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VISUAL AND COGNITIVE DIFFERENCES WHEN VIEWING BANNER
ADVERTISEMENT ELEMENTS: A CROSS-CULTURAL NEUROMARKETING
STUDY

Bachelor Thesis

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I have written this Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

Table of Contents

Introduction	4
1. Culture's role in consumer behaviour, and ties to static banner advertising	6
1.1. Culture in Consumer Behaviour and Marketing	6
1.2. Static Banner Ads, their Elements, and Cross-Cultural Cognitive & Visual Differences	13
2. Empirical Research Investigating Cross-Cultural Differences to Banner Ad Elements	21
2.1. Research Methodology and Sample Selection	21
2.2. Eye-Tracking Experiment and Interview Results & Analysis	29
Conclusion	39
List of References	42
Appendices	48
Appendix A Interpretation of each cultural identity strength level (SL)	48
Appendix B Mapped AOIs of Ad Elements for Ads of Interest	49
Appendix C Subjects' Grouped Comments About The Water Bottle Ad (Figure 3)	51
Appendix D Subjects' Grouped Comments About the Blanket Ad (Figure 4)	54
Appendix E Summary Tables About Comments Made About Each Ad Element	56
Appendix F The Ranked Order of Viewing Elements for Both Ads and Groups	58
Appendix G Visual Representation of Eye-Tracking Results: Heat Maps	59
Appendix H Statistical Tests for Eye-Tracking Metrics for the Water Bottle Ad	60
Appendix I Statistical Tests for Eye-Tracking Metrics for the Blanket Ad	61
Appendix J Data and Comparison of Means for the Percentage Fixated Metric	61
Summary in Estonian	63

Introduction

The commercial success of companies relies on their knowledge of consumer behaviour. Although consumers' buying decisions can be influenced by companies' marketing strategies to a degree, the unique needs and aspects that define a consumer are directly influenced by cultural factors (Luna & Gupta, 2001). Such factors are not only difficult to predict, but also impossible to directly control by companies themselves (Łatuszyńska et al., 2012). Failure to recognise and address cultural factors can lead to missed opportunities and ineffective message delivery (Cateora et al., 2024). Thus, it becomes important to address cultural differences and adapt marketing strategies based on them.

Past research indicates that consumer behaviour differs by culture, and culture dictates the ultimate decisions different consumers make (Zhong et al., 2019). Culture itself is an intangible phenomenon, and many cultural influences operate at a subconscious level (Cateora et al., 2024). To add, Luna & Gupta (2001) bring out that cultures shape people's reality, acting as a blueprint for their behaviour and, from an emic (or internal, subjective to a person) point-of-view, functions as the 'lens' through which a person perceives the world. The aspects of culture, as Hannerz (1997) stated throughout his book, manifest in both tangible (e.g., rituals, symbols) and intangible (e.g., values, beliefs, and thought processes) ways.

The importance and effect of culture in a marketing context have been addressed and seen differently across studies with no concrete or universal framework. However, consumer behaviour is a term used to explain how culture dictates individual and group-level behaviour in the marketplace, as indicated in the works of De Mooij & Hofstede (2011), Arnould et al (2019), Luna (2001), and Cateora et al. (2024), for example. Although it is generally accepted in literature that culture plays an important role in one's decision-making in the market, the effects of culture might diminish in groups of younger demographics due to younger people having spent a greater proportion of their lives experiencing a globalised culture (Möller & Eisend, 2010). Therefore, young people (along some other groups) might be more receptive to standardised ads (Steenkamp, 2019).

Interviews and other traditional qualitative research methods, i.e., focus groups or direct questioning, are often insufficient in capturing the subconscious cultural influences, thus not providing a complete understanding of how cultural factors affect consumer responses to marketing stimuli (Sherief, 2024). That is because these methods rely on self-reported data,

which can be subject to bias and other limitations when subjects attempt to articulate subconscious thoughts and feelings. Additionally, subconscious tendencies and emotive reactions can't be reliably accessed by conscious thinking and instead can be accessed by measuring the involuntary and physiological responses that occur while people observe content (Cateora et al., 2024). This introduces a research gap, because according to Sherief (2024), and Cateora et al. (2024), research methods that can produce results based on subconscious responses, for example, eye-tracking devices, are expensive or aren't readily available in many places.

In this research, I attempt to address this research gap by utilising a combination of both qualitative and quantitative (namely neuromarketing) methods, which include eye-tracking and interviewing, to provide a possibly more comprehensive picture of how people perceive content shown to them. Sherief (2024) suggest that future consumer behaviour and neuromarketing research should better account for the role of contextual factors, such as the influence of culture, as key parts of consumer behaviour.

I chose to use and research static banner advertisements (hereinafter ads) for the purposes of empirical research. Banner ads are well-suited due to them observably being one of, if not the most, researched ad groups. According to Peker et al. (2021), banner ads play a key role in commercial business success, which makes it relevant to understand how such ads are perceived and understood by different consumers. This is especially true when a company conducts business on a global scale.

The aim of this thesis is to find out whether people from different cultures experience significant visual and cognitive differences when viewing the same banner ads. To achieve this, the following research tasks have been set:

- Define culture and explain its implications in consumer behaviour
- Address culture's role in marketing by assessing factors that influence a consumer across studies
- Assess the state of cross-cultural advertising research, introduce static banner ad elements, and explain how they're perceived cross-culturally
- Determine and justify ad elements for use in empirical research
- Produce ads and conduct a neuromarketing experiment based on them

- Analyse the results of the empirical research and compare visual and cognitive responses to see if cultural differences play a role

The thesis will follow a simple structural approach, consisting of four main parts in the following order: introduction, theoretical part (Chapter 1), empirical part (Chapter 2), and conclusion. The format of this thesis is according to APA 7th edition and will follow the Tartu University's School of Economics and Business Administration iteration. To elaborate on structure, the theoretical part and empirical part will each be divided into 2 subchapters to ensure a compact set of topics. In the theoretical part, 1.1 will be a discussion about the definitions of culture and consumer behaviour, and their implications in marketing. 1.2 will discern static banner ads in the context of this study, going more into depth as to different elements they may consist of and potential ways such elements may be differently perceived from a cultural perspective. The empirical research consists of an eye-tracking experiment, during which ads, including 2 ads of interest, will be shown in a randomised order (with 2 possible placements for the researched ads) for 2 cultural groups: native Estonians and native Ukrainians. The experiment is accompanied by a post-and pre-experiment interview. The former interview will attempt to gauge the extent of a subjects' strength of cultural identity, and the latter will address what subjects thought of the ads of interest.

List of keywords characterising the study: Consumer Behaviour, Neuromarketing, Advertisement, Cultural differences, Cross-Cultural.

1. Culture's role in consumer behaviour, and ties to static banner advertising

1.1. Culture in Consumer Behaviour and Marketing

This part analyses past academic works to explain how culture is defined, how it's tied to consumer behaviour, and in what ways it becomes evident in marketing processes. Relevant definitions of culture, consumer culture, and ads are addressed and definitions suitable for this work are described in more detail. The latter part of this chapter is a discussion about the aspects of culture that affect consumer behaviour and the ways cultural differences might affect marketing decisions and directions.

Culture is a complex, multifaceted phenomenon which makes it inherently difficult to create a universally agreed-upon definition (He & Alden, 2008). Although iterations of culture's definition exist, some authors are cited more than others. One of the more prominent figures when it comes to research in the field of culture and consumer behaviour is Geert Hofstede. His

proposed definition of culture is used in most studies I came across. Hofstede (2001, p. 9) defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another”. To clarify, the “mind” stands for the head, heart, and hands, meaning thinking, feeling, and acting, which results in beliefs, attitudes, and behaviour (Hofstede, 2001). This definition is a shorthand derivative of anthropologist and social theorist Clyde Kluckhohn’s definition of culture:

“Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values.” (Kluckhohn, 1951, p. 86)

Kroeber and Parsons (1958) analysed existing definitions for culture and came up with their own: “transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour” (p. 583). Their definition is similar to Kluckhohn’s in a way that it seemingly centres it around the individual’s interpretation of their surrounding world and the means through which such interpretations are further transmitted to others.

Hannerz (1992), in his book discussing the anthropology of contemporary cultures, describes culture in a way that it has two dimensions to it, those being the “visible”, and “invisible” dimensions. The visible dimension consists of the ways in which peoples’ ideas, thought processes and values are communicated or made public in a way that’s accessible to the senses (Hannerz, 1992). The mediums of transmitting culture may be different forms of art, interstate highways, technologies, food, and many more (Hermans & Kemper, 1998). The invisible dimension is an intangible facet of culture which consists of symbols, norms, meanings and actions (Hannerz, 1992). Hannerz’s definition, while being similar to previously discussed definitions, introduces more depth as to the way culture is outwardly expressed and innerly processed.

The depth Hannerz introduces into the definition of culture may be further elaborated by concretely distinguishing elements/aspects of culture. This is to understand what factors play a role in determining an individual’s cultural identity. For effective academic comparability, it’s worth analysing the ways researchers have distinguished between different cultures. In their

review of the past 20 years of cross-cultural consumer behaviour research, Sojka and Tansuhaj (1995) highlighted three elements researchers mostly used to differentiate and examine cultures: language, material goods, and beliefs. This knowledge helps me understand which elements of culture I should address when differentiating visual elements in advertisements.

Culture's role in consumer behaviour is vital to understand due to its dominant influence among variables affecting consumer behaviour (Zhong et al., 2018). This is highlighted by multiple authors and researchers, including Cateora et al. (2024), who note that culture has a profound impact on consumer behaviour, impacting peoples' thoughts, feelings and actions in the marketplace.

The field of consumer behaviour is very broad, and consumer behaviour, as defined by Solomon et al. (2020), is characterised by "the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires" (p. 22). Consumer behaviour is not a discrete process, but an ongoing pattern of behaviour that influences the decisionmaking process before, during, and after a purchase (Solomon et al., 2020). Due to the continuously evolving nature of consumer behaviour and its cultural effects, it becomes an important factor to understand for international marketers, researchers and this thesis.

The ways through which culture affects consumer behaviour have been addressed in multiple ways, either by focusing on the levels (i.e. individual, group, societal) on which culture exists, the aspects or elements of culture, by addressing cultural dimensions, or by other means. To avoid digressing and unnecessary complexity, I will explain it through cultural influences proposed by Geert Hofstede. The cultural elements highlighted in research done by Sojka and Tansuhaj are similar to Hofstede's *cultural influences* (used synonymously with *manifestations of culture*). The main difference is that Sojka and Tansuhaj's elements are used to differentiate cultures, whereas Hofstede's cultural influences, as Luna and Gupta (2001) claim, explain ways culture influences peoples' behaviour.

According to Hofstede (2001), culture dictates human behaviour through values, heroes, rituals and symbols. Those four cultural influences are highly relevant to observational studies, because all of them can manifest in visible form, providing tangible grounds for criteria which researchers can observe and survey about. Values are reflected in people's behaviour, and heroes, rituals, and symbols are considered practices. Although the cultural meaning of the

practises is hidden, they can be observed and then analysed. The extent to which a cultural manifestation is visible differs among them. (Hofstede, 2001)

Martin & Phiri (2023) note that relevant research shows that cultural influences and consumer behaviour are directly linked. Furthermore, as discussed by the aforementioned authors, al Sajib et al. (2016) confidently conclude that each step involving consumption is greatly affected by one's cultural values, *especially* for specialty products. Specialty products are a specific type of consumer products that have unique characteristics and strong brand identification (Kotler et al., 2021).

Hofstede's manifestations, primarily values, have often been regarded as behavioural drivers in notable academic works (Luna & Gupta, 2001). Each cultural influence will be contextually defined and their impact and implication on consumer behaviour will be described.

Values are largely considered to be the central, most stable, as well as the most studied element of culture (Luna & Gupta, 2001). Values are invisible until they appear in behaviour. Values are divided into desired and desirable values: desired values refer to what people individually desire, and desirable values refer to what people ought to desire (Hofstede, 2001). Simply put, values are defined as "a broad tendency to prefer certain states of affairs over others" (Hofstede, 2001, p. 5). Values dictate consumer needs and influence the criteria people create when making purchasing decisions (Gutman, 1982; Nayeem, 2012, Riemer et al., 2014). For example, cultures that value tradition may have slow adoption rates for new products, whereas cultures that value innovativeness may have faster adoption cycles (Nayeem, 2012).

