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**Evelina BOGDIUN
MASTER'S THESIS**

INTERNETINĖS PARDUOTUVĖS ESTETIKOS POVEIKIS KETINIMUI PIRKTI PER EMOCIJAS IR PARDUOTUVĖS VERTINIMĄ	ONLINE STORE AESTHETICS IMPACT ON INTENTION TO BUY THROUGH EMOTIONS AND EVALUATION OF THE STORE
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SUMMARY

ONLINE STORE AESTHETICS IMPACT ON INTENTION TO BUY THROUGH EMOTIONS AND EVALUATION OF THE STORE

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Master's Thesis

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Master thesis consists of 103 pages, 37 tables, 2 figures and 104 references.

This thesis aimed to analyze indirect impact of aesthetic design type on purchase intention through emotions and evaluation of the store. Research was based on existing up-to-date e-commerce websites with expressive and classical aesthetic design type, selling utilitarian (coffee) and hedonic (chocolate) products. Four different aesthetic design and product combinations were tested in terms of their impact on emotions, evaluation of trustworthiness and attractiveness of the store and further purchase intention. Interrelations between emotions and evaluation of the store were tested to assess the importance of emotional response in customer behaviour caused by website design.

In order to achieve the goal of the research, current study was based on Stimulus – Organism – Response model. To test hypotheses, the 2 x 2 factorial experimental design was conducted, and data was collected using 4 questionnaires. In the experiment, manipulated variables were aesthetic design type (classical and expressive) and type of the product (utilitarian and hedonic). To conduct a statistical analysis of the responses Factorial ANOVA, Linear Regression, Independent Samples T-Test and Pearson Correlation analyses were used in statistical software IBM SPSS.

Current research explored impact of aesthetic design and product type on five factors, that can lead to purchase intention. Specific website design aesthetics and product type combinations were found to impact arousal (for expressive design and hedonic product), dominance (for classical design and utilitarian product) and attractiveness (for expressive design and hedonic product). No significant impact on pleasure and trustworthiness was found in case of exact design and product type. In current research, product type (coffee or chocolate) solely did not have any impact on evaluation of emotions. Positive correlation was found between each of emotions (pleasure,

arousal, dominance) and website evaluation factors (trustworthiness, attractiveness). Trustworthiness and attractiveness were found to have an impact on purchase intention. The results show that 4 variables – pleasure, dominance, trustworthiness and attractiveness have a direct effect on purchase intention in cases of different aesthetic designs and product types. Only pleasure factor was found to have an impact on purchase intention regardless of website design and product type combination.

Current study benefits both academic and business environments through exploration of different combinations of website design and product type, developing research model with two independent variables and identifying the most influential factors for each aesthetic and product type combination. Findings might be beneficial for marketers and businesses when designing e-commerce websites, specialized in coffee or chocolate retail.

SANTRAUKA

INTERNETINĖS PARDUOTUVĖS ESTETIKOS POVEIKIS KETINIMUI PIRKTI PER EMOCIJAS IR PARDUOTUVĖS VERTINIMĄ

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Magistro baigiamąjį darbą sudaro 103 puslapiai, 37 lentelės, 2 paveikslai ir 104 šaltiniai.

Šio darbo tikslas buvo išanalizuoti netiesioginę estetikos dizaino tipo įtaką ketinimui pirkti per emocijas ir parduotuvės vertinimą. Tyrimas paremtas realiomis naujausio dizaino internetinės prekybos svetainėmis, pasižyminčios ekspresyviu ir klasikiniu dizainu, prekiaujančios utilitariniais (kava) ir hedoniniais (šokoladas) produktais. Buvo ištirtos keturios skirtingų dizainų ir produktų kombinacijos siekiant pamatuoti jų poveikį emocijoms, parduotuvės patikimumo ir patrauklumo įvertinimui bei tolimesniam ketinimui pirkti. Emocijų ir parduotuvės vertinimo sąsajos buvo tikrinamos siekiant įvertinti emocinio atsako svarbą klientų elgesiui, kurį sukelia svetainės dizainas.

Darbo tikslui pasiekti tyrimas buvo parengtas remiantis Stimulo – Organizmo – Atsako modeliu. Hipotezėms patikrinti buvo atliktas 2 x 2 faktorinis eksperimentas, duomenys buvo renkami naudojant 4 klausimynus. Eksperimente manipuluojami kintamieji buvo estetinis dizaino tipas (klasikinis ir ekspresyvus) ir produkto tipas (utilitarinis ir hedoninis). Statistinei atsakymų analizei atlikti buvo naudojamos sekančios analizės – faktorinė ANOVA, tiesinės regresijos, nepriklausomų imčių T-testas ir Pearson koreliacijos. Analizės buvo atliktos statistikos programinėje įrangoje IBM SPSS.

Šiuo tyrimu buvo ištirta estetikos dizaino ir produkto tipo įtaką penkiems faktoriams, kurie gali lemti ketinimą pirkti. Atrasta, kad tam tikros svetainės estetinio dizaino ir produkto tipo kombinacijos daro įtaką susijaudinimui (ekspresyvi estetika ir hedoninis produktas), dominavimui (klasikinis dizainas ir utilitarinis produktas) ir patrauklumui (ekspresyvus dizainas ir hedoninis produktas). Tikslių dizaino ir produkto tipo kombinacijų atvejais reikšmingos įtakos malonumui ir patikimumui nenustatyta. Šiame tyrime atsižvelgiant tik į produkto tipą (kava ar šokoladas)

reikšmingų skirtumų ir įtakos emocijų vertinimui nenustatyta. Pozityvi koreliacija atrasta tarp kiekvienos iš emocijų (malonumas, susijaudinimas, dominavimas) ir svetainės vertinimo kriterijų (patikimumas, patrauklumas). Nustatyta, kad patikimumas ir patrauklumas turi įtakos ketinimui pirkti. Remiantis tyrimo rezultatais nustatyta, kad 4 kintamieji – malonumas, dominavimas, patikimumas ir patrauklumas turi tiesioginę įtaką ketinimui pirkti, esant skirtingoms estetikos dizaino ir produktų tipo kombinacijoms. Malonumo veiksnys turi įtakos ketinimui pirkti visais atvejais, neatsižvelgiant į konkretų svetainės dizainą ir produkto tipą.

Šis tyrimas yra naudingas tiek akademinėi, tiek verslo aplinkai, tiriant skirtingus svetainės dizaino ir produkto tipo derinius, kuriant tyrimo modelį su dviem nepriklausomais kintamaisiais ir nustatant daugiausiai įtakos turinčius kiekvieno estetinio ir produkto tipo derinio veiksnys. Išvados gali būti naudingos rinkodaros specialistams ir įmonėms kuriant elektroninės prekybos svetaines, kurios specializuojasi kavos ar šokolado mažmeninėje prekyboje.

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INTRODUCTION

Visual commercial website aesthetics plays a vital role for e-commerce and customer evaluation. The rise of e-commerce in the past years caused by worldwide pandemic encouraged companies to put an emphasis on e-commerce presence and web infrastructure improvement (Search Node, 2020). Lindgaard et al. (2006) proved that visual appeal can be assessed within 50 ms, and aesthetic judgements were affected already within 17 ms of exposure (Tuch et al., 2012). First impression in conjunction causes a halo effect, which turns first impression not only into evaluation of website attractiveness or credibility, but of products and business in general. Therefore, it's crucial to create a positive first impression and induce positive website evaluation through website aesthetics, that leads them to purchase decision, to attract and keep customers satisfied in this highly competitive e-commerce era.

The role of aesthetics in web design was actively explored by previous researchers. Website aesthetic was analysed mostly by separate elements of it. Reinecke et al. (2013) examined impression of aesthetics based on website elements, such as colourfulness and visual complexity. Lorenzo-Romero et al. (2013) analysed letter type, colors and layout and introduced it as the less known third aesthetics sub-dimension – design aesthetics. Cai and Xu (2011) stated that aesthetic has been highly ignored in research on web site design, even when it's considered to be of crucial importance in website appeal and design (Harris & Goode, 2010).

Website aesthetics was also analysed based on commonly known sub-dimensions – aesthetics formality and aesthetic appeal, which later were named respectively as classical and expressive aesthetics. Impact of these dimensions on different outcomes, including evaluation of website credibility, first impression, consumer behavior, was analyzed. Impact of classical and expressive aesthetics on emotional responses in form of valence and arousal were analysed by Bhandari et al. (2018). Research also evaluated linkage between emotions influenced by aesthetic design and purchase behavior. Cai and Xu (2011) evaluated an impact of classical and expressive aesthetic design on purchase behavior based on utilitarian and hedonic product types. Therefore, there is a scientific background, emphasizing the importance of a current research topic.

In the most cases researchers examined the impact of aesthetic design type of the website through emotions and customer responses. The most known emotional evaluation framework is PAD – pleasure, arousal and dominance (Chang et al., 2014; Liu et al., 2016; Wang et al., 2011). Other researchers examined impact on user satisfaction (Liu et al., 2016) or service quality perception (Tey & Mahmoud, 2020). Douneva et al. (2016) investigated how different website designs aesthetics models influence first impressions and evaluations of the website. Further researchers analysed halo effect of website aesthetics design (Minge & Thüring, 2017). Impact of

website aesthetics through intermediate variables, such as motivational shopping orientations, on cognitive, affective and conative responses was researched by Wang et al. (2011). Finally, aesthetics impact through different variables on the intention to purchase was analysed recently (Tseng & Lee, 2019).

Consumer product design and webpage visual evolves rapidly, leading to a strong increase of customer demands and expectations. Therefore, website designs analysed by researchers in the last decade or earlier might have lost their relevance and should be kept up to date. Previous research typically analyzed impact of website aesthetics on customer response through one or two variables. This research aims to analyze impact of multiple variables, covering emotions and store evaluation, on purchase intention, which are influenced by different aesthetic dimensions in the presence of different product type – utilitarian and hedonic. Therefore, indirect effect of website aesthetic design and product on intention to purchase should be analyzed.

Study problem – how classical and expressive aesthetics of the online shopping store affect emotions, evaluation of the store and purchase intention?

Study aim – to determine if multiple aesthetic website design and product type combinations impact recipient's emotions and store evaluation differently, to evaluate interrelations of emotions and evaluation of the store and reveal indirect impact of aesthetic design on purchase intention.

Study objectives:

1. To analyze aesthetic dimension types and their influence on emotions, online store evaluation and on purchase intention.
2. To determine relation between aesthetic design of online store and product type and their impact on customer cognitive response (emotions).
3. To explore and establish the difference between classical and expressive aesthetic designs in terms of influence they make.
4. To examine the relationship between emotional responses and behavioural responses (intention to purchase) in terms of website appraisal (attractiveness, and trustworthiness).
5. To distinguish if emotions induced by website aesthetics can lead to purchase intention.
6. To analyse up to date aesthetic website designs' impact on consumer emotions, website evaluation and intention to purchase.
7. To develop methodology and test the influence of e-store aesthetics combined with product type on emotions, evaluation of the store and intention to purchase, as well as interrelations of the dependent variables.

8. To conduct research on website design preference in case of different product types, evaluation and effect on emotions, evaluation of the store and intention to purchase.
9. To summarize research findings and develop recommendations on aesthetic design choice for e-commerce based on sold product type.

Study structure: This thesis constitutes of seven main chapters, from which 1-4 chapters cover scientific literature analysis, 5-6 is research methodology, empirical research and discussion, afterwards research conclusions, recommendations, limitations, references, and annexes follow. In chapters 1-4 previous scientific literature and research findings related to thesis topic and research problem are compared, analyzed and summarized. First chapter analyzes definitions of aesthetics and design in different aspects and two main aesthetic design dimensions are described and compared for the main characteristics and differences to be determined. Second chapter covers research on dependent variables, analyzing influence of aesthetic design on them. Different product types, such as utilitarian and hedonic are analyzed in previous literature and relation to perception of website aesthetics is assessed. Emotional dimensions and aesthetic emotions are researched, and previously discovered influence of aesthetic design is explored. Website evaluation variable is explored through division into two criteria – attractiveness and trustworthiness. Third chapter analyzes previously found differences in research on website aesthetics evaluation among different countries, cultures, genders and other socio-demographic indicators. Fourth chapter demonstrates application of S-O-R research model in previous studies and evaluates its application. In the fifth chapter research methodology is presented. Based on S-O-R theoretical model, current research model is depicted and based on theoretical knowledge 18 hypotheses are raised. Data collection methods and research instrument are described. Factorial experimental design is applied, conjuncting aesthetic design dimensions and product types in 2 x 2 experiment framework. To collect responses, four questionnaires of different design and product combinations are employed. Questionnaire constructs are justified based on previous application and sample size is determined based on good practice of 20 previous studies. Sixth chapter is dedicated for empirical data analysis and summarization of aesthetic design and product type impact on dependent variables and indirect impact on purchase intention, as well as discussion and interpretation in relation to previous research findings. In the chapter mentioned before reliability of collected data is assessed using Cronbach's α scale, processed socio-demographical data of respondents is presented. Hereafter, research data analysis is implemented in order to accept or reject raised hypotheses. The obtained results are interpreted and compared with the results of previous researchers. In this thesis data was analyzed employing IBM SPSS Statistics 26.0 software. To determine relations between variables multiple analyses were done, such as

Pearson Correlation, factorial ANOVA, Independent Samples T-test and Linear Regression analysis. To prepare the thesis, 104 sources were used, thesis presents 37 tables and 2 figures.

