brand the Ordinary. Further research would be necessary to better observe the fact of targeted advertisement, as well as an experiment that would use algorithmic concepts in a concrete way to better observe its effects on the topic of targeted advertisement.

Moreover, research in the concept of manipulation could be helpful in this topic. The literature review did observe that data collection is a complicated issue in current times. S study shows that DuckDuckGo, a search engine app that does not record search history, nor collects any user information saw a total increase of 49% across all platforms (99 Firms, 2019). The rise of such search engines shows that people are wary of data collection today and wish to reach more control on how their data is handled by companies. It would be important to look at the possibility of a version of targeted advertisement exist where preferences are controlled by the audience and what that would mean for advertisement effectiveness.

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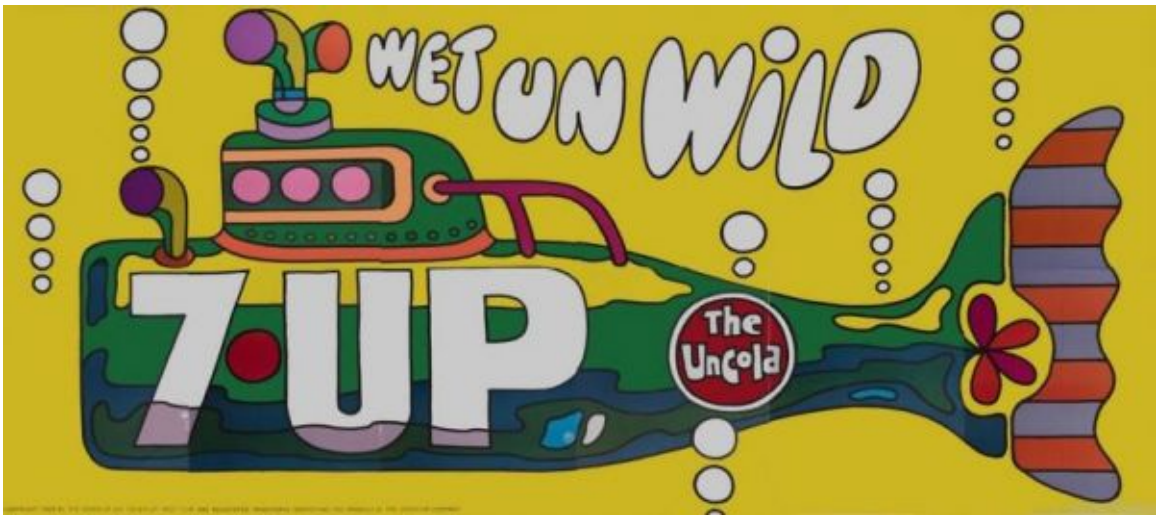
Appendix

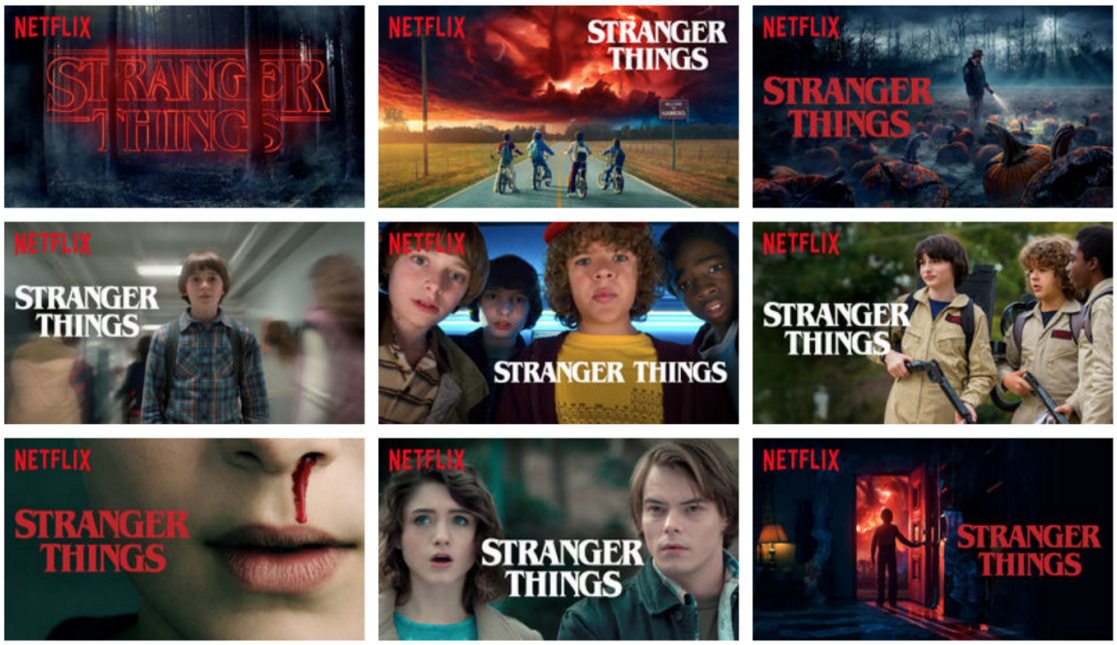
Appendix 1 (The Seven-Up Company, 1954)