Heroes, regardless of whether they're alive, dead, or fictional, represent people who possess highly valued characteristics (Hofstede, 2001). In cultures, heroes shape people's behaviour by representing a culture's values (Hofstede, 2001). Therefore, a highly influential hero will likely strengthen the cultural identity of those who look up to them and introduce desirable values unique to a culture. Spokespeople and thought leaders can be considered as heroes of this nature (Luna & Gupta, 2001). In different cultures, certain types of heroes have more weight than others (Luna & Gupta, 2001). For example, household elders' opinions may outweigh the impact of thought leaders, which still affects consumer behaviour, but in a different way. Understanding a culture's preferred hero may then be used to create more effective ads, or, for research purposes, retrospectively measure ads' effectiveness, e.g. via A/B testing.

Rituals are specific activities that are collectively carried out within cultures (Hofstede, 2001). Rituals aren't necessary to achieve desired ends but are vital to retain people within the culture's norms, and thus strengthen their cultural identity (Hofstede, 2001). Rituals can affirm cultural values and can sometimes influence or revise those values (Luna & Gupta, 2001). In marketing research, the importance of rituals is under-researched, but it can be deduced that cultures that practice rituals often, may tend to have more similarity in consumer behavior than cultures that practice rituals less. Solomon (2020) brings out that cultures more susceptible to globalisation will homogenise in terms of rituals and thus product preferences. This suggests that within globalised areas, differences in cultures may not be as substantial, which would therefore allow advertisers to create more standardised campaigns.

Symbols appear in the form of words, gestures, pictures and objects that serve a unique purpose or meaning to a culture (Hofstede, 2010). Symbols exist both verbally and nonverbally, and when it comes to words, include both formal and informal language (Hofstede, 2010). Symbols have unique meanings for specific groups of people and are closely linked to cultural values (Luna & Gupta, 2001). Luna and Gupta (2001) note that in consumer behaviour research, products are regarded as symbols through which desirable beliefs are transferred. In fact, symbolic meanings in consumer behaviour research are among the most important factors (Arnould & Thompson, 2019). Therefore, a product's appeal to a specific group of people may be affected by the values it symbolises.

Cultural influences affect cultures by homogenising them in a way and can serve as a tool to outwardly reflect one's values to others. Researchers agree that culture is dynamic and subject to change over time, and some cultural influences, as mentioned by Hofstede (2001), serve the purpose of affirming norms or strengthening cultural identity, and are less prone to changes than others.

Broadly defined, marketing includes activities through which companies aim to engage customers, strengthen relationships with them, and create value to receive value in return from them (Kotler et al., 2021). Catering to consumer needs requires marketers to understand the driving influences of consumer behaviour. As Zhong et al. (2018) mention, the predominant influencer of consumer behaviour is culture. The need for this comprehension is especially important for international marketing campaigns (Zhong et al., 2018).

To evaluate a culture's readiness for new ideas, its sensitivity to change should be measured. To help with this, the importance (or stability) of each cultural manifestation should be ranked, with values being of central importance since researchers agree it affects and is affected by the other cultural manifestations. While sensitivity to changes is more relevant to continuous or cohort studies, ranking by stability could provide a better intuitive understanding of the extent to which each manifestation is prioritised. The stability of each cultural manifestation was assessed by Hofstede et al. (2010), who determined that the order of cultural manifestations, from more stable to less stable, is as follows: values, rituals, heroes, and lastly symbols.

In the field of cross-cultural marketing research, culture is often viewed from the perspective of mass consumer groups (Arnould & Thompson, 2005). This type of research is known as *consumer culture research* (Arnould & Thompson, 2005). According to Arnould and Thompson (2005), in conventional consumer research, consumer culture is defined as a reasonably homogeneous system, in which its participants share meanings, lifestyles, and values. Such a definition is suited for differentiating societies or subcultures throughout different countries (Arnould & Thompson, 2005). In Consumer Culture Theory (hereinafter CCT) research, it is broadly defined as the "heterogeneous distribution of meanings and the multiplicity of overlapping cultural groupings that exist within the broader socio-historical frame of globalisation and market capitalism" (Arnould & Thompson, 2005, p. 869). This definition allows to differentiate between groups of people based on consumption patterns and/or other means of market interaction. Acknowledgement of heterogeneity in consumer culture therefore becomes a vital consideration in this study, as subcultures stemming from consumption patterns may introduce similarities in some people from distinct (e.g., ethnic, or national) cultural groups.

In today's world, it's important to understand the differences of culture's role for people from different age demographics. Möller and Eisend (2010) discuss the influence of national culture on consumers and suggest that age might have a moderating effect on cultural identity, because younger people have spent more time of their lives experiencing a globalised culture on the internet. Moreover, Sharma & Lulandala (2021) analysed cultural differences among Facebook users in India and Tanzania, and found that the young users they looked at showed signs of converging (i.e. becoming more alike), contrary to clear cultural differences established in the past (i.e. the clear difference in the masculinity and individualism dimension). These

findings might suggest that younger people across cultures might be more culturally integrated than older groups, which further suggests that a standardised marketing campaign might be viewed similarly among young people across cultures. However, the effects of individualism and masculinity remained stable in both groups studied (Möller & Eisend, 2010). Thus, exposure to global influences, like the Internet, might result in weaker effects of cultural manifestations for younger people or a weaker strength in their ethnic/national cultural identity. The difference of strength in one's cultural identity, or how different levels might affect consumption patterns, has seemingly not been researched among young individuals.

Solomon (2020) discussed the feasibility of using standardised campaigns and pointed out that Procter & Gamble, a US-based company, put out a statement about them noticing large segments of consumers across many countries that have similar outlooks, style preferences, and aspirations. The groups, interconnected through technology (like the Internet) included teenagers, working women and baby boomers (Solomon, 2020). Because of that, the company made the same content available in 40 countries (Solomon, 2020). The author further discusses that people who are in favour of employing standardised campaigns argue that cultures in industrialised countries are homogenised to the point where the same approach to marketing would work across the world (Solomon, 2020). In my opinion, the argument that the same approach to marketing would work across industrialised countries is too superficial, because it doesn't segment demographics. Möller and Eisend (2010) argue against the universal effectiveness or standardised ads, pointing out that the effects of native cultures differ among countries. When mentioning the term *native cultures*, I precisely mean the culture associated with the country the person is from.

There might be a case for standardisation, but not across all demographics at once. When Disney opened its Euro Disney Park in 1992 in Paris, France, the company received backlash from both French people, because the new location didn't cater to local customs (like serving wine with meals), and from people from other countries, because the park only sold French sausages (Solomon, 2020). Although this is an older example, it's still a relevant demonstration that a universal solution is not feasible when trying to cater to everyone/all demographics.

Steenkamp (2019) deduces that the global elite, young people, and higher educated people are more receptive to standardised ads. He adds that for ad campaigns made towards these

segments, including global imagery and associations will increase brand value, and local adaptations are not beneficial.

Consumers portray their identities via objects/possessions, with the goal to either align with or differentiate from other groups (Arnould, 2001). The importance of possessions therefore becomes important for this study, as due to their physical, often specific nature, they can be portrayed and thus utilised in ads.

The interconnectedness of consumer behaviour, consumer culture, and research in the field of CCT, demonstrates that culture's effect is multi-dimensional. For observational studies, this may prove to be a convoluting factor, because all macro, consumption pattern-based, individual, and culture-group-specific factors might not all be feasibly accounted for. However, this knowledge allows researchers to have a better intuitive understanding of the overarching and dynamic effects culture has on both individuals, larger (e.g., native), and smaller groups (i.e. subcultures).

1.2. Static Banner Ads, their Elements, and Cross-Cultural Cognitive & Visual Differences

Marketers can achieve their goals of communicating and translating the quality of their products via advertising (Cateora et al., 2024). Advertising is a form of marketing communication that involves the creation and spreading of messages to promote products, services, or ideas (Cateora et al., 2024). It is a persuasive form of communication that aims to move consumers to action (Verboom, 2021).

Ads can take many forms, but both in Internet marketing practice, as stated by Peker et al. (2021), and in marketing research, as stated by Ju (2013), the most reliable format is banner advertising. Banner ads are generally divided into static banner ads and animated banner ads, although they can be a combination of static and animated elements (Muñoz-Leiva et al., 2018). Static banners are less complex due to a lack of dynamic depth (audio, movement, etc.) and could hence be more easily controlled and studied in an experimental setting. Surprisingly, as discussed in the study by Peker et al. (2021), static banner ads were found to be more attention-grabbing than animated ads, which could suggest higher effectiveness. Lastly, by using static banner ads, many potential distracters that are present in animated banners, such as large, bright, or fast-moving objects, can be excluded (Lee & Ahn, 2014)

There is a looming lack of cross-cultural research into perception differences towards banner ads, not to mention their elements. This gap is also highlighted by Taylor (2023), who

adds: data collection is a large issue in cross-cultural contexts, the data may be very noisy due to culture's multi-dimensionality and subconscious effect, and cultural variables may vary between countries of interest. My observations of a lacking theoretical base are also one of Taylor's (2023), who wrote that although valuable insights (by scholars such as Hofstede) of culture's relation to business practices (including advertising) have been provided, many works have been criticised by researchers on grounds of culture's under researched complexity. However, as literature has advanced, stronger synthesised conceptualisations of culture and its role are needed (Taylor, 2023).

Due to the previously mentioned observation, the process of relevant academic writing selection was made exceedingly difficult. Moreover, most commercial studies into banner ad effectiveness were done on a select few cultural groups. Among some of the more relevant studies that tackle cultural differences, from researchers such as Muñoz-Leiva et al. (2018), Ploom et al. (2020), and Shao et al. (2004), the studied cultural groups are differentiated largely by nation (i.e., Korean, Estonian). Usually, the display of a specific attribute, such as materialism, gender representation, or humour appeal, is the focal point of the study (Sego & Lee, 2014). The number of countries researched in these types of studies was normally two or three. Thus, the inherent complexity of culture forces researchers to considerably narrow down in sample and subject to ensure significance in results. Culture's complexity is also a reason a standardised framework for research, or a model can't be effectively created.

In my study, I focus on cultural factors that exist on a cultural group level (namely country-level), rather than an individual level, due to the past researchers' general tendency to do so as well. Hofstede et al. (2010) point out that differentiating by nation is the most viable approach for cultural studies. Moreover, in the empirical part of the study, I will consider the cultural effects on subjects from the same country to be rather homogeneous. Generally, it's understood that country-level cultures aren't completely homogenous, highlighted by highly regarded writing, such as that of Hofstede et al. (2020). However, researchers Choi and Miracle (2004) point out that, on average, people from the same country tend to have very similar values, and researchers Möller and Eisend (2010) found that country-level cultural variables (compared to individual-level variables) dominate in affecting peoples' attitudes and interactions toward banner ads.

Scholars who have researched banner ads haven't yet come up with a general categorisation banner ad elements, but some tendencies can be observed. Manchanda et al. (2006) mention that the contents of a web-based static banner ad consist of graphical, textual content, and a link to the advertiser's website. Sometimes additional elements are included based on the type of banner ad. In the study by Peker et al. (2021), subjects were shown promotional ads consisting of three elements: brand logo, discount rate, and product image. Sego and Lee (2014) researched the elements of colour and non-specific imagery in their research. This might be because there is no accepted definition of what an ad element or a banner element is, and thus any component that makes up an ad can be considered an element. However, I believe it is beneficial to introduce a standardised categorisation of ad elements.

To categorise ad elements into larger groups, I will be using a similar approach that eye-tracking researchers use to define Areas of Interest (AOI-s). AOI is a term used in eye-tracking research to define specific, distinct areas within a visual stimulus (Peker et al., 2021). In the context of a banner ad, elements are the different visually distinct components that serve a specific purpose, but altogether contribute to the consistent value proposition of the ad. By this definition, they can be grouped by their overall nature, then purpose, and further divided by their type. For the overall nature of ad elements, I will use and modernise (because modern online banner ads do not include links, but are rather interactive themselves) Manchanda et al.'s (2006) categorisation because I find it to be quite compendious.