Methods applied in study: scientific literature analysis, 4 close-ended questionnaires based on factorial design experiment, statistical data analysis and conclusions.

Limitations of the study: the research was done in Lithuania; therefore, the results might differ based on the country. Classical and expressive designs of the websites were selected based on previous research description on these designs and was limited due to product type inclusion. Chosen websites are in English language, therefore, language barrier could distort perception of the product presented. Furthermore, coffee was chosen as utilitarian product, whereas chocolate was chosen as hedonic product. Classification of the products could be perceived differently by respondents based on their personal preferences.

1. VARIETY OF DEFINITIONS AND CATEGORIZATIONS OF AESTHETICS

1.1. Definitions of aesthetics in scientific literature

In different contexts term “aesthetics” might carry slightly different concepts and can be defined by different attributes, but in each case, it will define beauty and what is pleasant to an eye of the beholder. Over the years, the term “aesthetics” has been defined and used differently in various domains. In broader sense, aesthetics is interlinked with the philosophy of art. At first it was introduced as “the science of what is perceived and imagined, the science of consciousness” (Baumgarten, 1735, as cited in Le-Hoang, 2020). According to The American Heritage Dictionary of the English Language, aesthetics can be described as “an artistically beautiful or pleasing appearance”. Lorenzo-Romero et al. (2013) stated that word “aesthetics” originally comes from the Greek word AIRHHTIKH, which means experiences, enjoyed by people through their senses. Conception of beauty explains particular approach to what is pleasing to the senses (Hoffman & Krauss, 2004; Kripintiris & Coursaris, 2007). Therefore, it is considered that aesthetics theory is based on conception of beauty, thus term “aesthetics” became interchangeable with the term “beauty” (Lavie & Tractinsky, 2004; Tractinsky & Lowengart, 2007). Lindgaard et al. (2006) also claim, that aesthetics covers fields related to beauty, affect and visual appeal. To simplify the understanding of aesthetics, Jiang et al. (2016) declared that simpler definition of aesthetics which refers to beauty was generally used in recent years.

Aesthetics is dependent on the perception of beholder and can be perceived differently by the individual. Shortly – what is considered as beautiful by one person, might not be beautiful to everybody. It refers to the feelings toward an object and shows the correspondence between individual’s taste and purpose and such feelings (Mahlke & Thüring, 2007). Therefore, it was considered, that aesthetics is created in the eye of the beholder and is dependent on individual qualities of the object (Reber et al., 2004; as cited in Hartono & Holsapple, 2019). Hartono and Holsapple (2019) later completed this notion by proving, that aesthetic quality of an object depends not only on its qualities, but also individual’s personality and browsing goals. Researchers describe aesthetics as system of principles, revolving around appreciation of art, beauty and good taste. Thus, it can be concluded, that visual aesthetics presents the extent of beauty perceived by individual from a visual stimulus, dependent on feelings and personality of the individual (Moorthy & Bovik, 2011).

There are many descriptions of aesthetics, as well as many variables it can influence, cause, or create. Researchers analyzed many connections between aesthetics and other variables in order to evaluate if there is an impact of aesthetics on them and to measure it if it is present. Aesthetics

and its' dimensions were related to visual evaluations, such as web appearance (Kim & Stoel, 2004), visual appeal (Lindgaard et al., 2006), perception (Tseng & Lee, 2019) or perceived attractiveness (Van der Heijden, 2003). These relations allowed to evaluate connection between closely related aesthetics feel and perception of such visual stimulus. Next, it was related to effects or feelings, such as a visual impact (Demangeot & Broderick, 2006), aesthetic experience (Jennings, 2000), main factor influencing first impression of a website and a core construct in website evaluation (Thielsh et al., 2013). Berlyne (1971; as cited in Schenkman & Jönsson, 2000) explained aesthetics from a psychological perspective by relating number of collative variables. These variables are complexity, novelty, and wholeness, which altogether cause an arousal of the reticular system. This research helped to measure whether aesthetics have a cause-and-effect relationship with feelings, such as arousal, experience caused by aesthetic view or first impression of the view. Finally, it's stated to be one of the key determinants of the customer behavior and philosophy of beauty (Seng & Mahmound, 2020).

Online aesthetics is perceived in more specific, adjusted to website context, way. Researchers describe website aesthetics as a holistic perception, combining both design principles and separate objects of the design (Cai and Xu, 2011). In electronic retail, aesthetics is perceived mainly through a website interface, which Hooper (1986, as cited in Tractinsky & Lowengart, 2007) called a website façade. Mainly through website interface users experience the aesthetics of this interface immediately (Lindgaard et al. 2006) when entering an online store. The perceived level of beauty of a website can create a positive impression and keep user's attention immediately. However, if the website is unappealing, overall impression of the website might not meet user's expectations and they will be turned off by a website (Phan & Pilik, 2017). Therefore, there is no surprise that website aesthetics are a decisive factor for engaging and keeping users in online environment (Reinecke et al., 2013).

The visual appeal of the internet is the degree to which the website is attractive to the eyes, and highly appealing websites are positively affecting user satisfaction. In the e-store setting, website aesthetics refers to the combination of various webpage aspects, attributes and elements which give the user an impression of beauty (Vilnai-Yavetz & Rafaeli, 2006; Chang et al., 2014). According to Wang et al. (2010b), web aesthetics represents how impression of beauty is yielded by combining different elements and attributes of an online context. Combination of website elements and components creates overall website attractiveness perception. Consequently, this attractiveness affects user's experience and impressions of system and product (Wang et al., 2010b). Various design elements were combined in a dimension, called design aesthetics. Li and Yeh (2010) in their research analyzed design aesthetics and website design. Authors state, that design aesthetics of the website can be expressed through the elements of color, language, shapes,

music, animations. Moreover, website layout, headers, decorative font, and graphical buttons can also positively affect the impression of the site (Schultz, 2005; as cited in Li & Yeh, 2010). Tseng and Lee (2019) describe visual aesthetics as comfortable visual experience, clear and correct information presentment to users. These criteria impact positive emotional reaction, which respectively increases satisfaction and attention.

When it comes to analyzing aesthetics, it is typically divided into smaller attributes. It allows to better understand what exact components of aesthetics influence the most in relationships with variables being researched. Jiang et al. (2016) analyzed 5 website attributes influencing perceived website aesthetics. In their model researchers analyzed perceived quality of unity, complexity, intensity, novelty and interactivity designs and its' impact on attitudes towards website. Findings based on this model have revealed the significance of website aesthetics, which appears to be even higher than importance of website utility. Researchers found that improving these five elements will lead to higher quality aesthetics of the website and increase positive users' attitude toward website. However, many researchers examine aesthetics based on dimensions, introduced in early 2000s. Main dimensions, describing aesthetics, are aesthetic formality and aesthetics appeal. Lavie and Tractinsky (2004) introduced other names for aesthetic dimensions, closely aligned with notions of aesthetic – classical and expressive aesthetics, which are nowadays used in most of the studies. Classical aesthetics defines items, that appear pleasant, clear, and symmetrical, while expressive aesthetics represent creativity, originality, and sophistication (Lavie & Tractinsky, 2004). Lorenzo-Romero et al. (2013) in their study described third type – design aesthetic, which was not highly emphasized. Researchers describe it as a visual stimulus based on design components, such as letter type, colours, style, layout of web page. Therefore, design aesthetics combines design elements. However, design aesthetics should work with website design elements as a whole, to produce aesthetic experience rather than become isolated elements (Tractinsky & Lavie, 2003, as cited in Li & Yeh, 2010). In this study focus will be pointed towards classical and expressive aesthetics dimensions analysis.

1.2. Classical and expressive aesthetics framework

Typically, aesthetics is divided in two separate, different dimensions. In literature there are commonly used two different groups of definitions for opposite aesthetic types. These are aesthetic formality and aesthetics appeal, classical aesthetics, and expressive aesthetics. Both of these pairs have similar characteristics; thus, they define the same aesthetic dimensions, but carry different title. First pair of visual aesthetics, aesthetic formality, and aesthetic appeal was introduced by Schenkman and Jönsson (2000). Later Lavie and Tractinsky (2004) study showed that online users perceive two high-level, aesthetic dimensions – classical and expressive aesthetics. Researchers

noted that these styles are replicating aesthetic formality and appeal, introduced earlier by Schenkman and Jönsson (2000).

First group to be considered is formal aesthetics, associated with aesthetic notions from antiquity and typically having a clear order, organization. Aesthetic formality, introduced by Schenkman and Jönsson (2000), refers to perceived order of a website, organization, legibility, simplicity of the website, determines readability and is directly relevant to achievement of shopping goals (Wang et al., 2011). Aesthetic formality in webpages involves design utility, economy, and practicality (Chang et al., 2014). This aesthetic dimension contains pattern, order, in which details of shopping environment are presented. Referring to notions from antiquity, such as clear, clean, and structured design, symmetry, classical aesthetics was introduced later. These notions are related to design rules, suggested by usability experts, as enhancing perceptions of Web usability, for example, ease of use. These dimensions create “visual clarity” impression of the website (Nasar, 1999, as cited in Lavie & Tractinsky, 2004). Classical aesthetics refer to systematic and clear design and conjuncts few components – visual clarity, simplicity, symmetry, and cleanliness (Ramezani Nia & Shokouhyar, 2020; Bhandari et al., 2019). Wang et al. (2011) suggest that website designed classical aesthetics can be considered as a necessity to utilitarian, practical and economic properties of design. Therefore, it’s evident, that both terms – aesthetic formality and classical aesthetics, revolve around similar descriptions and terms. It can be concluded, that both terms can be interchangeable when talking about formal, structured, clear, and organized type of aesthetics.

Another group of aesthetic dimensions, opposite to previously described ones, can be described as a unique, meaningful, novel design of the website. Main idea of this dimension is expression of creativity, designer’s ideas, creation of unique website experience. As mentioned earlier, it was introduced by Schenkman and Jönsson (2000). According to the researchers, the aesthetic appeal comes along with the perceived novelty and meaningfulness of a website. This dimension refers directly to impressiveness and perceived quality of the website, is closely tied to hedonic quality of it. From user perspective, aesthetics appeal reflects degree of attraction, entertainment, pleasure and enjoyment of website design. Later Lavie and Tractinsky (2004) introduced concept of performance aesthetics, in reference to aesthetic appeal. This concept connects fascinating, complex and sophisticated aspects of website design. Based on Chang et al. (2014), these two aspects combined emphasize significant importance of beauty and impression as a whole. Later this aesthetic dimension became named “expressive”, representing designs perceived by users to be original and creative (Lavie & Tractinsky, 2004). Expressive aesthetics contributes to the uniqueness of the site's appearance. To the further side of classical principles, expressive aesthetics is manifested by designer’s creativity, originality, fascinating design,

sophistication and using of special effects (Bhandari et al., 2019). This corresponds to visual richness (Nasar, 1999, as cited in Lavie & Tractinsky, 2004) and diversity (Shem-Shaul et al., 2003, as cited in Ramezani Nia & Shokouhyar, 2020), which emphasizes designer's vision, expressiveness, and inventiveness. Therefore, it can be concluded, that both aesthetic appeal and expressive aesthetics can be interchangeable terms since both terms are characterized by similar qualities.

Both aesthetic dimensions should be used accordingly to given contingencies (Tractinsky & Lowengard, 2007). Webstore designers should adjust website style regarding the purpose of this website. Overall, classical aesthetics is based on aesthetic formality principles and "visual clarity" dimension. Classical aesthetics comprises simplicity, functionality, and utilitarian value of the design (Wang et al., 2011). Whereas expressive aesthetics is based on aesthetic appeal, on creativity and emotional quality of the website experience and hedonic value, for example, meaningfulness, and attractive, recreational attributes of the design. After analysing and comparing qualities of aesthetic formality and classical aesthetics and aesthetic appeal and expressive aesthetics it is evident, that these dimensions are similar. Therefore, terms to define either of these dimensions can be interchangeable as they represent the same idea.

2. WEBSITE AESTHETICS IMPACT ON PURCHASE INTENTION THROUGH DIFFERENT VARIABLES

2.1. Website design and consumer shopping orientation impact on purchase intention

Previous research has found that the interface of the website has an impact on consumer behavior and decision making on the website. Wu et al. (2013) confirmed significant effects of online store environment on shopper's emotions and purchase behaviors. Seng and Mahmoud (2020) provided evidence, that optimized towards user experience, readable and well-organized website is essential to the e-customer in making purchase decision. Sarkar (2016) in her research also mentions, that potential purchases might increase upon using proper aesthetic design, while also attracting new customers and retaining existing ones. Reduction of attrition rate was also found in her study. Thus, it is evident, that aesthetics impact on consumer can't be denied and aesthetics should be considered while designing the website.