Appendix 2 (The Seven-Up Company, 1957)

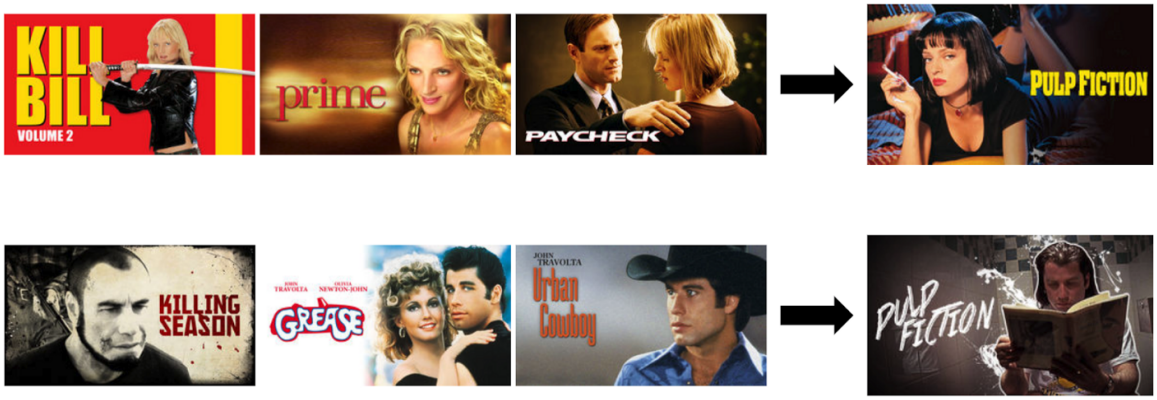
Appendix 3 (George, 1969)



Appendix 4 (Netflix, 2017)



Appendix 5 (Netflix, 2017)



Appendix 6 (Coppola, 1992)

Appendix 7 (Tarantino, 2003)