By their nature, ad elements can be placed under two groups: textual and graphical. The purpose of each element may vary, but when addressed in studies (e.g.: Muñoz-Leiva et al., 2018; Peker et al., 2021; Polegato & Bjerke, 2009; Sego & Lee, 2014), ad elements seem to serve up to three purposes: to attract attention, convey information, or encourage action. The type of element entails the specific form an element is presented in. The aforementioned method of grouping banner ad elements by their form, purpose and type is summarised in Figure 1. To further illustrate this with an example, the element type product image serves the purpose of attracting the viewer and is graphical in nature (Peker et al., 2021). In advertising research, every ad element could thus reflect information on its overall nature, purpose, and then type, allowing for coherent grouping of similar elements, which is especially useful in the case of many elements. Generally, every visual element of a banner ad, plus the background, is coloured. The significance of colour is culturally contingent, and the symbolic meaning different hues varies by

culture (Sego & Lee, 2014; Noiwana & Norciob, 2006). Overall, graphical, textual, and brand (can be both) elements are fundamental for banner ads, as mentioned by Peker et al. (2021). Some specific types of elements are also commonly used in banner ads, for example, a Call to Action (hereinafter CTA) has the purpose of guiding consumers to interact with the ad, the name is literal (Chen et al., 2020). CTAs typically appear as buttons, and usually include one of the following texts: “learn more,” “contact us,” or “shop now” (Chen et al., 2020). Bočaj and Ahtik (2023) bring out that, although CTAs weren’t a direct interest in their research, they included it in half of the banners they created to reflect real-life banners. Moreover, Usmani et al (2019) bring out that social media ad campaigns are “filled” with CTAs. As to textual elements, Sego & Lee (2012) discussed that common types of informational cues are special offers/events, availability, quality (for South Korean and USA ads).

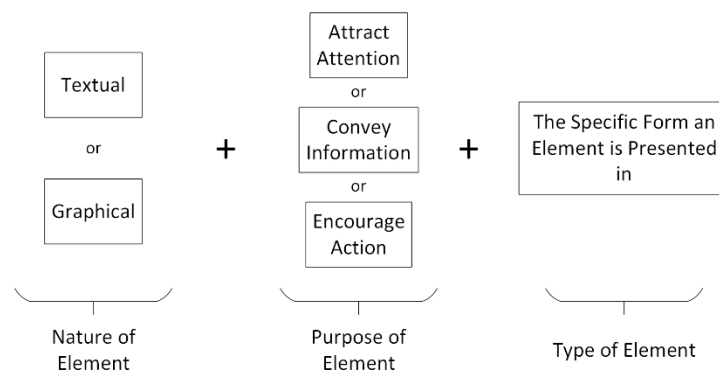


Figure 1. Aspects of a Static Banner Ad Element

Source: Compiled by author, based on combined knowledge of the grouping methods of banner ad elements discussed in writings from Muñoz-Leiva et al. (2018), Peker et al. (2021), Polegato & Bjerke (2009) Sego & Lee (2014), and Manchanda et al. (2006).

People from different cultures may regard and perceive ad elements differently in multiple ways. The factors that can warrant differences include depicted imagery and perceived values, as noted by de Mooij & Hofstede (2011) and Luna & Gupta (2001), but differences can also arise due to visual complexity and use of language, as Sego and Lee (2014) note. Thus, likeability and perceived visual attraction of the ad may differ depending on who views it.

Likeability and visual attraction towards an ad or its elements are measured via different methodologies. Likeability and attitude towards ads are predominantly measured using explicit methods. This implies researchers directly asking participants about their feelings toward

different aspects of an ad. Explicit methods, like the use of Likert-type scales, require participants to rate how much they like an ad overall or specific elements, thus relying on their conscious evaluation, which may not be the best-suited option for cross-cultural research, at least not on its own. (Muñoz-Leiva et al., 2018)

Visual attraction or attractiveness towards an ad or its elements is measured by using implicit methods, which measure a subject's responses without requiring any conscious reporting (Muñoz-Leiva et al., 2018). It's relatively new technology in the field of cross-cultural research due to its reliance on neuromarketing methods, namely eye-tracking (Muñoz-Leiva et al., 2018). Neuromarketing is a field that utilises neuroscientific methods to measure consumers' visual responses to marketing stimuli, allowing researchers to potentially get a deeper insight into subconscious tendencies and behavioural patterns (Sherief, 2024). However, neither the explicit nor implicit methods provide the full picture on their own, so it's generally better to utilise both methods in research (Sherief, 2024). Eye-tracking research, usually conducted in controlled lab settings, uses infrared technology to monitor and record a subject's movements to assess visual attention and other cognitive processes (Rieger et al., 2015). The benefits of eye-tracking for researching the perceptions of banner ads are: the ability to investigate the perception of elements separately via software, the ability to capture and measure subtle attention shifts, ability to create various data, such as what element was seen first and what was looked at the longest (Rieger et al., 2015; Noiwana & Norciob, 2005).

This paper assesses and compares the cognitive and visual differences of subjects that viewed the same banner ads. To elaborate, a subject's cognitive response entails their self-reported, conscious thoughts about the visual stimuli. This type of information is gathered via explicit methods. A visual response entails the subconsciously led, gaze-based reaction to the visual stimuli. This information is to be gathered via implicit methods. The exact methods used will be discussed in the empirical part.

Cross-cultural studies on banner advertising effectiveness and perception reveal that some types of ad elements are culturally more significant than others. In terms of affecting a consumer's visual attractiveness toward the ad and their perception of it, imagery is the most significant (Peker et al., 2021; de Mooij & Hofstede, 2011). While it might be possible to standardise certain visual elements, imagery in advertising is fundamentally cultural, and reflects cultural values (de Mooij & Hofstede, 2011). Although cultural meaning is inherently present in

imagery, what's depicted can greatly affect the intercultural disparity of peoples' perceptions. The ways cultural values are transferred in ad imagery are reflective of Hofstede's cultural manifestations (Rituals, Heroes, Symbols), which can all be created via advertising (Luna, 2001). In cross-cultural advertising research, the role of symbols and symbolic meanings in banner ads are commonly studied. This may be because symbols, as Hofstede (2001) wrote, are the most visible form of cultural manifestation. An example of preferred ways to appeal can be found in the study by Jin (2010), where they point out that American ads use complex messages and emotional/rational appeals, whereas Asian ads use more symbolic and metaphoric appeals.

Text, as the other major nature of ad elements, plays a significant role in cross-cultural advertising research, but its interpretation varies depending on its cultural context, particularly based on whether a culture is high-context or low-context (Sego & Lee, 2014). These concepts were coined by anthropologist Edward T. Hall in 1959, based on decades of anthropological fieldwork (Cateora et al., 2024). For clarity, high-context cultures are regarded as cultures in which communication relies heavily on implicit messages, shared understanding, and contextual cues (Shao et al., 2012). For high-context cultures, the text itself may play a lesser role than the overall message, imagery, and symbolism of the ad. Low-context cultures, on the other hand, communicate in more explicit ways and information is transferred directly through words (Shao et al., 2012). Low-context cultures derive and expect to derive their meaning through text (Shao et al., 2012). Some examples of high-context cultures are Japan, Korea, China, and Arab countries, and examples of low-context cultures are The United States, Germany, and Switzerland (de Mooij & Hofstede, 2011). De Mooij and Hofstede (2011) noted that high-context communication is correlated with collectivism, and low-context communication is correlated with individualism. This correlation can be supported by Sego and Lee's (2014) finding that Chinese and South Korean ads include a lot more information in their ads than ads in the United States of America. It is worth noting that consumers from individualistic countries tend to be less accepting of banner advertising compared to consumers from collectivistic countries. (Möller & Eisend, 2010). Not accounting for this may skew the results of studies researching cross-cultural likeability of (especially standardised) ad elements.

When comparing Estonia and Ukraine, the countries relevant for the empirical study of this thesis, as to their degree of context, some noticeable differences emerge. The scores for the following comparison were gathered from the website of The Culture factor group, who base

their data on the latest and relevant figures in the field, including Hofstede et al. (2010), which the original values are based on, with some updates made in time (The Culture Factor Group, n.d.). The findings are brought out and elaborated on Table 1. Estonia is abbreviated to EST and Ukraine to UKR.

Table 1

Hofstede's dimensions comparison between the countries Estonia and Ukraine

Metric	EST	UKR	Metric Definition
Individualism	62	55	The degree of Individualism in a country. A high score means the country is individualistic-leaning, a low score means the country is collectivistic-leaning. (Hofstede et al., 2010)
Power Distance	40	92	Dependence on authority figures. A high score means that the dependance on authority figures is lower, which makes it easier to approach and contradict them. (Hofstede et al., 2010)
Uncertainty Avoidance	60	95	The extent to which people are opposed to uncertain situations. Higher scores point to higher aaversion. (Hofstede et al., 2010)

Note. The values of the indices are from 0-100, and are relative, which means that the country's position is compared to other countries, rather than each having a concrete quantitative score (The Culture Factor Group, n.d.).

Source: Country comparison tool on the Culture Factor Group website (The Culture Factor Group, n.d.).

For Table 1, I chose to compare 3 metrics that are relevant in terms of correlation with degrees of context. Firstly, although both countries lean towards individualism, Estonia is more individualistic than Ukraine (score of 62 compared to 55). As mentioned previously, individualistic lean is correlated with low-context communication. Secondly, Estonia has a smaller power distance compared to Ukraine (score of 40 compared to 92). Estonians have an easier time addressing concerns directly and clearly, and as de Mooij & Hofstede (2011) mention, equal statuses in communication are a trait of low-context cultures, and vice versa. Thirdly, Estonia has a lower uncertainty avoidance score (60 compared to 95). High uncertainty avoidance is a trait of high-context cultures (Hofstede, 2001). Cateora et al (2024) bring out that cultures with high uncertainty avoidance scores tend to stick to historically tested patterns of behaviour and avoid risk. All-in-all, Estonia leans towards being low-context, and Ukraine tends to have high-context characteristics. It's important to note that some metrics (e.g., uncertainty

avoidance and power distance for Estonia) haven't been updated since they were gathered from 1995-2004, as reflected in the original source of the metrics by Hofstede et al. (2010).

Polegato and Bjerke (2009) explored cross-cultural differences in the likeability of ads and their elements (colour, logo, people, situation) on a scale of 1-7 (lower=less liked). The use of explicit methods allowed the researchers to inquire about subjects' views on the situation depicted in the ads. Subjects of the study (from Oslo, Kiel, and Bologna) were shown German, Norwegian, and Italian versions of three print ads of a company that was known for their minimal text, themes surrounding societal issues and controversial imagery. The study's findings indicated significant differences in how both the overall ads and ad elements are liked across the three cities. The only element with no significant cultural influence was the logo. The biggest difference in likeability was as to the portrayed situation, with a beta weight of 0.42 in Oslo, 0.74 in Kiel, and 0.34 in Bologna. (Polegato & Bjerke, 2009)

Not all studies show that cultural differences persist. Ploom et al. (2020) used conjoint analysis and eye-tracking to measure differences between Northeast Asians and Northern Europeans in their perception of product packaging (in image format), by tweaking colour and placement. Their analysis found no significant differences, which may point towards the possibility that a standardised approach may be viable for these two groups (Ploom et al., 2020).

Not seeing expected results can be attributed to other factors that can influence the outcome of a cross-cultural advertising study. Besides cultural factors, some individual factors should be considered when creating a mock ad for cross-cultural research. Firstly, a consumer's familiarity with the brand may reflect in results, thus researchers are recommended to design their own ads to ensure a controlled layout and environment (Peker et al., 2021). Moreover, colours are a key part of how brands differentiate and create distinct identities (Cateora et al., 2024). Secondly, the use of emotional appeal will affect ad effectiveness, meaning that the use of emotion must be relevant to the research (de Mooij & Hofstede, 2011). Thirdly, if a cultural group is assumed to hold culture-specific values, it's important to assess how strongly its members identify with their culture. Bond and Yang (1982) found in their study that the more important national value was to respondents, the more strongly they showcased ethnic affirmation. These findings can therefore imply that a group of subjects with strong national cultural identity are more homogeneous in preferences as to ad element likability or consumption patterns, compared to a group with weak identity.