Website aesthetics is essential for purchase intention in some cases, however, it's importance and impact on purchase intention is almost never direct. There are various variables, mediating impact of aesthetics on intention to purchase, such as satisfaction of the customer, product type, shopping task and overall website design evaluation. It can influence purchase

intention positively when consumer is satisfied with the way website appeals to them (Wang et al., 2011). Combination of high level of both aesthetic formality and appeal, however, is not always ideal for website design if the aim is to achieve customer's satisfaction with the website appeal. Recent research showed that improved visual website aesthetic perception could have a positive effect on aesthetic experience value (Tseng & Lee, 2019). Researchers found that despite of the frequency of the shopping, visual website aesthetics perception can cause positive effect on aesthetic experience, value, and positive emotions. Consequently, this positive impact can generate satisfaction and intention to purchase. To add up, the level of satisfaction with the website appeal is highly related to orientation of the browser. For task-free browsers, high formality and high appeal combination might provide utmost level of satisfaction, whereas for purchase task-oriented online consumers such aesthetic attributes are not a preference. To encourage satisfaction with website appeal in task-oriented customers classical aesthetics was considered as a necessary attribute, rather than a motivator (Cai & Xu, 2011). These findings sum up the importance of both aesthetic dimensions in website design.

As mentioned above, shopping orientation of the consumer plays an important role in satisfaction with the website aesthetics. Purchase task is also found to significantly moderate consumers' responses in terms of importance and direction (Wang et al., 2011). Depending on the purchase task, positive emotions can be a consequence of fit between goal of the individual and environmental stimuli (Frijda, 1994; as cited by Wang et al., 2011). When it comes to purchase task presence influence, Wang et al. (2010a) findings indicate dissimilar effects on consumers' cognitive and affective responses. Regardless of presence of purchase task and motivational orientations, aesthetic formality has a meaningful effect on perceived e-service quality. Aesthetic appeal significantly affects consumers' satisfaction of the website. Hedonic reactions were affected by design qualities through making visitors happy to some extent, relaxed, etc. (Hartono & Holsapple, 2019). Since both e-service quality and satisfaction of the website can influence purchase intention, e-retailers should take into account importance of customers' shopping task presence when designing their website.

However, different findings regarding aesthetic impact on purchase intention were present based on the product type. Wang et al. (2010b) state, that over the past decades hedonic tendency in shopping was realized. Classical and expressive aesthetics influence purchasing on hedonic and utilitarian products in a different way (Cai & Xu, 2011). In case of hedonic products aesthetics have a stronger impact, than in case of utilitarian products due to purchase motivation. However, regardless of product type, at least a little classical aesthetic is needed in order to facilitate a shopping task, although this type of aesthetics is not a motivator for neither product type purchase intention. Explanation to this incident is based on Zhang and von Dran (2000; as cited in Cai &

Xu, 2011) proposed hygiene factor, which makes a website useful and serviceable in both hedonic and utilitarian product cases. It was found that classical aesthetics is closer to be perceived as a hygiene factor of shopping experience, whereas expressive aesthetics is the motivating factor for a purchase. Therefore, it can be concluded, that regardless of product type, at least a little of classical aesthetics must be present to ease the shopping task. In case of hedonic products, it will have a higher impact on purchase intention together with higher importance of expressive aesthetics.

Visual design and layout of the website also influence purchase intention or decision in webstore shoppers. Visual design of the website, including layout and atmosphere, increases consumer's intention to purchase (Wu et al. 2013). The study suggests that layout has a direct influence on consumer behaviour through attitude towards website. Atmosphere influences behaviour through emotional arousal (Wu et al. 2013). Ramezani Nia and Shokouhyar (2020) claim that aesthetics is an extremely decisive concept in website design, despite little amount of studies on behavioral and psychological responses to e-commerce websites. Visual aesthetic website design influences visitors' emotions, moods, feelings based on congruence of design elements, proportion, and symmetry (Hartono & Holsapple, 2019). Wu et al. (2013) found the store layout design has a significant impact on emotional arousal and attitude towards website, resulting in substantial and positive intention to purchase. Study provided evidence of significant effects of website layout on shopper emotions and purchase behaviors. Thus, regarding of website design, different impact on purchase intention can be caused. For example, such website attribute as visual boundaries on the e-commerce website can have an impact on decision making in website design (Wen & Lurie, 2019). Researchers found, that using color block between alternatives or attributes have important effect on customer decision making through providing guidance. Depending on customer's perception of the aim of these boundaries, different outcomes are possible. When customer believe retailers use them to aid navigation, visual boundary effect is increased, but it is reversed, when customers believe, that boundaries are made to persuade consumer to make a purchase. In this case, reverse reaction is expected – when retailer aims to encourage purchase, they have to make it less obvious so the client will not suspect that. Therefore, in case of visual boundaries, it's best if they provide guidelines and encourage purchase intention, whereas former purpose has to be presented in more evident manner than latter one.

Impact of aesthetics on purchase decision in some cases can be direct, though more often it is indirect, mediated by variables described above. Regarding cases, when aesthetics has a direct impact, there are discussions whether aesthetics or usability, which also depends on aesthetics, causes stronger direct response to website aesthetics. Web aesthetics was found to have a positive effect on intention to purchase and on activation of search, where the effect on former was weaker,

compared to web usability. Nevertheless, web aesthetics was proven to have a positive influence on immediate purchase intention (Wang et al., 2010b). Researchers confirmed web aesthetics has a positive influence on immediate intention to purchase for an online retail website in later studies (Wang et al., 2015). Wang et al. (2010b) add that aesthetic experience evokes positive emotions in online shoppers, that in turn create positive attitude towards intention to purchase. However, researchers found usability to have a stronger effect on intention to purchase. Kurosu and Kashimura (1995; as cited in Minge & Thüring, 2017) earlier emphasized about usability and aesthetics relationship and summarized it by the notion “beautiful is usable” as for hedonic “halo effect”, causing beautifully looking websites to seem to be usable. Minge and Thüring (2017) complemented this notion by reverse “usable gets beautiful”, meaning that usability stands before aesthetics. Nevertheless, aesthetics has a direct impact on immediate purchase intention, although it is lower compared to other website elements, which have a relationship with aesthetic design.

Based on previous research, it can be concluded, that impact of aesthetic design on purchase intention depends on many variables. Some of them include shopping orientation of the consumer, product type, visual design elements and overall satisfaction with the website. Although particular website elements, such as usability, might have higher impact on purchase intention than aesthetic design itself, these elements are closely related and dependent on aesthetic design. This relationship proves aesthetic can have both direct and indirect effect on intention to purchase. Furthermore, shopping for hedonic and utilitarian products can impact effect of aesthetic design as well. It was found, that in case of utilitarian products, classical aesthetic design is more likely to increase purchase intention. On the contrary, in case of hedonic products, expressive aesthetic design can be more pleasurable and preferred by the website browser. However, it is important to mention, that presence of at least a little classical aesthetic is crucial regardless of product type and shopping orientation in order to create more pleasurable experience and enhance probability for the purchase of the product.

2.2. Aesthetics in website evaluation – role of attractiveness and trustworthiness

Aesthetics was proved to be an important part of website design (Jennings, 2000), evaluation and perception of the website (Thielsch et al., 2013) and further behavior of consumer. It affects perceived ease of use of the website (Pengnate et al., 2017), perception of design beauty, usability and satisfaction, approach, or avoidance behavior, intention to purchase or leave a store, quality perception (Bhandari et al., 2019), etc. However, pleasing visuals are important for Web site design because they create a first impression that results in a desire to explore the website further (Jennings, 2000). After seeing a website for the first time, consumer experiences first impression, which may have a deciding role in further evaluation of a store (Tractinsky &

Lowengart, 2007). Phenomenon called “halo effect” carries notion that first impression has a direct impact on further evaluation of different website aspects, such as attitude towards website, product design, layout, usability, opinion about the retailer or overall satisfaction. Unreliable, untrustworthy, or unattractive website design might cause consumers to leave website quicker and never return. In milder scenario, consumer might feel the urge to compare websites with competitors, which eventually leads to lower chances of possible purchase.

The first impression plays a huge role in website evaluation at first sight, mostly influenced with perceived website aesthetics and usability. First impression is perceived as evaluation of the website quality by consumer, determined by aesthetic aspects (Kim & Fesenmaier, 2008). Visual appeal is one of the most important tools in converting website visitors into users and making them stay on the website longer (Kim & Fesenmaier, 2008). Overall website impression is made of key constructs – content, usability, and aesthetics (Thielsch et al., 2013). Also, order and prototypicality are very important in formation of first impressions (Tuch et al., 2012). Researchers found that aesthetics influences deliberate first impression to the highest extent, whereas content and usability contribute to overall evaluation, but on the first impression less. Martínez-González and Álvarez-Albelo (2021) found that out of three items related to first impression (aesthetics, usability, and content) aesthetics obtained the highest score of impact among research participants.

While aesthetic is more important at the first sight, it is less important for complex decisions, like duration of use and tendency to recommend and revisit website (Thielsh et al., 2013). Aesthetics works as a strengthening factor to the users; thus, it is a whole lot more than just a “decoration” (Thielsh et al., 2013). Research done by Martínez-González and Álvarez-Albelo (2021) showed that people’s perceptions, attitudes, and predisposition towards website are likely to cause an intention of use and loyalty. Study was conducted in tourism field, whereas respondents from Generation Z were found to favour personalized websites with quality design. The finding predicts further development of website design, which should be more personalized through initial research of visitors’ needs, wishes and expectations.

Nevertheless, size of affection depends on the time spent and focus applied to the website. Formation of first impression is immediate, fast, and unconscious process (Douneva et al., 2016). Lindgaard et al. (2006) tend to claim first impression, formed within 50ms after entering a website, had a subsequent effect on visitor’s selection and buying intention on the site. If first impression of the website is positive, users will be more willing to continue exploring the website. In further interaction utility, usefulness and functionality of visual design become more important. These qualities form the second impression of the website (Douneva et al., 2016). Previous studies (Lindgaard et al., 2006; Tractinsky et al., 2006) show that first and second impressions of the site

shape visitor's further behaviors and attitudes towards website evaluation. Namely positive psychological responses cause approach behavior, e.g., intention to stay on the website, consider purchase on it and suggest it to others. Other studies found that only low-spatial frequencies of the website design are relevant in formation of aesthetic judgements in very short exposure times, causing immediate effect on first impressions (Thielsch & Hirschfeld, 2012).

However, later studies showed that first impression formed in less than one second exposure to a website doesn't play a critical role in intention to buy a product from an online store. Lorenzo-Romero et al. (2013) in their study found, that first impression, created during less than one second exposure, didn't affect customer's perception nor buying intention on the site. Nevertheless, creating first impression from the very first second after entering the website is still important for first-time consumers. Longer exposure times are typical for any consumer, therefore very short exposure time shouldn't even be considered and consumer who stayed less than a second shouldn't be considered as a potential client (Lorenzo-Romero et al., 2013). Findings of their study contradict earlier ones (Lindgaard et al., 2006) as there was no consistency found between short and long exposure quality perceptions. Very short exposure time's first impression's impact on formation of "halo effect" and on further evaluation of the website is also questioned. It is said that "halo effect" plays an important role in purchase decision and interaction with the website, however, hypothesis of first website quality impression effect on purchase intention is rejected. Thielsch and Hirschfeld (2012) also found that 50 ms and shorter exposure times are less important than previously thought.

It is believed that aesthetically appealing website should be able to develop user's first impression of the website into a favorable lasting impression (Abdallah & Jaleel, 2015). First impression influences so called "halo effect" phenomenon, which is described as a cognitive first impression bias, where perception of one attribute distorts perception of other attributes. "Halo effect" declares that first impression has a direct impact on further evaluation of different website aspects, such as attractiveness and trustworthiness, and depending on first impression kind (negative or positive), can accordingly influence opinion about the website, the retailer and overall satisfaction and trust (Tractinsky & Lowengart, 2007). "Halo effect" can be divided in two types: hedonic halo effect, which influences refers to notion that what beautiful, is usable, and pragmatic halo effect, which carries notion of usable getting beautiful (Minge & Thüring, 2017). Hedonic halo effect might be responsible for pre-use phase when ratings on usability and visual attractiveness might both rely on aesthetic features. In case of pragmatic halo effect, emotions might play more important role for judgements of attractiveness in the use phase. However, as it was mentioned before, not every first impression counts. As the researchers found that less than one second exposure time doesn't have an impact on first impression, this finding indicates that

in the case of exposures longer than 1/2 second and up to 1 second the first impression “halo effect” is not applying in evaluating a website (Lorenzo-Romero et al., 2013). Nevertheless, since effect of first impression is evident, it is important to think about it when creating a website, as prospects will most likely spend more time on the website, whereas people spending less than 1 second should not be perceived as prospects.

First impression has an impact not only on judgement of the website and further evaluation of the website but has direct impact on trust and intention to buy. Immediately perceived website quality based on aesthetics is also to be included in purchase intention. Visitor’s affective appraisal of visual design qualities was found to have a direct effect on products or services purchase intention on this website (Lee & Kozar, 2012). Favorable first impression can impact purchase intention at a high extent, specifically through favourably biased decision-making process (Loken, 2006; Yeung & Wyer, 2004). However, quality perceptions, formed in a very short period of time, have no impact on final website quality perception and decision to purchase, as it can be influenced by further perception of aesthetic design, formed while browsing the website more thoroughly. Lorenzo-Romero et al. (2013) rejected hypothesis, that first website quality impression after short time exposure influences customer’s buying intentions. Researchers’ results are inconsistent with earlier studies (Lindgaard et al., 2006; Tractinsky et al., 2006). However, Lorenzo-Romero et al. (2013) claim that long exposure to the website is a predictor of the buying intention compared to the short exposure. One second exposure showed no direct effect on the intention to accept website as an online shopping store. All in all, scientists state that visitors’ perception of website aesthetic quality and evaluation forms their willingness to trust the website and purchase through that website.