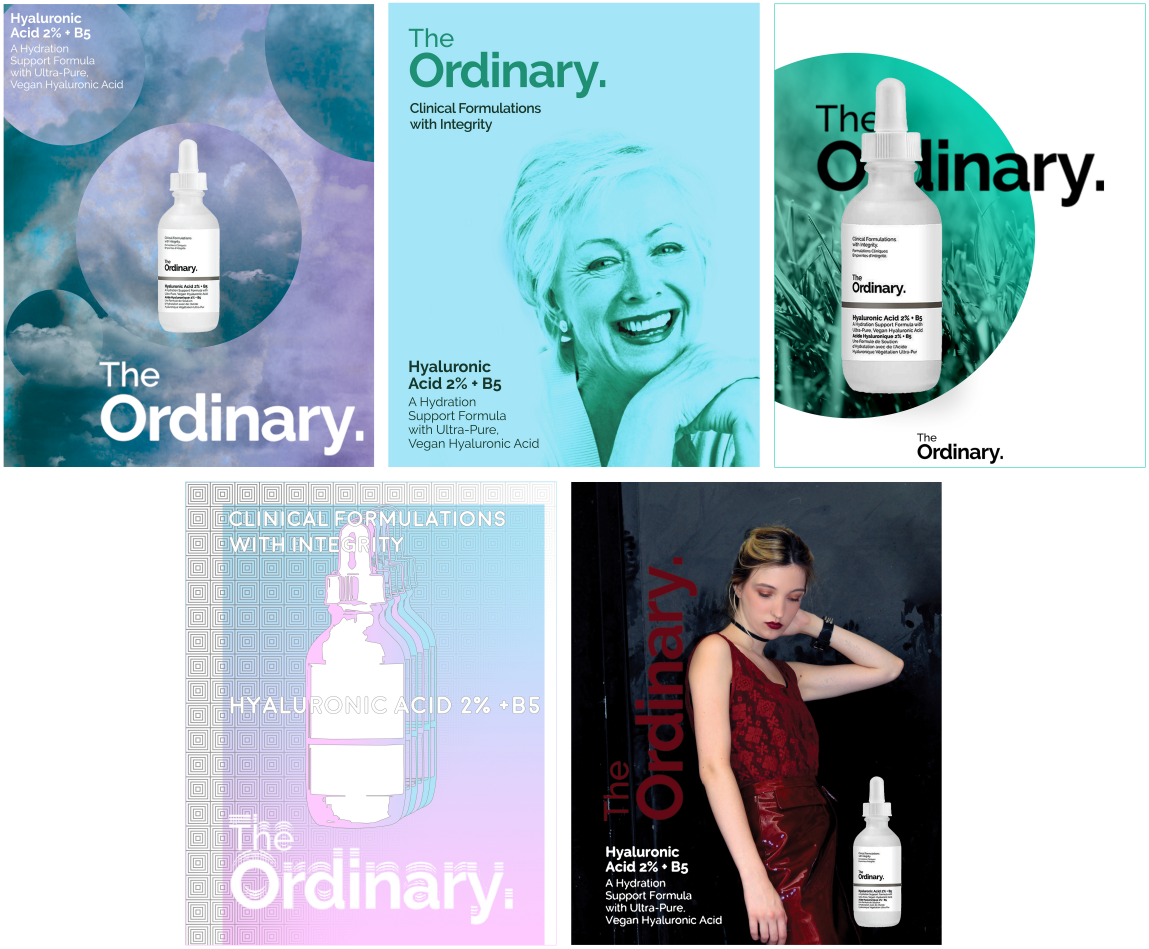
Appendix 8 (Kar-wai, 2000)

Appendix 9 (The Duffer Brothers, 2016)