Acculturation theory, a framework used in cross-cultural marketing, is used to understand how individuals and groups change and develop when interacting with external cultures (Steenkamp, 2019). He further notes that people's cultural identities in regard to the degree of influence from a secondary culture, is commonly measured in 2 ways: via the unidimensional model, or bidimensional model, the latter of which being more commonly used (Steenkamp, 2019). Via the former model, a person's identity is placed on either a single continuum, which measures from cultural maintenance (identifying with the old culture, aka separation) to assimilation (identifying with the secondary culture), with the middle of the continuum being bicultural (integration) (Ryder et al., 2000). The bidimensional model (Also called Berry's model) identifies 2 conceptually separate dimensions (usually in a 2x2 table-format), identifying four key responses: assimilation, integration, separation, marginalisation (little desire to maintain either culture). People exposed to secondary/host cultures may begin to adopt its norms and thus affect their consumer behaviour (Luna & Gupta, 2001). This, subsequently affects their perception of ads, as Zhong et al. (2018) bring out that native cultural differences influence consumers' perceptions, attitudes and purchasing behaviours. Acculturation is predominantly measured via self-reported multi-point rating scales (Ryder et al., 2000). For this thesis, I will be borrowing knowledge from this acculturation theory to determine and validate the kinds of questions to ask to gauge a person's strength of cultural identity.

For more accurate results, both explicit and implicit methods should be used. Implicit methods can help researchers identify how people of different cultures process information when viewing ads, while explicit methods can capture their conscious preferences and attitudes (de Mooij & Hofstede, 2011). Both provide value to the study. Academic authors like Ploom et al. (2020), Cateora et al. (2024), and Taylor (2023) stress the importance of using both methods in modern cross-cultural marketing and consumer behaviour research.

2. Empirical Research Investigating Cross-Cultural Differences to Banner Ad Elements

2.1. Research Methodology and Sample Selection

In this empirical research part, I attempted to investigate whether people from different national cultures experience significant visual and cognitive differences when viewing the same banner ads and their elements. The first part will explain and reason the choice of methodology and sample. The second part will consist of a statistical analysis and comparison of expected and actual results to help validate the findings. For the methodology, I employed a mixed approach

of quantitative and qualitative data collection methods, as the use of a mixed format is positively described in the works of multiple authors, including those of Luna & Gupta (2001), Cateora et al. (2024), and Sherief (2024).

The method of research was experiments (one experiment per subject) in a lab environment, and the chosen methods of data collection were employed consecutively (meaning that methods weren't used simultaneously). To collect quantitative data, I used eye-tracking technology. Eye-tracking offers a unique perspective into potential cultural differences by objectively measuring a participant's gaze patterns (Muñoz-Leiva et al., 2018). For this research, subjects were shown a total of 5 ads – 3 are dummy ads I found on the Internet, that serve the purpose of “resetting” the subject's gaze and providing an expectation of the duration of each ad. Looking for dummy ads was surprisingly a significant challenge, even with the use of VPN. The criteria of the dummy ads were as follows: the ads needed to be in English, include textual, graphic elements, and a central product, be similar in resolution and measurements to the ads of interest. I investigated multiple Ad libraries, namely Meta, Google, and LinkedIn, but banner ads were few and in between. Resetting Cookies had a potential role in 2 issues: some pages showed no ads at all (news sites like CNN, CNBC, Sky News and BBC), and most ads being of the exact same product. Thus, I used the help of my friends from the UK to provide me with dummy banner ads. The ads I made for this study occupied spots 2 or 4, with a random order.

Although the usefulness of eye-tracking was largely mentioned in the theoretical section, the type of data gathered via this method will be elaborated. With eye-tracking, I have access to, but am not limited to, the following data: Total fixation duration (amount of attention paid to an element), Time to first fixation (indicates which area/element is the most immediately eye-catching), Percentage fixated (binarily measures whether a subject fixated upon the element, 100%=yes, 0%=no, meaningful when assessing how many subjects looked at a certain element) (Simonetti & Bigne, 2023). This study accounts for all three in its data analysis. I also looked at Click Rate (shows which ad of interest was clicked on by the subject) on the last, interactive slide of the experiment, to help with measuring likability.

Subjects were given a consent form to inform them about what procedures will take place, what data will be collected, how the data will be used, how and in what period can subjects withdraw data, and that anonymity is ensured. I gave them as much time as they needed

to read the form. Moreover, the use of a consent form for the purpose of the study was employed to ensure compliance with the university's academic ethics guidelines.

The procedure of the eye-tracking experiment followed this sequence: firstly, the subject sat in front of the monitor with the eye-tracker, secondly, the subject went through a 5-point gaze calibration for precision, thirdly, the 5 ads played in 2 possible orders, with the position of ads being swapped in either order. Each ad lasted on the screen for 5 seconds, and a 2-second-lasting grey-coloured slide was placed after every ad slide. Lastly, the subject was shown the 2 ads of interest, the position of either ad on the image was either left or right for randomness, and the subject was asked to click on the ad they like the most. Having different sequences helps limit bias in likeability affected by the positioning of the ad in the sequence.

Because the experiment would not otherwise provide information as to whether the subject even identifies with their national culture, a pre-eye-tracking oral questionnaire evaluating cultural identity strength was utilised. Questionnaires allow me to use discrete ranges as a means of comparing cultures. Questionnaires help with structured data collection, and provides means of quantifying it, thus it can be statistically analysed (Cateora et al., 2024).

The oral questionnaire consisted of four questions, which were based on the information required to ascertain whether and what culture may affect the subject's response to the ad, and are as follows: How old are you?; The way you see it, do you like your native culture?; If you're in a group with people from your country, do you feel that you fit in?; Now imagine there being a group with say Estonians, another group with some other culture represented, another group that's mixed and all other possible combinations. If you were to choose to be in one, is there a group of people you'd feel more comfortable being with, considering they're all strangers? The latter 3 questions were structured to indirectly assess whether the subject identifies with their native culture, by inquiring whom they like to be around and feel the most comfortable around. In short, these questions focus on group comfort, preferred affiliation, and perceived fit.

The main rationale behind structuring and wording these questions is based on 2 relevant factors. Firstly, there has been a notable increase in market globalisation In the last few decades (Steenkamp, 2019), which means that people who develop during this time, are more exposed to outside cultures. Globalisation may open a window to a possibility of the person identifying with cultures other than their heritage culture, as can be deduces from the work by Steenkamp (2019). Secondly, asking about preferences about native and other cultural groups can help point out

whether and to what degree a subject identifies with one/other/multiple cultural groups. These questions were chosen in line with the unidimensional model from acculturation theory (Steenkamp, 2019). I see the unidimensional model being more fit as it's less complex than the bidimensional model, allowing me to apply a continuum, rather than a spectrum, to a subject's cultural identification. Additionally, the point of this questionnaire is to assess and potentially filter out extremes (e.g., when person describes categorically not liking their native culture), rather than measure everyone's degree of acculturation.

Directly asking people to assess like strength of cultural identity might be ineffective, as Hofstede et al. (2010) and many other authors stress that the effect of culture is deeply rooted, meaning that the underlying values might often be invisible. This, in turn, can mean that self-described cultural identification might not be accurate.

Depending on the answers, the subjects were assigned a strength level (SL) from 1-4, the interpretation of each level can be seen in Appendix A. Even though the questions prompt a short answer, the subjects were encouraged to elaborate their answers. The SL metric isn't enough to assess cultural identity in detail (e.g., how important symbols, heroes etc. are to the subject), however, it does help identify people that tend to be further from their group-level culture and gives a comparative, quantifiable overview of communication preferences.

After the eye-tracking experiment, subjects were inquired about the ads of interest (Figure 3 and Figure 4) with the four following questions about each: Did you find the ad good or bad?; Are there any specific elements that are good or bad in the ad?; Would you change anything?; Why did you click on the ad you did?. The reason I asked these questions was to determine likeability, and confirm the choice a subject made. Likability is commonly measured in cross-cultural ad research, including the works of Polegato & Bjerke, 2009; Lee & Ahn, 2012; Choi & Miracle, 2004. The goal was to gather as much information as possible about the overall ad, and the elements separately. Elaboration was also encouraged for more information as to subjects' cognitive experiences of viewing both ads: I hoped to understand the exact reason they chose one ad over the other and hoped to get an overall picture of what criteria the person follows when "grading" an ad.

Afterwards, the answers were written down and grouped with similar ones for analysis. To categorise the comments, I created a spreadsheet for either ad into which I wrote down the comment and its frequency for both groups. The goal was to find whether the groups have

similar or differing opinions and whether there are common opinions across groups. The research process from start to finish is detailed in Figure 2.

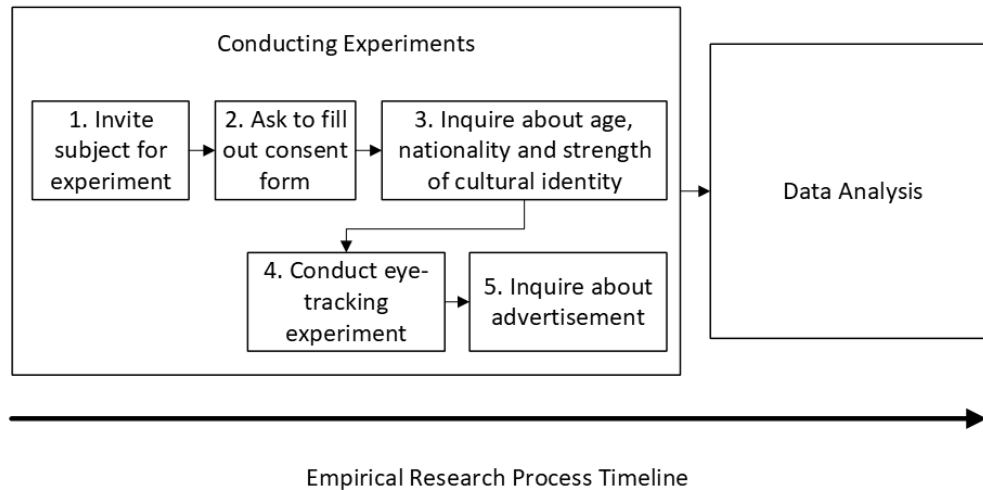


Figure 2. The Complete Empirical Research Process

Source: Compiled by author.

The reason I made 2 ads myself in the first place was to remove familiarity that subjects may have with the associated brand. Having 2 ads will provide more data to analyse. I opted to create a standardised static banner ad because of two reasons. Firstly, ads, especially more ethno-centric ones, will likely be perceived differently across cultures. Moreover, ads differ among cultures, and the effectiveness of ads depend on norms, values, symbols, and/or other distinct characteristics, the acknowledgement of which is highlighted in different findings discussed in the works of several authors (Luna & Gupta, 2001; Shao et al., 2013; Polegato & Bjerke, 2009; Ploom et al, 2020), and is also discussed in the book by Cateora et al (2024). Therefore, the more I contain differently perceived elements, the less meaningful contributions this paper adds to the field, and rather serves as confirmation of expected results. Secondly, there is seemingly less of a consensus about the feasibility of standardised ads. For example, De Mooij & Hofstede (2011) state that although standardised advertising saves costs, it is not equally effective in all markets due to converging values. They add that Saatchi & Saatchi, the first company to utilise global advertising, changed their strategy due to infeasibility (De Mooij & Hofstede, 2011). However, other authors like Steenkamp (2019), and Möller and Eisend (2010), point out that some

segments may be susceptible to standardised ads. Hence, focusing on the cross-cultural perception differences towards standardised (banner) ads can help understand whether there is a case for such campaigns and contributes meaningful information to the field.

I created the ads by attempting to avoid ethno-centric symbolism and the language used in the ads is English (the language all subjects spoke as a non-native language), the background colour is mostly white, and the base product is something that is familiar and commonly used. An important note is that the colours might have symbolic differences in groups. For example, white, in western cultures, symbolises purity, and in Asian countries, white symbolises mourning (Solomon, 2020).

The ads I made for this study (Figure 3 and Figure 4) consist of 6 elements each, excluding the background: the company logo, the product image, a catchphrase for ad 1 (Figure 3) and a sign saying “NEW” for as 2 (Figure 4), the description, a special offer, and a CTA. The first ad is for a caffeinated mineral water, the second ad is for a cooling blanket. The water, instead of being still water, was caffeinated, and the blanket was a cooled one, as adding a unique characteristic might provoke more discussion, which adds more data to analyse.