It is important to define what characteristics of the website influence first impression. A combination of various dependent variables such as implicit and explicit or subjective and objective measures, is highly desirable in the context of first impressions (Douneva & Thielsch, 2016). Typically, visual component of the website, namely attractiveness, is the first point of contact for a website visitor and the only stimulus that could be captured quickly. Thus, formation of the judgement and expectations about website are formed after first interaction (Hartono & Holsapple, 2019). It was found that typically users prefer websites with low complexity and high prototypicality. Both these factors influence user’s aesthetic judgement after as short as 17 ms exposure time (Tuch et al., 2012). Tuch et al. (2012) in their study found that website complexity and prototypicality are important factors for aesthetics perception of the website in context of first impression. High visual complexity leads to negative first impression, compared to websites of medium or low complexity. Websites perceived as more prototypical cause a better first impression than less prototypical, which are judged as unattractive in face of both low and high

complexity. Visual complexity was found to be a strong predictor for judgements based on aesthetics in general. Research participants describe visually simple page as organized, easily understood and containing only a few different subjects, with pale colours, easy to use and find. Whereas visually complex page was described as one with many categories, different in size and shapes, containing many images, colours and buttons, generating overall distraction (Michailidou et al., 2008). That is, data analysis showed that the more organised, clear, clean and beautiful the page is, the visually simpler the page was perceived by the participants. First impression can be also influenced by visual design, largely by combination of visual elements (Michailidou et al., 2008) Website visual design qualities, that have the highest impact on formation of the first impression, are visual appeal, attractiveness, or beauty of this design (Douneva et al., 2016; Jing et al., 2016). Different kinds of first impression judgements are mainly influenced by visual appeal, even when visual attributes are different (Lindgaard et al., 2011). Therefore, visual attractiveness plays an important role in website evaluation starting from the first impression.

Additionally, to create favorable first impression providing more information can be useful, as well as creating persuasive and more impressive shopping environment (Tractinsky & Lowengart, 2007). Look and feel are prime website attributes to attract customer's attention on a website, followed by effective navigation (Abdallah & Jaleel, 2015). 4 stages of website evaluation were presented in a framework by Abdallah and Jaleel (2015). To create a good first impression, 1st stage if attraction should consist of look&feel, navigation and credentials. To maintain visitor on the website, elements of the 2nd stage of engagement should be included in marketing strategies. Product, content and page customization were proven to turn good first impression into the long lasting one. At the 3rd stage marketers evaluate competitors and elevate first impression according to the elements competitors are better at. 4th compete stage elements, such as promotion, price and process, allow to transform a first impression into a lasting one. Researchers conclude, that pleasant first impression can be converted into favorable long-lasting impression. In order to reach this transformation, criteria in this model should be taken into account when justifying actions when designing e-stores with intention to create good first impression.

Website evaluation in this paperwork is divided in two stages: evaluation of attractiveness usability and evaluation of trustworthiness and credibility. Attractiveness is evaluated faster than credibility since it is based on the first visual stimuli and is closely related to aesthetics. As it was mentioned before, visual perception, appeal, attractiveness, and usability of the website influence further consumer's decisions. However, it's been found that perceived website aesthetics subsumes not only on immediate judgement of attraction, but also further, more cognitively deliberate judgement (Cai & Xu, 2011). How important attractiveness is to particular customer is

highly dependent on consumer goal. If consumer's drive is utilitarian, attractiveness and usability will play lesser role in purchase intention because consumer needs that product and doesn't pay too much attention for website design if the competitors are not better. If browsing intention is hedonic or entertaining, attractiveness is found to be more important for retaining potential customer and convincing them to stay on the website and think of potential purchase.

For the first time shoppers aesthetic design can create favourable first impressions and lead to desired evaluation of website qualities. While first-time shoppers are more sensitive to cues about trustworthiness of the website, visual design is one of the main things to indicate credibility and trustworthiness. The combined effect of these processes is expected to improve attitudes towards the store among first time shoppers and increase their purchase likelihood (Tractinsky & Lowengart, 2007). Clients coming back for the repeated purchases are less sensitive to first impressions, aesthetics design and attractiveness, as most likely repeated customers are drawn to the site for its pleasant atmospherics or require item sold on this website. To add up, when purchasing for the second and further times, customers will be less affected by trustworthiness implied by visual aesthetics (Tractinsky & Lowengart, 2007). Since they already have an experience and if they came back, they are most likely satisfied with level of trust with this particular website.

Although exposure time needed to create first impression and any judgements about the website is questionable, some studies confirm importance of the first 50 ms on the site (Lindgaard et al., 2011). In their study, Lindgaard et al. (2011) proved this time is enough not only to assess appeal of the website, but also trust and usability of the homepage. However, judgements that need more cognitive processing, such as usability or trust, may be different from appeal judgements, that represent the first impression of the website. To avoid misconceptions about importance of first second of exposure, 50 ms time mark should be perceived as important if the customer after this time stays on the website, as they already become a prospect. Attractiveness and website usability influence how long will customer stay on the website and if they will have an intention to purchase. It was found that the classical aesthetics is strongly related to the perceived usability of the site while the expressive aesthetics is less so (Tractinsky & Lowengart, 2007).

To conclude, website attractiveness, perceived already after first second exposure to the website, can influence purchase intention. It can cause positive attitude toward the website, stimulate the intention to stay on the website and browse further with higher chances of purchase decision. Attractiveness also influences perceived level of usability of the website, so both characteristics should be perceived in conjunction. Importance of attractiveness depends on consumer characteristics, such as shopping orientation. Hedonic product shoppers pay more attention to the attractiveness of the website, while utilitarian product shoppers less so. Same

dependability applies to first time and repeated purchase visitors, where former need an impressive attractiveness in order to feel motivated to stay on the website, and latter ones come back and are not influenced by the same visual stimuli attractiveness so much.

Website credibility is highly influenced by attractiveness, as an unattractive, poorly designed website might cause trust issues in first time visitors. Trust is recognized as the main concern of the online users of e-commerce websites (Ramezani Nia & Shokouhyar, 2020). After having doubts, visitor can leave and never come back to the website. Trust and credibility, together with usability, are the key factors, that influence user experience. Oyibo and Vassileva (2017) identify aesthetics as one of the main drivers of web credibility. Credibility is closely related to attractiveness and trustworthiness, as the store's visual design was found to serve as an indicator of site credibility, in turn increasing trustworthiness (Fogg et al. 2002). Website trustworthiness cause positive website evaluation as customer can feel calm and rely on the website. Especially when it is e-commerce website, where customer has to provide their address and payment details. It was found that visual appeal is dominating first impression judgements of site usability and trustworthiness (Lindgaard et al., 2011). While in later studies this finding was proved again, by stating that the effect of first impression is strong enough for later influence on usability and credibility (Reinecke et al., 2013). These judgements in turn add up to “halo effect”, but unlike visual appeal judgements, trust and usability are evaluated in qualitative different manner. Regarding trust, it was found that perceived visual appeal has a much stronger effect on trust than ease of use (Pengnate & Sarathy, 2017). Therefore, a few separate studies were found to prove connection between aesthetics appeal and trust. It can be concluded that impact of visual appeal on credibility and trust is undeniable, thus, in order to build better rapport with their users, websites should improve perception of these variables.

Website credibility and trustworthiness are important for purchase intention and can influence it indirectly, based on another variable, as well as influence perception of further variables. The role of trust, as of mediating variable between website aesthetics and purchase, is critical (Ramezani Nia & Shokouhyar, 2020). It was found, that first of all, website trust has a mediating effect on the relationship between perceived ease of use and behavioral intention. It's important to mention, that website design features play a significant role in website trust evaluation in both genders, with slightly higher proportion in men, as it was already mentioned before (Pengnate & Sarathy, 2017). To add up, trust was found to have a direct and significant effect on purchase, comparison to similar products on other websites and revisit intention (Ramezani Nia & Shokouhyar, 2020). Therefore, it is evident, that trust can have indirect and direct effect on purchase intention and other types of consumer behavior.

It's important to know what qualities of website influence higher perception of trust and how are these qualities related to aesthetic dimensions. It was found that blend of customizable, useful and appealing website elements increases levels of trust in customers (Li & Yeh, 2010). Furthermore, design factors such as information design (organization and placement of the information), visual design (aesthetic beauty and emotional appeal) and navigation design (ease of use) should be used as a marketing tool to subsequently create trust on the website and enhance purchase intention (Ganguly et al., 2010). Importance of content quality and navigation was also emphasized in later studies (Faisal et al., 2016). The beauty of the website affects trust mainly through clarity and cleanliness elements (Karvonen, 2000). Factors responsible for the instant judgement of credibility are balance, harmony, contrast and dominance (Alsudani & Casey, 2009). These findings indicate that classical aesthetics has a direct impact on perceived trust in e-commerce website visitors. Moreover, it was found that personal and functional appeal have a significant influence on visitor's trusting beliefs (Dalen, 2015). By personal appeal it is assumed, that websites customized and personalized by visual elements to induce trust in their customers. Thus, interaction elements and social presence of the website should be emphasized. Functional appeal encompasses easily understandable security symbols on the website, which should be included on website interface to stimulate trusting beliefs in customers. To conclude, it is evident that website aesthetic design has an impact on trust and trusting beliefs in consumers. Bigger emphasis was devoted to visual clarity and cleanliness, which appear to be important elements influencing trust and link to classical aesthetics. Nevertheless, contrast, emotional appeal and customizable qualities, which can be linked to expressive aesthetics, were also found to have a deciding role in trust judgements. Therefore, both aesthetics dimensions can influence perceived trust in website users.

2.3. Role of emotions in impact of website aesthetics on purchase intention

When it comes to the impact of aesthetics, it is known, that emotions play vital role in transmission of aesthetics through mediating variables, described in previous section. Nevertheless, relation of emotions cannot be strictly specified. Toufani et al. (2017) found indirect aesthetic impact on purchase intention through perceived social and emotional value, latter to the lesser extent. Lesser importance of aesthetics on perceived functional value was found in the study. Trust, caused by aesthetic design, can influence purchase intention. Ramezani Nia and Shokouhyar (2020) indicated the significant effect of trust on purchase, revisit intention and comparison to products on other websites. Earlier studies also proved that perception of the site design and quality increased trust in retailer and in consumer intention to buy from this site (McKnight et al., 2002; as cited in Sarkar, 2015). Norman (2004) also found significant design

effect on trust in both genders, with slightly higher proportion of trust in the male model. Pengnate et al. (2017) research shows that trust has a mediating effect on the relationship between perceived ease of use, caused by aesthetics, and behavioral intention, including purchase intention. Thus, emotional background is common in studies related to impact of aesthetics on purchase intention.

Emotions play an important role for online companies, just the same way as they kept public attention in traditional marketing. If e-retailers want to build a trustworthy and personable face on the internet, they must keep in mind importance of emotions on customers' experiences (Chen, 2009). Websites can be designed according to desired emotion infliction. Kim et al. (2003) indicated important design factors, that can evoke certain emotion or aesthetic responses during the usage of the website. Design qualities, that are proved to influence visitor's emotions and feelings are certain combinations of sizes, shapes, colors, unity in elements, proportions and symmetry (Hartono & Holsapple, 2019). Designing website according to an emotion desired to cause will help retailers to catch consumer's attention and cause the emotion needed. This will most likely lead customer to the outcome, desired by the retailer. It is also known, that based on emotional value of the product, different dimensions affect those products' intention to purchase differently. For high touch, emotionally more valuable and relatively more expensive products expressive aesthetics might be more important. However, for low touch, inexpensive and emotionally neutral products classical aesthetics have a higher impact (Porat & Tractinsky, 2012). To add up, designing bearing in mind emotional product value and desired emotions will help to avoid confusion in client, thus, they will experience clearer emotions and avoid rushing about them.

Online shoppers might tend to activation search in course of aesthetics experience. Studies show that aesthetics might have stronger influence on activation search than on the intention to purchase, since aesthetic experience stimulates peripheral information processing rather than central information processing. Bhandari et al. (2019) as well emphasized importance of design effect on emotions. According to the researchers, core affect can be measured as a combination of arousal and dominance. Emotions caused by website design affect quality perception and attitude towards website attractiveness. Classical aesthetics, in particular symmetry and cleanliness, was found to elevate user's valence making them evaluate quality and attractiveness pragmatically (Bhandari et al., 2019). When it comes to aesthetic dimensions' impact on emotions it is evident, that both aesthetic formality and aesthetic appeal have an influence on consumer's website evaluation and purchase behavior. This impact was analyzed mostly through an emotional model, combining pleasure, arousal, and dominance (PAD) in purchase intention.