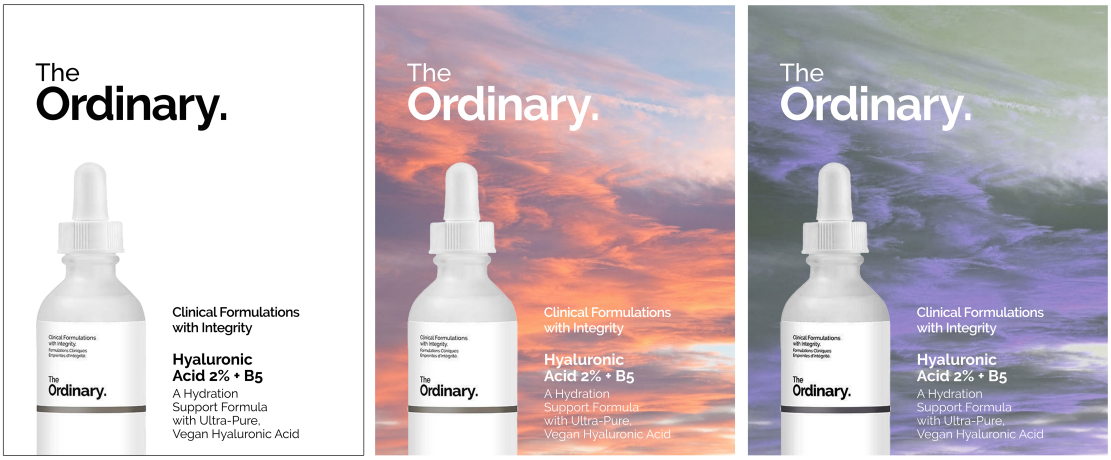
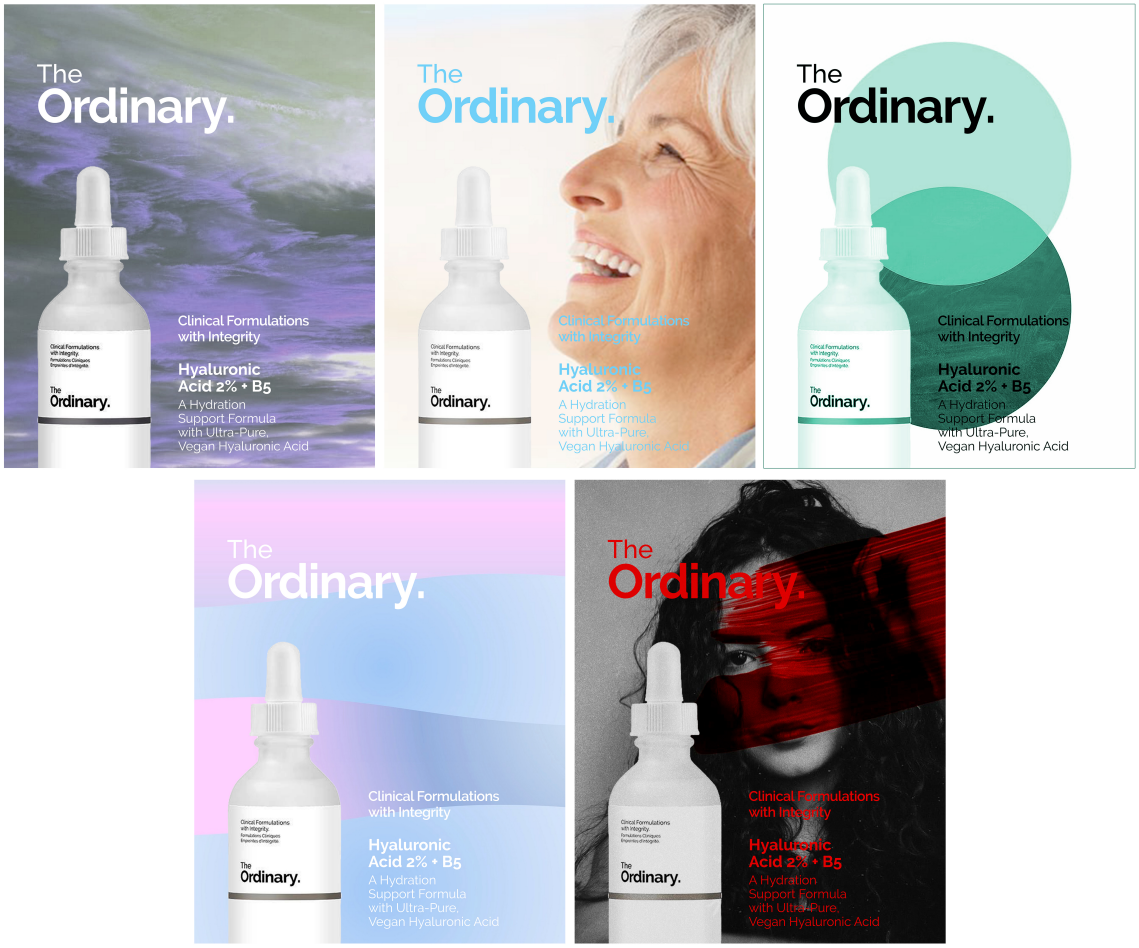
Appendix 10 (W. Henderson, L. Giese, & A. Cote, 2004) (Vectorised version)

Appendix 11 (W. Henderson, L. Giese, & A. Cote, 2004) (Vectorised version)

Appendix 12: Personal redesign of an advertisements for The Ordinary.



Appendix 13: Visualization of the algorithmic process proposed



Appendix 14: Results of an algorithmic approach to achieve similar results in the visual design process