Bottled water exists and is consumed in most countries around the world, thus the familiarity with the product type shouldn't differ among subjects, and the same goes for blankets. The symbolism associated with the water bottle is a water drop, which can be seen on both the bottle and logo, and the symbolism associated with the cooling blanket is a snowflake, which is also the basis for the colour scheme. The description of the product includes a positive statement about the ad, the one on the bottle ad having more context about the product, and the one on the blanket ad being more context-based. The Special offer exists to add information, and is one of the three most common types of information cues, as Sego & Lee (2012) mention. The CTA (“Order Now”) was included because it is a standard practice in advertising, as Bočaj and Ahtik (2023) also found. A slogan was used as it's the backbone of creating a value proposition (Kotler et al., 2021), and is widely used in many classic ad campaigns (Solomon, 2020)

Blue was used throughout the ads to separate the description, emphasise the catchphrase (for the first ad), and illustrate the product. The tone on either ad differs by the level of saturation. I tried to avoid excessive colouring and the colours I did use have direct associations with the product (water or cold respectively). Blue tends to have positive associations among different cultures and notably, as Noiwana & Norciob (2006) found, was the favourite colour

among Thai and American cultural groups. The notability of this comes from the fact that behaviours and colour associations in Western and Asian cultures often differ quite substantially. When positioning elements, I avoided making anything physically central to make the element first gazed upon more apparent and meaningful: the middle area is a default and automatic attention spot, as found in multiple eye-tracking studies (Verboom, 2021; Peker et al., 2024; Ploom et al., 2020). The elements were spaced to prevent cluttering gazes. To ensure that focus stays on the elements, rather than the readability or usability of the ads, I consulted digital product designer Laura Sööt, who helped with final adjustments as to positioning and sizes of elements. Both ads were made by me in the online photo editor Photopea and were chosen from ~20 potential renditions. The products themselves were generated by using generative AI model FLUX.1 (Flux.1 AI, 2025). Some details on the bottle were added in post. For analysis, the elements of both ads were highlighted as AOIs (areas of interest) and labelled according to their aspects (Appendix B).



Figure 3. The First Static Banner Advertisement of Interest

Source: Compiled by author.



Figure 4. The Second Static Banner Advertisement of Interest

Source: Compiled by author.

Touching on sample selection, I observed that the common sample for cross-cultural marketing studies is around 50-60 people (Sharma & Lulandala, 2021; Li et al., 2015; Ploom et al., 2020). Usually, cross-cultural studies view the effect of stimuli for 2 cultural groups, which is why I decided to do the same, and chose to research Estonians and Ukrainians. The reason I chose people from these countries is because there's numerous students from both groups in the building I study in. The groups were to be divided into 25-30 people from ideally the same cultural background per group, and a similar age demographic for the whole sample. Younger people are often more familiar with technology, are more influenced by globalisation or more exposed to different cultures, which, when compared with older people, would likely lead to noticeable differences in results (Möller & Eisend, 2010). To add, this segment is more likely to be susceptible to standardised advertising, as mentioned by Steenkamp (2019). Thus, it is in the best interest of this study to keep age conditions as similar as possible. For my experiments, I asked the students who study in the Delta building of Tartu University to participate via a single-variable (country of origin) quota sampling. This method of sample collection allows for 2 equal (ideally) groups, guaranteeing comparative validity. The following table will describe the sample (see Table 2).

Table 2.

Sample by Gender and Native Country

Gender	Native country	
	Estonia	Ukraine
Male	14	9
Female	10	16
Total	24	25

Source: Compiled by author.

In total, 49 people took part in the experiments. Originally there were 50 people booked, but multiple people weren't able to participate, and one slot remained without replacement. Genders are balanced for Estonians, but female representation in the Ukrainian group is larger. The average age among Estonians is 22, ranging from 19-24, and among Ukrainians, the average age is 20, ranging from 18-23.

2.2. Eye-Tracking Experiment and Interview Results & Analysis

This part contains analysis of the data gathered via the experiments (see Figure 2). The first part describes the cognitive (or self-reported) data gathered in the study, after which follows an analysis of eye-tracking results between groups using relevant statistical methods (comparison of means via a nonparametric approach). For generating statistics of the eye-tracking data, the software Stata was used.

The average cultural identity strength level (SL) for both groups is very similar, 3.50 for Estonians and 3.52 for Ukrainians (see Table 3). The standard deviation, however, differs noticeably, being 0.51 for Estonians and 0.71 for Ukrainians. This comes from the fact that although Ukraine has a large representation of subjects with 4 SL, it is balanced out by a few subjects with 2 SL. According to multiple subjects, the culture and sometimes prominent language differs in the eastern and western side of the country, and people from one side of the country might be subject to prejudice from the other side due to that. This, in return, causes some people to feel distant or isolated from their national culture, potentially making it easier for acculturation to take place. Additionally, some areas like Crimea have been under Russian rule for lengthy periods, which may also contribute to a more distant relationship with one's native culture. Measuring the SL would allow the reviewer to better see inter-group variance in both visual and cognitive data. In my case, the SL levels between groups are similar. Had they been different, for example when SL 2 dominates, it would have made interpreting findings more

difficult, as it would be even harder to determine whether the results reflect the effect of native cultures.

Table 3.

Cultural Identity Strength Level Distribution for Subjects of This Study

Strength Level	Native country	
	Estonia	Ukraine
SL 1	0	0
SL 2	0	3
SL 3	12	6
SL 4	12	16
Average	3.50	3.52
Standard Deviation	0.51	0.71

Source: Compiled by author

When interviewing Ukrainian subjects about their preferences of cultures, the positive answers to the questions were often more assured in tone: they sometimes used words like “definitely” and “absolutely” rather than a simple “yes.” This shows that, at least among some of the Ukrainian subjects I experimented on, the conscious connection to their native country is strong. This also gives credence to the deduction that Ukraine is a high-context culture. Estonian subjects often had either no preference (8 subjects) of the group in which they’d feel the most comfortable in, or preferred being with non-Estonians (4 subjects), mostly due to their dislike of the introversion Estonian people are stereotypically known for. In general, the SL of subjects was around a similar level, which is a good sign for the study, as it allows to keep factors surrounding cultural identity at a similar level. However, higher deviations could point towards more heterogeneity at a group-level, which gives me less confidence as to the generalisability of results.

The eye-tracking part of the experiment concluded with subjects picking which one of the the 2 ads of interest (Figure 3 and Figure 4 respectively) they liked more. I expected the results to be mixed, but with a clear favorite. The average favourite choice was the blanket ad (see Table 4), but by a slight margin (27:22 accordingly), and due to the small sample size, it’s not possible to deduce a clear favourite.

Table 4.

Subjects' Choice of More Liked Ad

Gender	Choice of more liked ad			
	Estonian subjects		Ukrainian subjects	
	Blanket ad	Bottle ad	Blanket ad	Bottle ad
Male	8	6	3	6
Female	6	4	10	6
Total	14	10	13	12

Source: Compiled by author.

The subjects were asked to comment on the ads overall, and the elements. I manually wrote the comments down into a spreadsheet with a goal of seeing whether both groups have similar remarks and sentiments about the ads. The spreadsheet contained ~8000 words in comments, which was plenty to look for similarities and structure them accordingly. For example, comments like “It looks really nice,” “It’s visually pleasing,” and “I like the way it looks” were grouped as ‘Visually pleasing.’ All comments were included. The result of that manual lengthy process can be seen in Appendix C and Appendix D. To find out the overall spread and difference in positive and negative comments, summary tables with counts and weights for both ads have been created (Appendix E).

When comparing the tables (Appendix E), it’s worth noting that the water bottle ad overall received more negative feedback from both nationalities, with Ukrainians making slightly more positive comments (Ukrainians: 46.3%, Estonians: 42.9% positive). The blanket ad was received better by both nationalities, with slightly more positive comments by Ukrainians (Ukrainians: 58.1%, Estonians: 53.9% positive). Estonians had a significantly higher percentage of negative comments on elements such as the “NEW” label (75% negative compared to 40% for Ukrainians). Although the finding indicates a big difference in results, it’s based on a small number of answers. The more comments an element has, the more it tends to be similar among groups. The comments about the overall ads and elements aren’t only similar in the weight of positive/negative comments, but also in the content of the comments. When looking at the positive comments both groups made for the overall Blanket ad, for example (Appendix E), the top comments were very similar and almost identical. To elaborate, Estonians brought out the following comments: Visually pleasing: 12 times; Good ad design: 5 times; Pleasant/Good colours: 5 times. Ukrainians brought out: Pleasant/good colours: 13 times; Visually pleasing: 9

times: Looks good: 6 times. Similar results can be seen for the water bottle ad. Both groups have low positive sentiment rates for the water bottle ad logo (Ukrainians: 33.3%, Estonians: 22.2%), and both have 100% negative sentiment weight about the water bottle CTA.

I ran a Kruskal-Wallis test (because the check of normality was violated) to determine whether there's a statistical similarity in positive sentiment rates between Estonians and Ukrainians across all ad elements (Table 5).

Table 5.

Kruskal–Wallis Equality-of-populations Rank Test, Total Positive Rate Grouped by Elements

Nationality	Observations	Rank sum
Estonian	14	174.50
Ukrainian	14	231.50
Chi2(1)	1.715	
Prob	0.1904	
Chi2(1) with ties	1.719	
Prob	0.1898	

Source: Compiled by author, data generated in Stata

The p-value is (0.19) (> 0.05), which means we reject the H1 hypothesis and accept that there is no statistically significant difference in the positive rates between Estonians and Ukrainians across all ad elements. Comparing the comments show striking similarity in both overall sentiments and the comments themselves, with Ukrainians having a slightly more positive overall sentiment towards both ads. When further categorising the comments based on their theme (Visual appeal, Functionality, Trust/Emotion), some differences emerge (Table 6).

Table 6.

Comments Categorised by Theme, Both Ads Combined

Theme	Subcategory	Ukrainians (Count/% of Total)	Estonians (Count/% of Total)	Example Phrases
Visual Appeal	Colours/Design	62 (45.6%)	41 (26.8%)	"Good colours," "Visually pleasing," "Bad fonts," "Too contrasting"
	Imagery	33 (24.3%)	18 (11.8%)	"Well-designed," "Looks appealing," "Weird positioning"
Functionality	Clarity/Information	12 (8.8%)	47 (30.7%)	"Not enough info," "Unclear what it is," "Too much text"
	Effectiveness	8 (5.9%)	22 (14.4%)	"Small button," "Ineffective CTA," "Bad placement"
Trust/Emotion	Trustworthiness	9 (6.6%)	11 (7.2%)	"I don't trust that," "Feels cheap," "Scammy"
	Emotional Reaction	12 (8.8%)	14 (9.1%)	"Puts me off," "Feels cozy," "Aggressive"

Source: Compiled by author.

Table 6 shows that ~70% of comments made by Ukrainians relate to visual appeal, mentioning colours and imagery, whereas ~45% of comments made by Estonians have a focus on functionality. Only ~15% of comments made by Ukrainians mention functionality. This could indicate that Ukrainians are culturally more drawn to the visual nature of things, and Estonians are more concerned with the implications of what they see. For Ukrainians, a larger focus was on colours and, when describing the ads, they were more drawn to graphical elements as opposed to Estonians, who often expressed more caution/skepticism and put their focus on the utility and functionality of the products in the ads. This can be explained by the fact that high context cultures are more used to symbols, signs and other methods of indirect communication (de Mooij & Hofstede, 2011) In total, Ukrainians made 136 comments about the ads, and Estonians made 153 comments, totaling 289. This difference is significant, as can be seen in Table 7.

Table 7.

Chi-Square Tests for Comment themes

Theme	Estonians (%)	Ukrainians (%)	χ^2	df	p-value	Cramer's V
Visual Appeal	38.6%	69.9%	28.32	2	< .001*	0.31
Functionality	45.1%	14.7%				
Trust/Emotion	16.3%	15.4%				

Note. N = 289, the total amount of comments made.

Source: Compiled by author.

Table 7 indicates that the differences in comment themes across two groups differ noticeably and statistically ($p < 0.001$). This prompts the rejection of the null hypothesis and accepting that there is a statistically significant difference in the prevalence of themes of certain comments for Estonians and Ukrainians in the sample. To note, χ^2 Measures the difference between the observed and expected outcomes, divided by the expected frequency. Cramer's V, similarly to Cohen's d or Rank-Biserial r, measures the strength (or effect size) of the relationship between two variables. For Table 7, Cramer's v shows a strong relationship. Df shows the degrees of freedom, or the number of independent observations in the data.

Ukrainians reported their likeability of the colours and aesthetics of the ads more often, and more strongly, coming across as more passionate about analysing the colour schemes than Estonians, who often came across as indifferent or didn't use words that expressed strong emotions as much. This also reflected in the way many of them described their culture, citing its vibrance, the fact that it's close to its roots, the traditions. During the interview, Estonians were less descriptive when talking about their culture, opting to give more concise answers.