Pleasurable interactions are an essential determinant of positive attitude towards e-commerce website. It was found that perceived pleasure has great influence on purchase behavior

while browsing e-commerce websites. It's undeniable, that positive emotions and happy mood enhance consumer's purchase behavior much more than negative emotions. However, it is more difficult to find a direct impact of classical or expressive aesthetics on pleasure. Chang et al. (2014) found the reason for lack of direct impact is caused due to emotional model affecting pleasure. The positive emotions, e.g., happiness, are created by the content of the website, which accordingly influences sense of pleasure of browsing. Furthermore, pleasure is affected through atmospherics of the store, in particular excitement towards it, created by both aesthetic dimensions (Porat & Tractinsky, 2012). Being a mediator between store atmospherics and consumer's attitudes is the prime role of the pleasure, bringing overall pleasurable experience to consumer. Despite of significant indirect effect on pleasure, Liu et al. (2016) study confirmed direct aesthetics dimensions and design effect on user's pleasurable experience. In case of aesthetic design, it is positive and significant, thus, improving aesthetic design will result in enhanced sense of pleasure in consumers. In conclusion, pleasure can be influenced both directly and indirectly, thus, both relations should be considered while creating pleasurable browsing experience for consumers.

Another component of emotional model is arousal. Positive bodily arousal is caused by aesthetic stimuli, which leads to risk aversion and searching for alternatives during decision making process (Wang et al., 2010b). In later studies Wu et al. (2013) confirmed their hypothesis that emotional arousal towards website has a significant impact on consumer intention to purchase. However, expressive aesthetics, in particular creativity and special effects of the website design, is expected to affect arousal through excitement part of emotion spectrum, but the findings are not clear and significant (Bhandari et al., 2019). Nevertheless, arousal is known to be energetic and tense, and both types have diverse sources of influence and different impact on consumer. Energetic arousal, which is associated with feelings from energy and vigour to fatigue and tiredness, while tense arousal is characterized by feelings ranging from tension and anxiety to calmness and quietness (Boehringer et al., 2010). Energetic arousal positively influences pleasure, unlike tense arousal, caused by negative emotions, experienced by the consumer, which results in significantly negative influence (Chang et al., 2014). However, negative emotions due to tense arousal, such as anxiety or nervousness, were found to be evoked by both aesthetic formality and appeal. It was mainly due to poor, unattractive design, lack of logics, confusing layout (Liu et al., 2016). Thus, both dimensions negatively affect tense arousal, if these dimensions don't meet usability and beauty standards of consumer. Energetic arousal is positively affected by aesthetic appeal, meaning that attractive design helps to evoke positive emotions in consumers, such as activeness and excitement (Boehringer et al., 2010). However, aesthetic appeal is a tool for aesthetic formality to significantly influence energetic arousal, since there was no direct relation found. Therefore, if aesthetic formality doesn't create good aesthetic appeal, effect on energetic

arousal will be insignificant. It can be concluded that arousal has direct impact on pleasure and is highly dependent on aesthetic appeal and aesthetic formality.

Third component of emotional model is dominance, which refers to the degree of control over the environment and consumer behavior. It was found that enhancing website qualities, such as layout, readability and visual style affect customer's sense of dominance over the website (Chang et al., 2014). Nevertheless, despite of dominance being related to aesthetic qualities of the website, it is also related to other components of emotional PAD model. Study confirms influence of control on energetic arousal and significant negative influence on tense arousal (Chang et al., 2014). Therefore, sense of control is directly proportional to energetic arousal and inversely proportional to tense arousal. Strength of sense of control depends on memory-evoking experiences in consumers. However, control doesn't have a meaningful direct impact on the sense of pleasure, but as mentioned above, impacts it through energetic and tense arousal. Furthermore, dominance is more subject to the environment and personal motivation and may depend on the context and variables used by researcher (Porat & Tractinsky, 2012). It is unclear, if dominance has a direct effect on approach-avoidance behavior and purchase intention in consumer. To conclude, control plays a significant role on energetic and tense arousal and doesn't affect pleasure or purchase intention directly, as is highly dependent on the nature of the environment and customer's motivation.

As mentioned above, aesthetics influences perceived website design. Aiming to replenish this notion it is needed to say, that importance of design on emotions can be measured through satisfaction. Tey and Mahmoud (2020) found that positive emotions caused by user-friendly, well organized, legible website, lead to higher level of satisfaction, even when shopper doesn't buy from the website. However, researchers proved that well organized, user-friendly website is essential in purchase decision making process, hereby plays an important role in the survival of the firm as well. Tseng and Lee (2019) proved positive emotions and aesthetics experience value are important mediating variables in web visual aesthetic perception and satisfaction. Unattractive aesthetic design can evoke negative emotions in consumers, such as anxiety or nervousness. Liu et al. (2016) found that both aesthetic formality and appeal may negatively influence tense arousal through poor aesthetic design, e.g., lack of logic, not understandable layout, unattractiveness. However, energetic arousal is positively influenced by aesthetic appeal through attractive designs, causing pleasant emotions, such as activeness and excitement. Therefore, it is important to consider both positive and negative emotions, that aesthetics might cause, and evaluate them from two aesthetic dimensions perspectives. Depending on retailer's goal, aesthetic design solutions should aim to cause more positive emotions, in order to stimulate purchase intention in website visitors.

To conclude, emotions caused by aesthetics of the website have a significant impact on consumer and their decision-making process. Emotions evolve based on mediating variables, such as trust, pleasure, arousal, dominance, and shopping orientation. Trust has a mediating effect on the relationship between perceived ease of use, caused by aesthetics, and behavioral intention, including purchase intention. It is highly related to aesthetic appeal, perceived by user. Pleasurable browsing experience creates positive attitude towards the website and has a great impact on purchase behavior. Arousal directly impacts pleasure by different types of it – energetic and tense, while being highly dependent on aesthetic appeal and aesthetic dimensions. Dominance has a proved impact on arousal. It is directly proportional to energetic arousal and inversely proportional to tense arousal. Despite significant impact on arousal, there is lack of evidence for direct impact on purchase intention. Desired emotions can be evoked in consumers by specific website design, based on retailer’s goal, intention, and orientation. It is useful in businesses with defined target audience since specific design helps to evoke desired emotions and helps consumers to avoid confusion in their emotions. Ultimately, design aiming to create emotions leading to purchase intention will help e-commerce owners in their purchase stimulation goal.

2.4. Emotions typically caused by aesthetics

Emotions caused by aesthetics always play a direct role in aesthetic perception and evaluation (Menninghaus et al., 2019). Very often emotions caused by aesthetics are named simply aesthetic emotions, thus, these terms will be interchangeable in this paper. However, there are some conflicts between researchers regarding aesthetic emotions, as some of them perceive aesthetic emotions as a distinct dimension. Psychological and neurobiological empirical findings show that affective states observed during aesthetic stimuli do not differ from affective states caused by other form of sensory stimuli (Skov & Nadal, 2020). Despite being analyzed for over a century by psychologists, researchers call idea of aesthetic emotions “empty and arbitrary” (p. 646), as they present evidence of non-existence of aesthetics emotions. However, in reply to this accusation, Menninghaus et al. (2020) explained the meaning behind aesthetic emotions researchers have in mind. Aesthetics emotions are defined as emotions evoked by aesthetic evaluation of an object, intuitive evaluation of subjectively perceived aesthetic stimuli, not only artworks. Moreover, many emotions do not include a pronounced action component, therefore based on criterion for emotion existence provided by Skov and Nadal (2020), no emotions can exist at all. Therefore, accusation of researchers is a logical fallacy. In this paperwork it is assumed that aesthetic emotions are emotions, caused by aesthetic visual stimuli and not as a separate emotional dimension.

Aesthetic emotions are analyzed in different contexts and there are many publications devoted to this topic (Perlovsky, 2014). Aesthetic emotions are defined and perceived in different ways. There is an emotional pleasure, arousal, and dominance model, discussed in previous section. Some say, aesthetic emotions are the ones, that underlie evaluative assessment of artworks (Fingerhut & Prinz, 2020). Schindler et al. (2017) therefore define an aesthetically pleasurable experience as a mixture of positive and negative valence, experienced in both arousing and relaxing ways. Menninghaus et al. (2019) confirm presence of arousal by finding, that aesthetic emotions cover whole spectrum from low to high affective arousal. Even though most of terms for evaluation of aesthetic purposes include more positive emotions, many overall aesthetic emotions consist of both negative and mixed emotions (Menninghaus et al., 2019). Therefore, the aim of this section is to distinguish, which emotions can be caused by aesthetics, lead to positive attitude towards e-commerce website and cause purchase intention in consumers.

Recently researchers developed a few frameworks for aesthetic emotions evaluation. Schindler et al. (2017) created an emotion assessment tool AESTHEMOS – Aesthetic Emotions Scale, due to lack of such tool despite interest of researchers in emotions that occur in response to perceived aesthetic stimuli. This framework consists of 21 subscales with two items each, that are meant to help identify emotional responses to stimuli. These scales divide emotions in three subcategories: prototypical emotions, caused by aesthetics, such as feeling of beauty, fascination, awe, being moved, epistemic emotions, such as interest and insight and lastly, emotions that indicate amusement – humor and joy. To add up, another two subscales are being captured – activating emotions (energy and vitality), calming emotions, such as relaxation, and negative emotions (boredom, confusion, feeling of ugliness). Important finding is that feeling of beauty and liking are inseparable since are highly correlated, but beauty is not a prerequisite of liking, creating the possibility for stimuli to be liked despite not being beautiful. In prototypical emotions subcategory fascination was also found to be best described as being impressed and overwhelmed. Pleasing emotions subcategory includes all emotions with positive affective valence – joy, humor, vitality, energy and relaxation. Joy and humor are perceived as fun and represent pleasantness of aesthetic experience. Epistemic emotions subcategory covers surprise, interest, intellectual challenge and insight. These emotions depend on one's potential ability to understand and satisfy the drive for sense making. Negative emotions, such as feeling of ugliness, boredom, confusion, anger, uneasiness and sadness, are often felt during unpleasant experiences, contributing to negative evaluation of aesthetic stimuli. However, negative emotions do not merely indicate displeasure, as even clearly unpleasant emotions may contribute to subsequent aesthetic pleasure (Menninghaus et al., 2017). Therefore, AESTHEMOS tool for evaluation of emotions caused by aesthetic stimuli can be used to assess full range of emotions in contexts of aesthetic perception

and evaluation. Fingerhut and Prinz (2020) divided 12 aesthetic emotions in 4 categories: pleasure, contemplation, amazement and respect. Researchers found that emotions caused by aesthetics go far beyond beauty and are not only calm, as it was thought before. Both these frameworks were mainly designed for the assessment of art, music or literature, although researchers emphasize, that not in a strict sense and scales are applicable across a wide range of domains (Schindler et al., 2017). However, website design is visual stimuli as the art is, moreover, expressive aesthetics shows creativity of web designer, therefore it can be perceived as form of visual art. Menninghaus et al. (2019) therefore presented multicomponent model of aesthetic emotions for broad range of experiential stimuli which should not be overlapping with art-elicited emotions (Annex 1). Their framework encompasses bipolar emotional scale, including pleasure/displeasure, negative and mixed emotional ingredients, high and low arousal, enjoyed and savoured intensity and liking/disliking of the stimuli. 4 mandatory features of aesthetic emotions were emphasized: inclusion of evaluation/appreciation, various types of aesthetic appeals, association with pleasure/displeasure, prediction of resultant liking/disliking. Furthermore, the appraisal of intrinsic pleasantness is of substantial importance for emotions inflicted by aesthetics. Researchers also emphasize the importance of negative emotions, as they make aesthetic experience more intense, varied, and memorable, and contribute to other emotions, creating mixed affective feelings. To add up, emotions may depend on a goal and are sensitive to cognitive and affective recipient's coping potential. Lastly, aesthetic emotions may also motivate the tendency of approach and avoidance behavior and in some cases clearly the tendency to possess the object, which is highly relatable and important to e-commerce business.

It is evident, that aesthetic design may cause wide spectrum of emotions. These emotions analyzed by previous researchers are pleasure, arousal, dominance, positive and negative valence, contemplation, amazement, respect. It was found, that directly or indirectly, combination of these emotions can have an impact on website visitor's purchase intention. However, it was found, that trust is an important mediator variable between expectations together with emotional response and purchase intention (Wang et al., 2019). Therefore, emotional experience is positively correlated with trust and purchase intention. Moreover, perceived usefulness may also affect purchase intention through emotional interaction, in particular familiarity and intimacy (Wang et al., 2021). Researchers found direct correlation between improvement of emotional interaction and perceived usefulness and their impact on enhancement of purchase intention. Thus, not only emotions caused by aesthetics should be evaluated, but emotional experience of the customer while browsing the website. Previous studies suggest that relation of emotions and trust should be evaluated, since trust may have a higher impact on purchase intention than emotions solely.

To conclude, in evaluation of emotions, caused by aesthetics, analysis should be based on emotions suggested in previously analyzed emotional assessment tools. It is important to cover all kinds of emotions, in particular negative ones. Despite of separate emotions, emotional experience of a customer as a whole should be evaluated, and mediating role of trust should be taken into account when analyzing the causality of evoked emotions and purchase intention.

3. ROLE OF DEMOGRAPHIC CHARACTERISTICS OF CONSUMERS IN WEBSITE DESIGN PERCEPTION

Aesthetics influence on consumer depends not only on aesthetic dimension, consumer type, mediating variables or presence of shopping task. Every person has different characteristics, while most of them can be generalized into groups. These groups include gender, age, education, culture, etc. A few research were conducted to measure whether personal characteristics have significant influence on perception of aesthetics in website design. Typically, research exploring differences of a stimuli impact on different categories analyzes categories divided by gender. Cyr and Bonanni (2005) researched website design perception differences among different genders across different cultures, such as Canada, U.S., Germany and Japan. Oyibo and Vassileva (2017) conducted a multicultural study on mobile website design impact between genders among participants from 5 continents. Reinecke and Gajos (2014) in turn collected data from 40 thousand participants with different cultural backgrounds. Differences in trust, colors perception, symmetry, and orderliness were found in these studies.

There are differences in website aesthetics and other factors, such as credibility and usability, influenced by aesthetics perception between genders. Stronger effect of perceived aesthetics and usability is observed for males than for females (Oyibo & Vassileva, 2017). Males are found to be more affected by the halo effect – cognitive first impression bias, where perception of one attribute distorts perception of other attributes. However, effect size of perceived aesthetics on perceived credibility was found to be larger for females. Website credibility and trust are two of the most important mediators in purchase intention. Trust has a mediating effect on perceived ease of use and behavioral intention, including purchase decision, and is observed to be slightly higher for the male model (Pengnate et al., 2017). To add up, for male website trust is significantly impacted by visual appeal and ease of use, and for females only visual appeal plays significant role. However, impact of perceived visual aesthetics has been observed in women, when shopping mainly for clothes, cosmetics or health products (Wu et al., 2016).

In case of clean and well-organized website, ascribable to classical aesthetic dimension, more favorable impressions were received from men than women (Cyr & Bonanni, 2005).

Navigation design, known as website usability, is also more satisfying to men, whereas women report wishes for web design to be more user friendly and easy to use. Interactive interface, flashy layout, attractive presentation of products on the website and extensive graphics and animation was perceived positively by men (Cyr & Bonanni, 2005; Simon, 2001). Although Reinecke and Gajos (2014) found that men like simpler look more than females. However, women were more attracted by colors of the website (Cyr & Bonanni, 2005; Reinecke & Gajos, 2014) and preferred less cluttered, flatter (less sub-page levels) websites with lesser graphic elements (Simon, 2001). Symmetry is an important factor of website design. Asymmetrical websites were found to be perceived as less beautiful, even more, only male participants reacted unfavorably towards asymmetric design, while women's opinion was not influenced by symmetry (Tuch et al., 2010). However, Coursaris et al. (2008) did not indicate differences of website aesthetic perception between genders. Pengnate and Sarathy (2017) also didn't find significant differences between both genders regarding online shopping. However, gender differences are strong in high-masculinity countries and weak in low-masculinity countries (Cyr & Head, 2013). In Germany and U.S. men had higher perceptions of information content than women (Cyr & Head, 2013). Trust or satisfaction was proved to be significantly different between genders in high-masculinity countries. In high-masculinity countries people tend to lay more emphasis on informational design of the website (Ganguly et al., 2010). Masculine customers expect to see logical presentation of information, that will help them in decision making process. These finding suggest that research done in low-masculinity countries might not have significantly different findings, if done on men and women groups. Therefore, it's evident, that males and females perceive website aesthetics and other dimensions, such as website credibility, trust, first impression, differently. Hence, website designers should take it into account when designing website and targeting gender specific audience, since it might influence higher conversion rates and bring better results than targeting both genders and creating versatile design.

There are differences in website design and aesthetics perception between different age groups and generations. Younger people are more critical about designs than older people (Oyibo et al., 2018). Colorfulness of the website was found to be rated the highest in groups of participants under 20 and over 51 years old (Reinecke & Gajos, 2014). Participants between 31 to 40 years old prefer slightly less colorful websites. It was also found that older participants evaluate plain, colorless websites less visually attractive and higher colorfulness affects this group at a lesser extent. People under 20 years old prefer more saturated colors with larger images, whereas older participants prefer more complex websites with more text, but with less saturated colors. Another research showed that younger people prefer moderate temperature (green to orange) over extreme (blue to red) color schemes of the websites, while older people are indifferent about website color

schemes (Oyibo et al., 2018). Visual complexity is perceived better in older groups of respondents, starting from 41 years old (Reinecke & Gajos, 2014). Stable range for perception of visual complexity was found to be between 12 and 40 years old. However, when the website is intended for utilitarian purposes, young consumers are more concerned with the utilitarian aspect of experience. While if the website is intended for hedonic purposes, to please equally both older and younger consumers with a single website might be difficult due to different perceptions of the website and satisfaction (Wagner et al., 2014).

Differences of perception among age groups are caused biologically. It was found that decline in biological and psychological human functions within aging cause decline in special ability and higher disorientation levels in older website users (Wagner et al., 2014). Participants who experienced higher level of disorientation thus reported lower satisfaction, which appears to be indirect age impact on website satisfaction. However, despite lower spatial ability and worse performance, levels of disorientation in older participants were lower, than in the youngest category of 18-24 years old. Designers should provide navigation cues for younger and experienced users have come to expect, while keeping in mind that older users prefer the simplicity (Wagner et al., 2014) and list-style organization of a website (Oyibo et al., 2018).

Cultural background also has an influence on website design perception and affect. Based on Reinecke and Gajos (2014) findings, further cultural differences between countries were found. Russians and Finnish people are negatively affected by complex websites, thus prefer lower complexity level. Participants from Serbia, Bosnia and Herzegovina, Mexico and Chile preferred websites with higher complexity scores. Participants from Macedonia, Malaysia and Chile like colorfulness of the website the most, whereas Russians, Finnish, Germans and French find website appealing at lower colorfulness levels. The finding was generalized to notion that Northern European countries prefer less colorful websites than Southern European and Asian or English-speaking countries. Cyr et al. (2005) analyzed webpage design differences across cultures and found the greatest difference in evaluation is between Germany and Japan, whereas the lowest between U.S. and Canada. Based on these findings cultural values analysis based on Hofstede (1980) value dimensions was done in order to hypothesize tendency of such results (see Annex 2, Table 1). It was noticed, that in countries, which are negatively affected by complex websites, power distance is relatively low (average 34 points), while in countries which prefer higher complexity level, it was relatively high (average 80 points). Thus, it can be assumed, that in low power distance countries lower complexity level is preferred over higher complexity, whereas in high power distance countries preference is vice versa. Regarding colorfulness attribute, in countries who like higher level of colorfulness individualism level is low (average 24 points), whereas in countries who prefer less colorful websites, individualism level is higher (average 64

points). In conclusion, higher individualism level may cause preference of dimmed colors versus higher colorfulness level. Additionally, trust and purchase intention relation are negatively influenced in high collectivism countries (Ganguly et al., 2010). Differences in website evaluation can be also measured depending on cultural value comparison. Canada and U.S. are very similar based on these values, therefore low difference in website perception is not a surprise. However, Japan and Germany are very different countries, based on masculinity value (36 JP vs 95 DE), power distance (93 JP vs 54 DE) and indulgence (20 JP vs 42 DE). Therefore, differences in website perception are normal and expected in this case. This comparison allows to assume that low power distance cultures will prefer lower complexity websites and preferred level of colorfulness is higher in less individualistic cultures.

Differences in consumers are not limited to demographic differences only. As mentioned before, emotions affect task-oriented and task-free customers differently, therefore personal characteristic of consumers are also relevant in evaluation of website design and aesthetics impact on consumer behavior. Differences in website perception and its' qualities influence on shopping behavior are dependent on shopping frequency. People, who buy more than once a month, are less aesthetic sensitive, compared to rarer buyers (Tseng & Lee, 2019). Researchers came to this conclusion based on higher exposure to marketing incentives in frequent shoppers due to browsing different webpages, when looking for the information. Therefore, for this type of shoppers' product functionality and information about the product on the website are more important. Meanwhile, for low-frequency online shoppers visual aesthetic design is of a particular importance as it becomes one of the further browsing motivators. However, more appealing website is seen as more reliable and even consumers with high levels of shopping experience will be likely to consider it as attractive. In conclusion, although aesthetic design is more important in low-frequency shoppers decision making process, aesthetically appealing website is perceived as more attractive and reliable in both types of consumers.

When designing the website and choosing the dominant aesthetic style, it is also important to consider two types of customers – task-oriented and consumers without purchase task. These typologies of customers experience different emotions based on their anticipatory browsing orientation. Wang et al. (2010a) found that regardless of creativeness and fascination of the website, task-oriented customers sense negative emotions caused by high aesthetic appeal, which fails to indicate superior service quality. On the other hand, when consumers do not have a purchase task, aesthetic appeal becomes the main factor in determining consumer's emotions and evaluations of the website. Web retailers should have a different website design depending on their goal. High aesthetics formality and low aesthetic appeal combination will most likely lead to positive emotions in task-oriented shoppers (Wang et al., 2010a). Wang et al. (2011) concluded

that when individual does not have a shopping goal, hedonic property of environmental stimuli results in positive emotions, which are intrinsically preferred by human. Reaction to aesthetic design can also depend on visitor's motivation (Chen, 2009). For high-interest individuals' aesthetics might be less important as they would favour a site, stimulating positive emotions, only after rational consideration. However, low-interest individuals favour heuristic appearance of the web site, that stimulates to feel good, as they tend to ignore core information content and consider, for example, quantity of information. Therefore, it is more likely, that design based on classical aesthetics will please task-oriented consumers, thus creating effect of clear, understandable, and easy to use website. Whereas consumers without clear purchase task would favour expressive aesthetic design, since they are looking for hedonic feelings, pleasure, and satisfaction from website surfing. Therefore, e-retailers should focus on website aesthetics design while considering target customer and their intention and purpose of shopping.

Website users can have different attitudes and perceptions towards website aesthetics depending on their professional background. Koutsabasis and Istikopoulou (2014) found designers have rated most aesthetic attributes of a website of a higher importance than general users. Although group of users and group of designers have similar views on number of selected attributes within aesthetic dimensions, different aesthetic attributes become more important between groups. Even though this research was meant to provide designers with insights on desired improvements from users' perspective, it is evident that there are differences in website perception between general users and professionals in art related field. To add up, high education level is found to lower preference for complex and colorful websites and vice versa (Reinecke & Gajos, 2014). Therefore, future research might examine how different aesthetic dimensions in website design are perceived by user groups, divided by education or a professional background.

To conclude, consumer's characteristics moderate the influence of stimuli on the receiver. Visual website appeal was found to be important for both genders. Males heed it less than women, although men tend to evaluate website trust, which is an important factor, based on website appeal. Gender differences in stimuli perception and evaluation are strong in high-masculinity countries and weak in low-masculinity countries. Thus, website creators should design interface of the website based on target audience gender and/or masculinity level in culture. Additionally, low power distance cultures will prefer lower complexity websites and preferred level of colorfulness is higher in less individualistic cultures. Website visitor's age defines perception of visual complexity. It is perceived better in older groups of respondents and remain stable in people aged 12-40 years old. Within age, desired level of website colorfulness decreases. Furthermore, consumers with purchase task are positively influenced by high aesthetic formality and low aesthetic appeal, whereas task-free consumers are more stimulated by expressive aesthetics,

evoking hedonic feelings and satisfaction during the browsing process. Meanwhile, aesthetic formality, even without significant impact, is vital for both types of browsers. Lastly, profession and education might have an influence on customer's perception and decision-making process. In the limited studies it was found that designers and random respondents perceive different aesthetic attributes of the website as more important. To add up, higher education lowers need for complex and colorful websites, suggesting that level of customer's education will influence website perception.

4. S-O-R MODEL APPLICATION IN PREVIOUS STUDIES

Many researchers used behavioral psychology model in testing impact of aesthetics dimensions on various variables. Commonly used model is stimulus-organism-response (S-O-R) model, created by Mehrabian and Russell (1974). This model is based on psychological-environmental stimuli, that influence the cognitive, emotional and intentional responses of consumers (Chang et al., 2014; Tseng & Lee, 2019). In more broad perspective, S-O-R paradigm is meant to analyze how environmental stimuli evoke human emotions and result in human approach-avoidance response (Hormann, 2020). According to Porat and Tractinsky (2012), an approach response would mean tendency to browse the website, explore and interact with it, contact salespeople, resulting in greater knowledge of the website and willingness to purchase from it and a higher probability of an actual purchase. Avoidance behavior would result in the opposite reaction, e.g., desire to leave the website and be inactive within it. Whereas according to Chang et al. (2014), the idea of this model is to obtain the desired responses, which may encourage customer's behavioral responses, leading to further purchase. Therefore, knowledge of possible behavior as a response to stimuli may help to project desired behavior through the usage of the right stimuli and excitation of correct emotional organism.

Previous studies of website consumption investigated different areas of impact. These included web aesthetics impact on customer's PAD (Chang et al., 2014), on purchase intention (Tseng & Lee, 2019), perceived website aesthetics dimensions on perceived online service quality (Wang et al., 2011), aesthetics dimensions impact on satisfaction on job hunting websites (Liu et al., 2016), response on website aesthetics and usability through eWOM intention (Phan & Pilik, 2018), website cues on urge to impulsive purchase (Parboteeah et al., 2009), layout design and atmosphere on purchase intention (Wu et al., 2013). Broader applied models' description is presented in Table 1. Thus, S-O-R model is the right model to follow when researching customer's responses to stimuli through understanding of reactions and effect on consumer before their behavioral response.