The visual data from the eye-tracking experiment (as to TFF and TFD) for each element in both ads will be analysed in the following part. For that purpose, Mann-Whitney U tests, chi-square tests were used for numerical and categorical variables respectively, and the effect sizes were also reported via Rank-Biserial r, which measures the size difference between group means. The effect of Rank-Biserial r can be differentiated into trivial/minimal ($r < 0.3$), medium ($0.3 \leq r < 0.5$), strong/large ($r \geq 0.5$). Using a measure to see the size of the effect helps better understand how groups are connected and can serve as another way to measure how meaningful the differences are. The eye-tracking metrics measured in the following part were Time to First Fixation (TFF), Total Fixation Duration (TFD), and the data can be seen on the tables in

Appendix H (Water Bottle ad) and Appendix I (Blanket ad). A visual representation of the gazes in a heat map format can be seen in appendix G.

Visually, the values on the tables about statistical tests for eye-tracking metrics indicate that for both the water bottle and the blanket ad (Appendix H and Appendix I respectively), the studied groups show very similar tendencies, which would be in accordance with the expected results. If the p-value is below 0.05, the null hypothesis is accepted, meaning that there are statistically significant differences in how the two groups viewed the ads. However, both tables reveal that none of the p-values for any of the elements satisfy this, which leads to a clear confident conclusion that, for the sample in this study, there are no statistically significant differences in how the 2 groups visually experienced the different ad elements. To add, all rank-biserial values (or effect sizes) for the water bottle ad are small (<0.3), which confirms a negligible magnitude. For the blanket ad, 3 out of 12 of the effect sizes were moderate, which can highlight several subtle, cultural-specific viewing differences, but not large enough to satisfy statistical significance thresholds.

When ranking the elements based on the order in which they are seen on average when using the TFF metric (Appendix F), many similarities emerge. Firstly, the order by which the elements of the water bottle ad (Figure 3) were seen were identical among groups. This suggests similar/comparable ad viewing patterns. When combined with the similarity in sentiment (positive/negative) and content of comments (Appendix E), it can be concluded that Estonians and Ukrainians visually experience that ad in a similar way, although not completely identically, which is to be expected when taking into account the sample size. The only difference in ranking was for the blanket ad, where Ukrainians on average looked at the product image first (0.46 sec) followed by the logo (0.56 sec), but Estonians looked at the logo first (0.75 sec) followed by the product image (0.91 sec). The rest of the visual hierarchy for the blanket ad is again identical. It is worth noting that elements placed on the top-left on the screen were usually the first ones looked at, which is expected (see Appendix B). Members from both countries read from left-to-right, which creates a tendency for people to view ads starting from (top) left, also highlighted in Appendix G, which shows that the left ad got more attention overall. Thus, the visual hierarchy of elements points to a homogeneous tendency in viewing ads among the groups.

The water bottle ad (Appendix H) has more visual similarities among groups, which, when combined with the previously discussed findings of similar comments, can suggest that the

ad might follow more universal design principles, or at a minimum those, that cater more to both studied groups. To add, the water bottle has elements that are high contrast, and its elements are visually more separated, potentially helping with guiding the gaze, especially for subjects whose viewing experience is otherwise very similar. This doesn't disprove that the blanket ad can't be standardised, but rather points towards the potentially gaze-homogenising effect of stronger visual separation of ad elements. To illustrate this, the average difference between groups for TFF for the blanket ad was almost triple that of the bottle ad (0.279 sec, 0.087 sec respectively), further implying that visual complexity/clutter can affect the sequence of viewing the elements. This could be further validated by A/B testing the same products with varying degrees of visual clutter, and colour-based and tonal separation.

The total and average difference for TFD and TFF for the water bottle ad is smaller than that of the blanket ad (see Table 8). One of the notable metrics that produced larger differences for the blanket ad was TFF on the Logo, which is closer to approaching significance than other metrics ($p = 0.07$), with a medium effect size ($r = 0.35$). Secondly, similar patterns emerge for the "NEW" label and the CTA: Estonians fixated on the label for longer than Ukrainians (0.41 sec, 0.19 sec respectively) with a p -value 0.15 and an effect size of $r = 0.42$. For the TFF for the CTA, Estonians tended to notice it sooner than Ukrainians (2.78 sec, 3.21 sec respectively), with a p -value of $p = 0.11$ and an effect size of $r = -0.3438$. This information is derived from Appendix I. The Estonian subjects' tendency to focus on the logo element and the "NEW" label for longer could illustrate their larger focus on functionality or value confirmation. It is worth noting that these elements are the least central, which, when considering that gaze tends to be naturally in the middle, could explain the bigger differences. The conclusions can be further reinforced if the experiment were to be repeated for a larger sample size.

Table 8.

Total and average visual differences in subjects' visual difference for metrics of both ads

Ad	Metric	Total difference (sec)	Average difference per element (sec)
Water Bottle	TFD	0.42	0.07
	TFF	0.52	0.09
Blanket	TFD	0.92	0.15
	TFF	1.68	0.28

Source: Compiled by author

Percentage fixated measures element fixation dichotomously (i.e., 100% or 0%), and the sample size is quite small (N=49), which is why the best-suited method of calculating the p-value is via Fisher's Exact Test. The strength of correlation was calculated via the Phi Coefficient, as it's designed for measuring binary variables. Consistently with the TFF and TFD metrics, Percentage Fixated showed no statistically significant differences between the studies groups (see Appendix J). Visually, for the bottle ad, the data isn't very different either, with Ukrainians having fixated upon more elements in total than Estonians (115 and 103 respectively). When accounting for the discrepancy of 1 in sample, the difference becomes more negligible. This is further solidified with Phi-values ranging from negligible ($|0.02|$) to weak ($|0.21|$). For the blanket ad, the overall difference is almost not even there, with Ukrainians again having fixated upon more elements, very likely due to the extra participant (108 and 106 respectively). However, one significant difference in percentage can be seen as to the Offer element, with a p value of $p = 0.049$, and a Phi-value of -0.3 (moderate negative relationship). This difference doesn't (based on self-reported focus points of Ukrainians vs Estonians when viewing ads on Table 6) contribute to overturning the overwhelming evidence supporting the contrary, bringing me to the following point. Based on data from both ads, the Percentage Fixated data supports and gives more grounds for the conclusion that there is a high degree of similarity in how both cultural groups processed the Water bottle ad, with some very small differences as to the blanket ad. This finding is further supported by the following understandings: younger people are more susceptible to standardised ads (Steenkamp, 2019), might be less affected by their native culture (Möller & Eisend, 2010), and could showcase cultural congruence, when the cultures fundamentally differ (Sharma & Lulandala, 2021).

All-in-all, the cognitive, or self-reported data from the subjects highlighted a lot of similarities, very clearly for the bottle ad, and with slight tendencies for different visual experiences for the blanket ad. The sentiment about the ads was very similar, which shows that both at a cognitive and a visual level, the subjects experience the ads similarly, confirming the assumption that there is a case for standardisation of banner ads and their elements when targeting young people (more specifically, students) from different countries. However, the thematic differences in comments, where Ukrainians focused more on visual appeal (69.9%) and Estonians more on functionality (45.1%), provide a potential link to Hall's theory of context. To elaborate, the focus on visual appeal aligns with high-context communication, where meaning is derived from symbolic cues. On the other hand, Estonians' focus on more functional aspects of the ad reflect low-context characteristics, where explicit textual cues are used to forward information. Therefore, even though standardised visual layouts of ads may be similar on the visual level, cognitive lens through which the cultures evaluate banner ad elements might differ significantly, suggesting that this might be more rooted in cultural values. This, in terms of a culture's contextual leaning, should be accounted for especially when creating targeted ads, as catering to and focusing on improving the aspects a group tends to put more focus on may improve likeability.

To add, the importance of symbols as the most visible form of cultural manifestations, as mentioned by Hofstede (2001), comes to light as well in the context of banner ad element perception. To illustrate, if one were to make an ad to only have symbols catered to low-context cultures (i.e. descriptive text), or an ad to only have symbols catered to high-context cultures (i.e. imagery), the ad will most likely not have a comparable sentiment across cultures. That said, I believe an ad can only be truly standardised (in terms of cognitive perception) if the meaning and sentiment derived from both textual and visual elements/symbols from an ad is similar for both high-context and low-context subjects. Whether it's realistic or feasible in both marketing and future research, I'm not sure, as it would require a deeper understanding of the utility a culture derives from specific symbols.

Future research could employ similar methodologies for larger groups for more meaningful data, and to ensure that the positioning of elements and usability isn't the issue, more randomness in ads could be introduced by creating multiple versions of the same ad but switching the position of elements. This would function like an A/B testing would but would

inherently require double the sample size. The SL model (Appendix A) could be tested on a larger set of people from more differing countries (i.e., countries more known for being globalized and countries known for having a more prevalent local culture), to better validate the effectiveness of the framework. However, considering that the future, due to globalisation, might look more culturally congruent than ever, the unidimensional model might become obsolete, and will need building upon. Another limitation stems from not thoroughly assessing and considering cultural dimensions in this study, which lessens valid points of comparisons between the findings of this study, and the cultural aspects of Estonians and Ukrainians. A major limitation of the study is that for my empirical part, I assessed the strength of one's group-level cultural identity, and not at an individual-level, possibly disregarding the effects of sub-cultures stemming from consumption patterns, as discussed by CCT researchers, like Arnould et al. (2019). To add, it's never certain whether group-level (i.e., national) cultural effects can be isolated as the causative factor. Similarly, the degree to which individual factors are at play is something that's hard to measure or determine. Therefore, generalisations without isolating individual-level or even societal-level factors (more feasible for larger-scope studies) are prone to ecological fallacy. However, these limitations will only decrease as methodologies, knowledge into human anthropology, psychology and consumer behaviour improve in time. Moreover, it is not necessary to isolate the causative factor affecting the differences/similarities in perception if a large sample from 2 native backgrounds is compared, and a significant correlation is found with no major deviations. This would also give more credence to the notion that the effect of one's national culture is dominant, even in a marketplace setting that is affected by a multitude of other factors.

Conclusion

While there's plenty of research that has examined consumer behaviour or advertising effectiveness, there remains a noticeable research gap when it comes to understanding how cultural factors influence the perception of banner advertisements across different cultural groups. This gap is particularly evident in the context of neuromarketing research, as this methodology is expensive and isn't readily available in many places.

The theoretical discussions in this study provide several valuable insights into understanding culture's role in consumer behaviour, its implications for the field of marketing and for static banner advertising, and a method of describing and separating ad elements. Though

the field of consumer behaviour is broad, and conversely the field of cross-cultural advertising research is under researched, the inter-disciplinary links I found create a better-connected picture of culture's role. This allowed me to understand the nuanced presence of culture in the life of a consumer and hence, its potential significance for marketers and researchers.

Culture exists in many fields of study, but knowledge from prominent works resonates across fields. Cultural values are the most central, deeply embedded aspects of culture. Culture manifests in consumers' behaviour through heroes, rituals and symbols with each manifestation affecting consumer behaviour differently. Cultural factors create a complex network of dynamic influences that perpetually shape an individual's consumer identity and the socioeconomic and cultural developments at large. Although strong academic basis exists for the dominant effect of one's native culture, it's evident that some demographics and groups can show larger degrees of cultural convergence. Younger people have developed in a globalised environment, which might make them more susceptible to standardised marketing campaigns.

Culture's role in marketing processes is closely tied to the concept of cultural manifestations and its relation to consumer responses to marketing stimuli. Definitions may differ from field to field. The role of culture in the field of CCT is regarded differently from traditional consumer behaviour research, by including more possible ways to differentiate groups, but also introducing more potential for overlap.

In static banner advertising, the effect of culture on perception differences among people from different cultures is significant and must be addressed by marketers. In cross-cultural advertising empirical research, culture is predominantly differentiated by nation. This is the most convenient way to differentiate cultures.

By combining knowledge from multiple sources, I managed to establish a theoretical framework for categorising banner ad elements based on their nature (textual or graphical), purpose (attention, information, or action), and specific type. This categorisation approach provides a more structured way to analyse cross-cultural perception differences in static banner ad elements.