Table 1 *Several studies based on S-O-R theory*

Authors	Stimulus	Organism	Response
Wang et al. (2011)	Aesthetic formality and aesthetic appeal	Arousal, satisfaction and cognitive	Purchase, consultation, search on other websites and re-visit
Chang et al. (2014)	Aesthetic formality and aesthetic appeal	Control, energetic arousal, tense arousal, and pleasure	Search on other websites and purchase behavior
Tseng & Lee (2019)	Web visual aesthetics perception	Positive emotions, aesthetics experience value	Satisfaction and intention to purchase
Liu et al. (2016)	Aesthetic formality and aesthetic appeal	Perceived ease of use, energetic and tense arousal, pleasure	Satisfaction
Phan & Pilik (2018)	Aesthetic appeal and usability	Attitude towards website	eWOM intention
Parboteeah et al. (2009)	Task and mood relevant cues	Perceived usefulness and enjoyment	Urge to buy impulsively
Wu et al. (2013)	Layout design and atmosphere	Emotional arousal, pleasure, attitude towards website	Purchase intention
Liu et al. (2013)	Product availability, website appeal and ease of use	Impulsiveness, normative evaluation, instant gratification	Urge to buy impulsively
Peng et al. (2017)	Elements and principles of design, composition factors	Flow, distaste, product quality, perceived usefulness	Affective and cognitive attitude
Ramezani Nia & Shokouhyar (2020)	Colorfulness, diversity, craftsmanship, simplicity	Satisfaction, arousal, perceived service quality, trust	Purchase, compare, re-visit

Stimuli can lead to response through two organismic mechanisms proposed by S-O-R (Peng et al., 2017). First one covers cognitive mechanism and perceived usefulness, where stimuli can go beyond environmental cues. Stimuli can be internal or external factors to consumer that affect them consciously or subconsciously into action. Ramezani Nia and Shokouhyar (2020) interpret them as higher cognitive awareness of a product when the seller ignores the product. Second one is affective mechanism, which is like a flow, which is linked with affective attitude toward the website. Ramezani Nia and Shokouhyar (2020) interpret it as a joy or fear to consumers. Both of these mechanisms affect consumer's attitude toward the website, potential purchase intention and product itself. Hormann (2020) reviewed way to assess and measure emotions derived from classical and expressive stimuli in web design through S-O-R paradigm. Based on Mehrabian and Russell (1974) they suggest three dimensions of emotions – pleasure, arousal and dominance (PAD scale). Pleasure is referred to extent to which consumer feels happy or satisfied, arousal represents the degree of stimulation caused by atmospherics and dominance refers to the degree person feels in control or having an influence over the situation.

5. AESTHETIC DIMENSIONS IMPACT ON PURCHASE INTENTION THROUGH EMOTIONS RESEARCH METHODOLOGY

5.1. Purpose of the research, model, and hypotheses

In this section of the paper methodological part of the research is presented based on findings of literature research. In methodology research aim, methods, problem of the paper, research model and hypotheses are presented.

In the first part of this section theoretical analysis method was applied. Scientific literature, research papers and scientific papers, related to the topic of the thesis were analysed. Research model is developed based on previously analyzed S-O-R model, based on theoretical knowledge, previous research findings hypotheses are raised. Section includes data collection methods, justification of questionnaire constructs based on previous research where they were applied, sample size of the research is determined. In the second methodological part of the thesis empirical research of collected data is done. The data is processed using statistical software IBM SPSS Statistics 26.0, hereafter, multiple statistical analysis methods are used to confirm or reject hypotheses. Reliability of the data is assessed as well as socio-demographical respondents' data is presented.

Problem of the research – how different aesthetic dimensions type influence website visitor's emotions, website evaluation and purchase intention based on the product type (hedonic and utilitarian).

Aim of the research – to determine, how different aesthetic dimensions influence intention to purchase through website visitor's emotions and store evaluation in the presence of different product types.

Research object – 2 websites of classical and 2 websites of expressive aesthetics designs.

Theoretical research model is created based on S-O-R model introduced by Mehrabian and Russel (1974) and actively used by previous researchers. The model includes stimulus – perception of website design, whether it is classical or expressive, product type – utilitarian and hedonic, organism – bodily reaction to stimulus, which includes emotions and evaluation of e-store, and response – conscious intention to purchase or not. This model helps to understand impact of aesthetic design of the website selling hedonic and utilitarian products on emotions, website evaluation and intention to purchase (Figure 1).

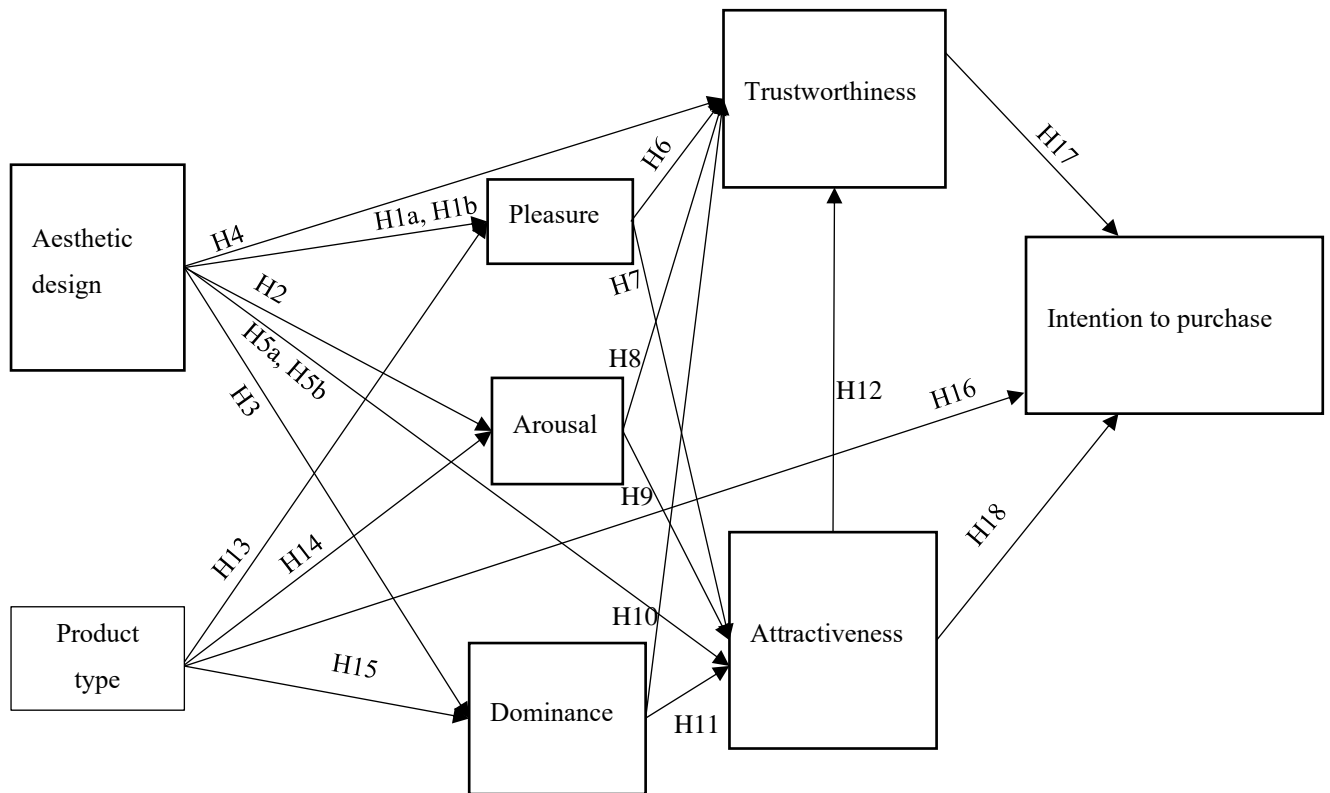


Figure 1. Research model

Recent research showed that improved visual website aesthetic perception could have a positive effect on aesthetic experience value (Tseng & Lee, 2019). Researchers found that despite of the frequency of the shopping, visual website aesthetics perception can cause positive effect on aesthetic experience, value, and positive emotions. Consequently, this positive impact can generate satisfaction and intention to purchase. To add up, the level of satisfaction with the website appeal is highly related to orientation of the browser. For task-free browsers, high formality and high appeal combination might provide utmost level of satisfaction, whereas for purchase task-oriented online consumers such aesthetic attributes are not a preference (Cai & Xu, 2011). Therefore, it can be concluded, that regardless of product type, at least a little of classical aesthetics must be present to ease the shopping task. In case of hedonic products, it will have a higher impact on purchase intention together with higher importance of expressive aesthetics.

Research hypotheses are stated based on the literature review and proposed research model. To begin with, the relationships between website aesthetic design and emotions are described. Based on literature analysis and previous knowledge, it is expected that different aesthetic design can influence emotions differently. At first, the relationship between aesthetic design of the website and pleasure is considered. According to previous research, pleasure can significantly be affected by aesthetic dimensions and website design (Liu et al., 2016). Previously it was found that both aesthetic dimensions can cause excitement and have an impact on perceived pleasure (Porat & Tractinsky, 2012). However, in this research hedonic and utilitarian types of the products were included to evaluate more specific fields of influence. Previous research states

differences in aesthetic design influence based on product type (Cai & Xu, 2011). Hedonic shopping tendency is more related to perception of the website design. Thus, it is expected, that for hedonic products expressive aesthetic design is perceived as more pleasurable, while classical aesthetic design is more pleasurable when shopping for utilitarian products.

***H1a:** Pleasure will be higher for expressive than for classical aesthetic design in a case of hedonic product.*

***H1b:** Pleasure will be higher for classical than expressive aesthetic design in case of utilitarian product.*

The next factor that constitutes emotions is arousal. Aesthetic design can influence emotional state of arousal. However, previous findings on both aesthetics dimensions influence on arousal emotion are dissimilar. Positive degree of arousal is associated with positive feelings, such as excitement (Porat & Tractinsky, 2012; Bhandari et al., 2019), which is considered desirable in shopping activities. Excitement and thus positive arousal are believed to be caused by expressive aesthetics factors (Liu et al., 2016; Wang et al., 2011), such as creativity and special effects (Bhandari et al., 2019). However, classical aesthetics was both found to have a negative influence on arousal (Wang et al., 2019) but also to elevate arousal in recipient, specifically through cleanliness and symmetry elements (Bhandari et al., 2019). Furthermore, poor aesthetics can influence tense arousal in any type of aesthetics (Liu et al., 2016). Because of findings of previous research being insignificant, it is expected, that different types of aesthetic design influence arousal in different ways. To specify the hypothesis, product type importance was also included. Since arousal is more common in hedonic shopping tendency, it is expected, that expressive design will have higher influence on in in case of hedonic product.

***H2:** Expressive aesthetics will cause higher arousal than classical aesthetics for hedonic product.*

The last factor that constitutes emotions is dominance, which can be named as perception of control. Dominance is the extent to which a website user has a feeling of having an influence on the website and is in control of the situation. Over the years, researchers have had lower interest towards dominance dimension due to it being perceived more of a cognitive reaction (Porat & Tractinsky, 2012). However, in some studies it was found that sense of dominance is affected by visual qualities of the website, such as layout, readability, visual style (Chang et al., 2014). In the same research it was found that aesthetic value of the website has a significant positive impact on the sense of dominance over the website, but it was not specified which aesthetic dimension impacts it to the higher extent. Based on the previous knowledge, expressive aesthetics design is more creative, usually guides user through the website while using the animations, it can be assumed that dominance over the website becomes lower. Thus, classical aesthetic design with

clear structure and typical, understandable layout can be more likely to cause feeling of control over one's actions on the website. Furthermore, utilitarian product was included in the analysis, since it is more likely to cause feeling of dominance over the purchase process, as it is purchased out of the need rather than amusement.

***H3:** Classical aesthetic design causer higher sense of dominance over the online store than expressive aesthetic design for utilitarian product.*

Moving further, aesthetic design influence on website evaluation is analyzed. Previous researchers have found strong connection between aesthetics and website credibility, factor of website evaluation, identifying aesthetics as the main driver (Oyibo & Vassileva, 2017). In earlier studies it was found that contrast, balance, and harmony are the main factors leading to instant credibility judgement (Alsudani & Casey, 2009). Credibility was found to increase trustworthiness of the website; thus, website aesthetics has an impact on site trustworthiness (Fogg et al. 2002). The beauty of the website affects trust mainly through clarity and cleanliness elements (Karvonen, 2000), which are the elements of classical aesthetic design. These website qualities are part of classical aesthetics. To add up, customizable, appealing website elements increase levels of trust (Li & Yeh, 2010). Emotional appeal of the website should also be used in creating trust (Ganguly et al., 2010). Latter two elements, together with contrast, are part of expressive aesthetics, which drives conclusion of importance of this type of aesthetics on trusting beliefs. However, classical aesthetic is more organized and usual for customer's eye, therefore it can be assumed, that it is more likely to have a higher influence on trustworthiness than expressive website.