Theory reveals that value-based influences play a significant role in determining what ads look like for different cultures, and what graphical and text elements distinct cultures may prefer. High-context and low-context cultural orientations fundamentally affect the reception and interpretation of advertising messages, with high-context cultures showing greater sensitivity to

implicit messages and symbolism. This becomes important for marketers who aim to create standardised ads.

Researchers agree that effective cross-cultural advertising requires a combined methodological approach, one that includes both explicit (interviews, questionnaires) and implicit (eye-tracking) methods. This approach addresses the potential limitations of using one method and will give a more comprehensive overview of the nuances of cross-cultural consumer behaviour.

The empirical research in this study revealed some significant findings about how Estonian and Ukrainian participants perceived the same static banner advertisements. Both the cognitive data that was gathered through interviews, and the visual data gathered through the eye-tracking experiment, showed striking similarities. Both groups made similar comments about the ads (both positive and negative), and, especially for the bottle ad, there is strong evidence suggesting that the groups chosen for this thesis visually experience the ads similarly. It was found that Ukrainian subjects were more drawn to graphical elements like colours and images, while Estonians focused more on textual, informational elements such as descriptions and offers. These findings align with the theoretical framework, which mentions that, although one's cultural background subconsciously and overarchingly influences how individuals process visual and textual information in advertisements, factors like group belonging, age, and degree of growing up in a globalised world, can play a big role in determining how similar one can be with secondary cultures. This can also affect whether, and to what degree, the person identifies with their native culture.

The limitations of the study include the small sample size, potential hidden variables, which highlight that for even more reliable and generalisable results, the methodologies should be applied to a larger sample size, and different demographics. Future cross-cultural ad research should account for factors other than one's native culture, as habits formed in the marketplace are also affected by one's individual needs, and broader socio-economic factors. Moreover, it's important to acknowledge potential overlap across cultures based on an individual's consumption patterns and/or sub-cultures that come to be based on them.

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Appendices

Appendix A

Interpretation of each cultural identity strength level (SL)

Strength level (SL)	Interpretation
SL 1 (N-N-N, 0)*	Subject doesn't like their native culture, doesn't feel like they fit into a group with people from their native country. They do not prefer being in a group of people from their native country when faced with a choice or have no preference. No strong likability is shown towards native culture, which likely points towards strong assimilation or no preference.
SL 2 (X-X-X, 1)*	Subject might like their native culture or have a mixed response. They might feel comfortable in a group with people from their native country, but likely don't. They might prefer being in a group of people from their national country, but when faced with a choice, they might choose the other. The way they feel towards their culture or people from their native country can be positive, but is rather distant. This might point towards assimilation.
SL 3 (Y-X-X, 2)*	The subject likes their native country and likely feels comfortable in a group with people from their native country. They might prefer being in a group with people from their native country. When faced with a choice, they might show indifference. This might point towards cultural maintenance
SL 4 (Y-Y-Y, 3)*	The subject likes their native country and feels like they fit in with other people from their native country. They also prefer being in a group with people with the same cultural background as them when faces with a choice. This likely points towards strong cultural maintenance.

Note: *: the numbers or x-s in the brackets represent the questions asked from each subject about their cultural identity, in the same order as mentioned in page 20. N represents a no, meaning that in order for a subject to land in that group, they must answer the question in a way that indicates distance from their native culture. X represents an answer that is can be either a Y (yes) or a N (no), but in order for the subject to land in the group, the number of yeses can at maximum be the number positioned after the combination. For example, in case of SL 2, a yes can occupy all spots (X-X-X), but there can only be one. This system allows to account for differences in answers. Y represents a yes, meaning that in in order for the subject to land in the group, their answer to the question with Y must indicate a closer relationship with their native culture. An important note is that a person's view of their culture isn't always limited to

yes and no, sometimes people might like a certain part of their culture and dislike some other part.

Source: Compiled by author.

Appendix B

Mapped AOIs of Ad Elements for Ads of Interest

Mapped AOIs of Ad Elements for the Water Bottle Ad



Note. Element names structured in the following way: element type, purpose of element (CI - convey information, AA - attract attention, EA – encourage action) nature of element (Te – textual, Gr – graphical)

Source: Compiled by author

Mapped AOIs of Ad Elements for the Blanket Ad

Note. Element names structured in the following way: element type, purpose of element (CI - convey information, AA - attract attention, EA – encourage action) nature of element (Te – textual, Gr – graphical)

Source: Compiled by author.

Appendix C

Subjects' Grouped Comments About The Water Bottle Ad (Figure 3)

Element	Comment type	Frequency	Comment type	Frequency
	Positive		Negative	
Slogan	Looks good	3	Too large	1
	Effective	1	Puts me off	1
	Total	4		2
Product Image	Well designed	3		
	Well sized	1		
	Looks appealing	1		
	Total	5		0
Description	Informative	5	Too much text	5
	Good size	2	I don't trust that	3
	Clear	2	Doesn't stand out	2
			Too close to product	1
			Too large	1
	Total	9		12
Ukrainians Offer	Effective	5	Ineffective	4
	Looks good	2	Bad design	2
			Bad placement	2
			Bad colour	2
			Could include price	1
	Total	7		11
CTA			Small button	5
			Ineffective	3
			Bad colour	3
	Total	0		11
Logo	Looks good	1	Too small	1
			Doesn't match style	1
	Total	1		2
Overall Ad	Good colours	9	Overcrowded	4
	Good design	6	Not relevant to me	4
	Effective ad	5	Too aggressive	3
	Ad is relevant to me	3	Bad fonts	3
	No clutter	3	Bad design	3
	Easy to understand	2	Harsh/Jagged	3

Estonians		Good fonts	1	Bad colours	3	
				Too basic	2	
				I don't get it	2	
				Not enough context	1	
				Scammy	1	
				Too much contrast	1	
				Feels cheap	1	
				Outdated	1	
		Total	29		32	
		Slogan	Looks good	4	Redundant	2
			Effective	1	Too large	1
			Total	5		3
		Product Image	Well designed	4	Basic	1
			Looks appealing	2	Looks bad	1
			Informative	1	Needs more colour	1
					I don't like the AI	1
			Total	7		4
		Description	Well sized	2	Too much text	4
			Informative	1	I don't trust that	2
					Not enough info	2
					Too large	1
					Doesn't stand out	1
					Boring	1
			Total	3		11
		Offer	Effective	7	Bad design	3
			Looks good	2	I don't trust it	3
					Ineffective	3
					Bad colour	2
					Could include price	1
					Pointless	1
			Total	9		13
		CTA			I don't like it	1
				Small button	1	
	Total		0		2	
	Logo	Looks good	2	Redundant	2	
				Bad placement	2	
				Boring	1	
				Doesn't match product	1	
				Too small	1	
		Total	2		7	

Overall Ad	Effective ad	7	Needs more colour	6
	Good colours	7	Too contrasting	4
	Ad is relevant to me	5	Basic	3
	Easy to understand	4	Bad colours	3
	Visually pleasing	2	Aggressive	3
	No clutter	2	Ineffective	2
	Good design	2	Bad design	2
	Good branding	1	Harsh/jagged	2
			Not enough context	2
			Not relevant to me	2
			Bad fonts	1
			Feels cheap	1
	Total	30		31

Source: Compiled by author.

Appendix D

Subjects' Grouped Comments About the Blanket Ad (Figure 4)

Element	Comment type	Frequency	Comment type	Frequency
	Positive		Negative	
Slogan	Looks good	3	Small text	4
	Effective	1	Not catchy	2
			Not enough info	1
	Total:	4		7
Product Image	Looks good	5	Boring	1
	Looks cozy	2	Unclear what it is	1
	Well presented	1		
	Total:	8		2
"NEW" label	Looks good	2	Unclear what it's for	1
	Effective	1	I don't like it	1
	Total:	3		2
Offer	Not as aggressive	1	Ineffective	3
	Looks good	1		
	Effective	1		
	Total:	3		3
CTA	Looks good	6	Not noticeable	1
	Well noticeable	2		
	Total:	8		1
Logo	Looks good	3	Too big	2
	Fits well	1		
	Total:	4		2
Overall Ad	Pleasant/good colours	13	Not enough information	12
	Visually pleasing	9	Bad colours	9
	Looks good	6	Too basic	6
	Effective ad	4	Outdated	2
	Ad is relevant to me	4	Not relevant to me	2
	Easy to understand	2	Not eye-catching	2
	Feels trustworthy	2	Too many fonts	1
	Good fonts	2	Bad fonts	1
			Too much empty room	1

Estonians			Not enough colour	1	
		Total:	42	37	
	Slogan	Nice text	1	Small text	3
				Not enough info	2
		Total:	1		5
	Product Image	Looks good	2	Weird positioning	2
		Well presented	2	Unclear what it is	2
		Total:	4		4
	"NEW" label	Effective	2	Looks out of place	3
				clichéd	1
				Unclear what it means	1
				Redundant	1
		Total:	2		6
	Offer	Effective	3	Ineffective	3
		Total:	3		3
	CTA	Looks good	6	Ineffective	2
		Effective	2	Looks bad	1
				I don't like it	1
		Total:	8		4
	Logo	Looks good	7	Unclear what it says	2
		Fits well	1	Looks bad	1
				Bad positioning	1
				Ineffective	1
		Total:	8		5
	Overall	Visually pleasing	12	Not enough information	9
		Good ad design	5	Bad colours	4
		Pleasant/good colours	5	Too Basic	3
		Ad is relevant to me	4	Too much empty room	3
		Effective ad	4	Not enough colour	2
		Good fonts	4	Not relevant to me	1
		Easy to understand	1	Too many fonts	1
		Intriguing	1		
		Total:	36		23

Source: Compiled by author

Appendix E

Summary Tables About Comments Made About Each Ad Element

Summary Tables About Comments Made About Each Ad Element, Water Bottle Ad

Ukrainians					
Element	Positive Count	Negative Count	Total Comments	Positive %	Negative %
Slogan	4	2	6	66.70%	33.30%
Product Image	5	0	5	100.00%	0.00%
Description	9	12	21	42.90%	57.10%
Offer	7	11	18	38.90%	61.10%
CTA	0	11	11	0.00%	100.00%
Logo	1	2	3	33.30%	66.70%
Overall Ad	37	35	72	51.40%	48.60%
Total	63	73	136	46.30%	53.70%
Estonians					
Element	Positive Count	Negative Count	Total Comments	Positive %	Negative %
Slogan	5	3	8	62.50%	37.50%
Product Image	7	4	11	63.60%	36.40%
Description	4	11	15	26.70%	73.30%
Offer	9	13	22	40.90%	59.10%
CTA	0	2	2	0.00%	100.00%
Logo	2	7	9	22.20%	77.80%
Overall Ad	30	36	66	45.50%	54.50%
Total	57	76	133	42.90%	57.10%

Source: Compiled by author.

Summary Tables About Comments Made About Each Ad Element, Blanket Ad

Ukrainians					
Element	Positive Count	Negative Count	Total Comments	Positive %	Negative %
Slogan	4	6	10	40.00%	60.00%
Product Image	8	2	10	80.00%	20.00%
"NEW" Label	3	2	5	60.00%	40.00%
Offer	3	3	6	50.00%	50.00%

CTA	8	1	9	88.90%	11.10%
Logo	4	2	6	66.70%	33.30%
Overall Ad	45	38	83	54.20%	45.80%
Total	75	54	129	58.10%	41.90%

Estonians					
Element	Positive Count	Negative Count	Total Comments	Positive %	Negative %
Slogan	1	5	6	16.70%	83.30%
Product Image	4	4	8	50.00%	50.00%
"NEW" Label	2	6	8	25.00%	75.00%
Offer	3	3	6	50.00%	50.00%
CTA	8	4	12	66.70%	33.30%
Logo	8	5	13	61.50%	38.50%
Overall Ad	36	26	62	58.10%	41.90%
Total	62	53	115	53.90%	46.10%

Source: Compiled by author.

Appendix F

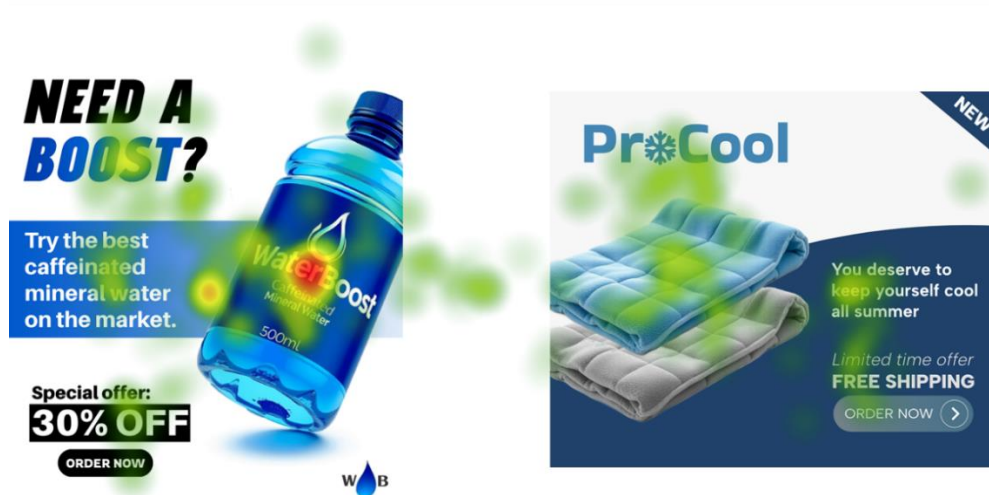
The Ranked Order of Viewing Elements for Both Ads and Groups

Rank	Water Bottle Ad			
	Estonians		Ukrainians	
	Element	Average Time	Element	Average Time
1	Slogan	0.44	Slogan	0.37
2	Description	1.18	Description	1.15
3	Product Image	1.74	Product Image	1.88
4	Offer	2.77	Offer	2.71
5	CTA	3.35	CTA	3.15
6	Logo	3.79	Logo	3.77
Rank	Blanket Ad			
	Estonians		Ukrainians	
	Element	Average Time	Element	Average Time
1	Logo	0.75	Product Image	0.46
2	Product Image	0.91	Logo	0.56
3	Slogan	1.17	Slogan	1.34
4	Offer	2.57	Offer	2.59
5	CTA	2.79	CTA	3.21
6	"NEW" Label	3.35	"NEW" Label	3.77

Source: Compiled by author.

Appendix G

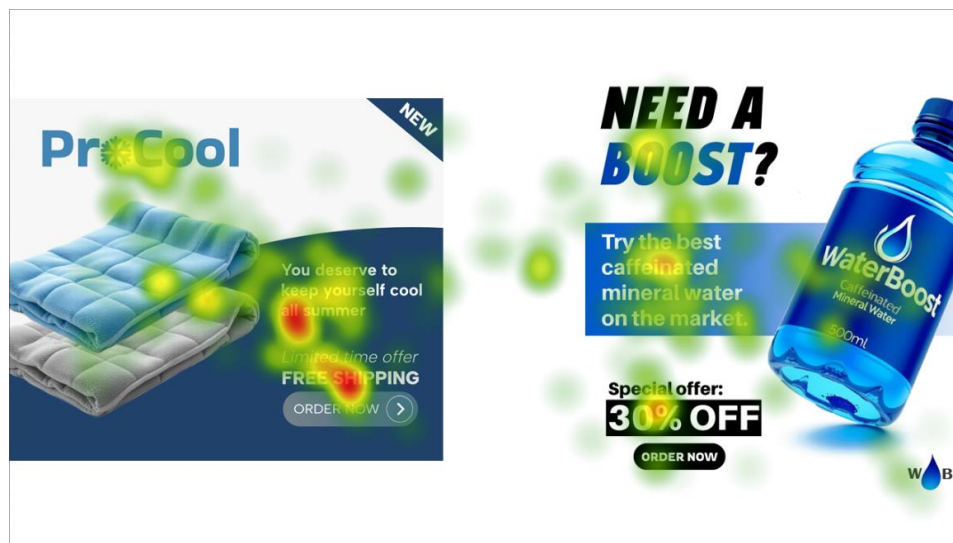
Visual Representation of Eye-Tracking Results: Heat Maps

Heat Map of Choice Slide, Positioning 1

Note. The effect of reading patterns becomes apparent when switching the position of elements.

The leftmost element gets the most attention.

Source: Compiled by author.

Heat Map of Choice Slide, Positioning 2

Note. The effect of reading patterns becomes apparent when switching the position of elements. The leftmost element gets the most attention.

Source: Compiled by author.

Appendix H

Statistical Tests for Eye-Tracking Metrics for the Water Bottle Ad

Element	Metric	Estonians (Average)	Ukrainians (Average)	Mann- Whitney U	p-value	Rank- Biserial r
Slogan	Time to First Fixation	0.44	0.37	217.0	0.572	0.101
Slogan	Total Fixation Duration	0.54	0.47	273.0	0.465	0.130
Product Image	Time to First Fixation	1.74	1.88	202.0	0.659	-0.082
Product Image	Total Fixation Duration	0.83	0.91	196.0	0.554	-0.109
Description	Time to First Fixation	1.18	1.15	254.0	0.565	0.104
Description	Total Fixation Duration	1.08	0.97	243.5	0.752	0.059
Offer	Time to First Fixation	2.77	2.71	175.5	0.903	0.026
Offer	Total Fixation Duration	0.41	0.46	158.0	0.704	-0.076
CTA	Time to First Fixation	3.35	3.15	93.0	0.682	0.101
CTA	Total Fixation Duration	0.23	0.34	72.0	0.537	-0.148
Logo	Time to First Fixation	3.79	3.77	69.5	0.804	0.069
Logo	Total Fixation Duration	0.31	0.30	71.0	0.733	0.092

Note: Total N = 49, but since most subjects fixate on certain elements, this leaves an average of 2-3 missing values per observation. This, however, becomes less detrimental as the number of observations increase. *: p-value below 0.05, highlighting significance

Source: Compiled by author.

Appendix I

Statistical Tests for Eye-Tracking Metrics for the Blanket Ad

Element	Metric	Estonians (Average)	Ukrainians (Average)	Mann- Whitney U	p-value	Rank- Biserial r
Slogan	Time to First Fixation	1.17	1.34	207.0	0.424	-0.142
Slogan	Total Fixation Duration	0.75	0.91	178.0	0.138	-0.262
Product Image	Time to First Fixation	0.91	0.46	266.5	0.359	0.158
Product Image	Total Fixation Duration	0.78	0.62	271.0	0.323	0.178
"NEW" Label	Time to First Fixation	3.35	3.77	30.0	0.330	-0.285
"NEW" Label	Total Fixation Duration	0.4	0.19	59.5	0.146	0.416
Offer	Time to First Fixation	2.57	2.59	206.0	0.809	-0.046
Offer	Total Fixation Duration	0.41	0.62	173.5	0.285	-0.196
CTA	Time to First Fixation	2.79	3.21	84.0	0.101	-0.343
CTA	Total Fixation Duration	0.36	0.40	115.0	0.636	-0.101
Logo	Time to First Fixation	0.75	0.56	168.5	0.836	0.043
Logo	Total Fixation Duration	0.56	0.41	218.5	0.073	0.352

Note: Total N = 49, but since most subjects fixate on certain elements, this leaves an average of 2-3 missing values per observation. This, however, becomes less detrimental as the number of observations increase. *: p-value below 0.05, highlighting significance

Source: Compiled by author.

Appendix J

Data and Comparison of Means for the Percentage Fixated Metric

Bottle Ad						
Element	Group	N Fixated	Mean	Std.Dev	p-value	Phi
CTA	Estonians	13	0.54	0.51	1.000	0.02
	Ukrainians	13	0.52	0.51		
Description	Estonians	20	0.83	0.38	0.190	-0.21
	Ukrainians	24	0.96	0.2		
Logo	Estonians	10	0.42	0.5	0.571	-0.10
	Ukrainians	13	0.52	0.51		
Offer	Estonians	19	0.79	0.41	0.742	0.08
	Ukrainians	18	0.72	0.46		
Product Image	Estonians	20	0.83	0.38	0.417	-0.13
	Ukrainians	23	0.92	0.28		
Slogan	Estonians	21	0.88	0.33	0.349	-0.15
	Ukrainians	24	0.96	0.2		
Blanket Ad						
Element	Group	N Fixated	Mean	Std.Dev	p-value	Phi
"NEW" Label	Estonians	12	0.5	0.51	0.148	0.226
	Ukrainians	7	0.28	0.46		
CTA	Estonians	16	0.67	0.48	1.000	0.028
	Ukrainians	16	0.64	0.49		
Logo	Estonians	19	0.79	0.41	0.520	0.126
	Ukrainians	17	0.68	0.48		
Offer	Estonians	18	0.75	0.44	0.049*	-0.300
	Ukrainians	24	0.96	0.2		
Product Image	Estonians	20	0.83	0.38	0.417	-0.132
	Ukrainians	23	0.92	0.28		
Slogan	Estonians	21	0.88	0.33	0.667	-0.074
	Ukrainians	23	0.92	0.28		

Note.*: p-value below 0.05, highlighting significance. N=49, N(Estonians)=24, N(Ukrainians)=25

Source: Compiled by author.

Summary in Estonian

VISUAALSED JA KOGNITIIVSED ERINEVUSED RIBAREKLAAMI ELEMENTIDE VAATAMISEL: KULTUURIDEVAHELINE NEUROTURUNDUSLIK UURING

Mark Kauer

Tarbijakäitumise ning reklaamide efektiivsuse kohta on palju uurimusi, kuid selle osas, kuidas kultuurilised faktorid ribareklaamide tajumist eri kultuuriliste gruppide vahel mõjutavad, on teadusuuringud veel puudulikud. See lünk tuleb eriti esile neuroturundusuuringute puhul, arvestades et see metoodika on kulukas ning pole paljudes kohtades lihtsasti kättesaadav.

Antud bakalaureusetöö eesmärk on uurida, kas ja millisel määral kogevad erinevatest kultuuridest pärit inimesed visuaalseid ja kognitiivseid erinevusi samu ribareklaame vaadates. Uuringus kasutatakse kombinatsiooni kvalitatiivsetest ja kvantitatiivsetest meetoditest, sealhulgas silmajälgimist ja intervjuusid, et saada põhjalikum ülevaade sellest, kuidas inimesed tajuvad nii teadlikult kui ka alateadlikult neile näidatud sisu.

Teoreetilises osas käsitletakse kultuuri rolli tarbijakäitumises ja turundusprotsessides, samuti staatiliste ribareklaamide elemente ja kultuurilisi erinevusi nende tajumises. Kultuur on keeruline ja mitmetahuline nähtus, mis mõjutab alateadlikult tarbijate käitumist ja otsuseid turul. Kultuurilised mõjud toimuvad mitmel tasandil väljaspool inimese riigikultuuri, ning tarbimiskäitumise põhjal tekkinud subkultuuride väärtused või muud normid võivad kattuda teiste kultuuride väärtustega. See võib teha kultuuridevahelised uuringud keerulisemaks, tuues sisse uusi kultuurilisi mõjureid, mis ei pruugi ühtida uuritava riigikultuuriga.

Empiirilises osas uuritakse, kas erinevatest rahvuskultuuridest pärit inimesed kogevad visuaalseid ja kognitiivseid/tunnetuslikke erinevusi, kui nad vaatavad samu ribareklaame. Uuringus osalesid Eesti ja Ukraina tudengid, kes vaatasid kahte staatilist ribareklaami. Pilgujälgimise ja jooksva suulise küsimustiku/intervjuu tulemused näitasid, et Ukraina päritoluga osalejad keskendusid rohkem graafilistele elementidele, näiteks nagu värvid ja pildid. Eestlased aga keskendusid rohkem tekstilise sisuga informatiivsetele elementidele, nagu tootekirjeldused ja pakkumised. Sellegipoolest kogesid mõlemad grupid pilgujälgimisie andmetel reklaame väga

sarnaselt, eriti pudelireklaami puhul, milles ei esinenud ühtegi statistiliselt olulist erinevust ühegi reklaamielemendi visuaalsel kogemusel.

Uuringud näitavad, et kultuurilised erinevused mõjutavad alateadlikult seda, kuidas inimesed kogevad ja töötlevad visuaalset ja tekstilist sisu reklaamides, kuid mõne demograafia või kultuurigrupi puhul võib päritolu kultuuri mõju olla oluliselt väiksem, näiteks noorte või kõrgharidusega inimeste puhul. Kultuuri domineeriv mõju võib pärssida standardiseeritud reklaamide universaalset efektiivsust, kuid ei pruugi seda teha iga sihtgrupi puhul. Turundajad peaksid arvestama nende nüanssidega, kui nende eesmärgiks on luua standardiseeritud reklaamikampaaniaid.

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13/05/2025