***H4:** Trustworthiness will be higher in case of classical aesthetic design than in case of expressive aesthetic design.*

The next factor that constitutes website evaluation is attractiveness. It was found that attractiveness is dependent on consumer goal (Cai & Xu, 2011). When purchasing utilitarian products, aesthetic design of the website is of a less importance. However, in case of hedonic or entertaining browsing drive, attractiveness of the websites plays an important role in staying on the website and eventual purchase intention. Since the classical aesthetic design is clear, with typical, organized layout, it could be considered as more attractive when purchasing utilitarian products. On the contrary, expressive design is more interesting and engaging, thus, could be considered as more attractive when browsing for pleasure and in case of hedonic product purchase.

***H5a:** Expressive aesthetic design is perceived as more attractive when purchasing hedonic products.*

***H5b:** Classical aesthetic design is perceived as more attractive when purchasing utilitarian products.*

Moving further, influence of emotions on website evaluation will be analyzed. Previous studies have found that aesthetic design of the website influences emotions of the visitors, which respectively influence consumer's attitudes towards the store (Porat & Tractinsky, 2012). Pleasure is known to be the main mediator between online store design and attitudes towards the website. Pleasure is affected by aesthetic design, and in turn it can significantly affect attitude towards the website (Liu et al., 2016). Excitement and impact on evaluation towards the store is known to be affected by both aesthetic dimensions (Porat & Tractinsky, 2012). Therefore, since higher level of pleasure tends to placate evaluation of the store, it can be expected that evaluation will be influenced positively.

H6: The higher the pleasure, the higher the trust.

H7: There is a positive relationship between pleasure and attractiveness of the website.

Based on previous knowledge, website design can influence attractiveness of the website through emotions. The next emotion to have an influence on website evaluation is arousal. It was found that higher arousal makes individuals more active (Wang et al., 2011). However, since arousal is closely related with feelings of stress and anxiety (Mehrabian & Russell, 1974), it can lead to defocusing behaviour and alternative seeking. Thus, higher arousal may decrease perception of trustworthiness of the website. Furthermore, it was found that visual design replaces initial attention to attractiveness through arousal emotion (Sutcliffe, 2002). Elevated arousal stimulated website visitors to evaluate attractiveness in a pragmatical, realistic way (Bhandari et al., 2019). Therefore, higher arousal can cause more favourable judgements of attractive websites.

H8: The higher is arousal the lower is trustworthiness of the website.

H9: The higher is arousal the higher is evaluation of the website attractiveness.

Lastly, impact of dominance on online store evaluation is measured in current research. Dominance was found to be an effective aesthetic factor resulting in immediate judgements on website credibility (Alsudani & Casey, 2009). Credibility is closely related to trustworthiness, as the visual design of the store was found to serve as an indicator of site credibility, in turn increasing trustworthiness (Fogg et al. 2002). Therefore, in this study it is expected that high dominance will increase evaluation of trustworthiness of the website. Relationship of dominance and attitudes towards the website is unclear, since it was both found to not have an association (Porat & Tractinsky, 2012) and to contribute to attitudes towards the store (Porat et al., 2007). In this research it is expected that there is a relationship between feeling of dominance and attractiveness of the website.

H10: As higher is the dominance as higher the trustworthiness is.

H11: There is a relationship between the feeling of dominance and attractiveness of the website.

In scientific literature it is not uncommon to evaluate impact of variables on each other. In this study, impact of attractiveness on trustworthiness is assessed. Based on previous knowledge, influence of visual appeal on first impression of attractiveness of the website and consequently on trustworthiness was found (Lindgaard et al., 2011). Unattractive website may lead to trust issues and doubts over the website, thus, leading consumer to risk aversion and untrustworthy behavior.

H12: There is a positive relationship between website attractiveness and trustworthiness evaluation.

Moving further, current research also aims to investigate whether product type may impact emotional response of the consumer. For utilitarian products, classical expressive design has stronger impact on cognitive (dominance) and affective (arousal and pleasure) responses. For hedonic products, perceived expressive aesthetics has stronger effect on cognitive and affective responses (Wang et al., 2011). However, based on previous knowledge utilitarian shopping orientation causes stronger effects on arousal and pleasure (Koo & Lee, 2011). In earlier research, emotional responses when shopping for hedonic products were found to be stronger. Arousal was higher when shopping for hedonic products, meanwhile, utilitarian products caused higher pleasure (Kempf, 1999). Since in the current research product type rather than shopping orientation are measured, it is expected that hedonic product will cause higher arousal, while utilitarian product will cause higher pleasure.

H13: Pleasure will be higher when shopping for utilitarian products than for hedonic products.

H14: Arousal will be higher when shopping for hedonic products than for utilitarian products.

In previous studies dominance was often excluded when evaluating emotional responses due to better reliability of previous two emotional dimensions (Kempf, 1999; Bhandari et al., 2019). Utilitarian and hedonic products evoke different involvement. Utilitarian products cause cognitive involvement, while hedonic products cause affection. Therefore, cognitive involvement stimulates more attention to product argument, while affective involvement allows environmental stimuli to influence pleasure to the higher extent (Ding & Lin, 2012). Based on this finding, utilitarian product can cause higher perception of dominance over the website, as the cognitive involvement is higher.

***H15:** Dominance will be higher when shopping for utilitarian products than for hedonic products.*

Product type also impacts the importance of aesthetics on purchase intention. Based on previous knowledge, classical and expressive aesthetic design influence purchase intention of hedonic and utilitarian products in a different way. Expressive aesthetics had stronger effect on hedonic shopping condition than it had on utilitarian shopping (Cai & Xu, 2011). In case of hedonic products aesthetics have a stronger impact, than in case of utilitarian products due to purchase motivation. When consumer doesn't have a shopping task and browses for pleasure or entertainment, expressive aesthetics become a central factor determining emotions and evaluations (Wang et al., 2010). However, expressive aesthetics may negatively impact purchase intention when purchasing utilitarian products, as it requires more energy to complete the task. In later research it was expected that in presence of expressive aesthetics intention to purchase hedonic product might be stronger than for utilitarian product, since emotional cues have more influence for the former product than for the latter (Wang et al., 2015). Therefore, current research suggests that expressive aesthetics is more important for purchase intention infliction in case of hedonic product than in case of utilitarian product.

***H16:** Purchase intention of hedonic products is higher than utilitarian when expressive aesthetics design is used.*

Finally, the impact of two website evaluation factors on purchase intention is considered. Previous studies have found direct significant effect of trust on purchase intention (Ramezani Nia & Shokouhyar, 2020; McKnight et al., 2002; as cited in Sarkar, 2015). Trust can directly influence positive attitudes towards the online store, causing willingness to purchase on the website (Lim et al., 2014). Moreover, the direct positive correlation between trust experienced by consumers and intention to purchase from the website was found (Lee et al., 2010). Therefore, current research expects to discover similar relation between higher trust perception and higher purchase intention. Trust mediates influence of pleasure on purchase intention (Ding & Lin, 2012). Therefore, this study staying consistent with previous research suggests that higher trustworthiness of the website is more likely to contribute to purchase intention than low trustworthiness.

***H17:** Trustworthiness has a positive influence on purchase intention.*

Previous knowledge shows that attractiveness of the visual elements of the website have an impact on different types of consumer behaviour. Attractiveness of sales promotions was able to generate a higher purchase stimulus (de Oliveira Santini et al., 2015). However, attractiveness of the website is also known to influence purchase intention indirectly (Lee & Jurchisin, 2011). To add up, positive relationship between user's perception of a website, including attractiveness,

and purchase intention was discovered (Peng et al., 2017; Pebrianti, 2016). Researchers found, that the more organised, clear, clean and beautiful the page is, the visually simpler the page was perceived by the participants. (Cai & Xu, 2011). Importance of attractiveness is dependent on consumer browsing orientation, i.e., product type. However, based on findings about online store attractiveness effect on purchase intention, current research aims to confirm that there is a direct positive impact of attractiveness of the website on purchase intention.

H18: Attractiveness has a positive influence on purchase intention.

5.2. Data collection methods and research instruments

Previous research on aesthetic design impact on further behavior shows that experimental design (Bhandari et al., 2019, Wang et al., 2011, Minge 2017, Wang et al., 2010, Pengnate et al., 2018) and questionnaire (Porat et al., 2012, Lorenzo-Romero et al., 2013, Lavie & Tractinsky, 2004, Tseng et al., 2019, Chang et al., 2014, Liu et al., 2016, Seng et al., 2020, Wang et al., 2010, Ramezani Nia & Shokouhyar, 2020, Wu et al., 2013) are usually applied as research methods. Factorial design allows to analyse different combinations of variables, whereas questionnaire allows to find out an opinion of the respondents, collect data necessary for the research, easily structure and process this data. Therefore, the research of this thesis is made of factorial experimental design, consisting of different aesthetic design websites and different product types, and the questionnaire. The questionnaire was developed in English language, then translated to Lithuanian, and presented online, mainly on social media platforms and in public groups, where respondents could fill it in at any time anonymously. The anonymity of survey allows to collect more reliable, honest answers, therefore ensuring quality and reliability of the data.

For respondents to evaluate the extent to which the presented design is classical or expressive, the construct developed by Cai and Xu (2011) was used. It contains 5 statements for expressive aesthetics perception measurement, and 4 statements for classical aesthetics perception measurement. However, one statement from expressive aesthetics construct was excluded since it measures attractiveness, which will be measured in depth in the next questions. Cai and Xu (2011) construct were chosen as it best describes both aesthetic dimensions and allows to evaluate them without measuring specific characteristics of aesthetics. Construct's validity was assessed by researchers and discriminant and convergent validities were established. The research participants evaluated the design of four web sites based on a 7-point Likert scale, ranging from (1) "strongly disagree" to (7) "strongly agree". Other researchers usually developed constructs to assess exact characteristics of the website (Shaik & Ling, 2009; Bhandari et al., 2019; Tractinsky et al., 2006; Wang et al., 2011). However, exact constructs and questions were not available in scientific

articles and complicated potential usage of them. Furthermore, in this research it is not aimed to measure impact of specific characteristics of aesthetic dimensions, but rather to measure aesthetic design type impact in general.

Moving further, product type evaluation framework will be presented. To measure whether the product is perceived as utilitarian or hedonic, Voss et al. (2003) scale was adapted. Numerous psychometric studies and tests of criterion were performed to evaluate the validity of ten-item HED/UT scale, and it demonstrated strong overall performance. Reliability and validity were replicated in various geographic location throughout a wide variety of stimuli. Thus, this scale is considered worthwhile and complete measurement tool to access two important underlying dimensions in consumer attitude (Voss et al., 2003). The construct consists of 10 semantic differential response items, which are evaluated at 7-point scale. Whereas HED/UT scale is proved to be reliable and designed specifically for purpose of measuring hedonic and utilitarian value of the product for the customer, no alternative scales were considered.

The next construct to be presented is emotion evaluation framework. In literature the most common emotions analysed with aesthetic evaluation are pleasure, arousal, and dominance (PAD), developed by Mehrabian and Russell (1974). It consists of three blocks of bipolar emotions, measured by a 9-point semantic differential scale. Originally, emotions are assessed from positive on the left to negative on the right. However, to maintain the integrity of the questionnaire, original 9-point evaluation scale was reduced to 7-point scale and negative emotions were moved to the left side as in Bradley and Lang (1994) research. Emotions are presented in the Table 2. This construct was chosen as the most reliable in terms of aesthetic design impact measurement and corresponding to recommendations of using bipolar scales in emotions evaluation to include negative emotions as well (Menninghaus et al., 2017). Other frameworks, such as AESTHEMOS (Schindler et al., 2017) were not considered any further because of lack of validity and applicability in online store aesthetic measurement background.

Next, constructs to measure two chosen components of website evaluation are introduced. First, to measure trustworthiness of the website, Ramezani Nia and Shokouhyar (2020) construct was chosen. This construct consists of 5 questions, presented in the Table 2, closely related to e-store evaluation. Divergent validity of the construct was proved as appropriate, thus, reliable to measure trust levels in online customers. Researchers used 7-point Likert type scale to measure perceived trustworthiness, which was as well adapted in current study. Other option for trustworthiness evaluation construct included Corritore et al. (2003), which consisted of 4 questions, 2 of which were concluded as reliable. For current research this construct would be too narrow to measure trustworthiness, thus, alternative option was chosen.

Secondly, to measure attractiveness of the website, Cao et al. (2005) scale was chosen. Their set of instruments reliability is proved by Cronbach α resulting in more than 0.80, which is considered good based on the basic research requirements (Nunnally, 1978). Original research uses 7-point Likert type assessment scale, in current research the same scale is kept. Alternative construct option was Lindgaard et al. (2006) construct, which consist of only one question, based on visual analogue evaluation scale with two measurements on both ends – very unattractive and very attractive. This scale is not sufficient to measure perceived attractiveness of the website in current research, thus it was not considered any further. Another scale used by Lindgaard et al. (2006) consisted of 5 pairs of bipolar characteristics, assessed using semantic differential scale. It included such characteristics as “boring”, “imaginative”, “good use of color”, which were not relevant for current study, thus, the construct was not considered either.

Lastly, intention to purchase is evaluated. Athapaththu and Kulathunga (2018) construct was chosen due to its’ reliability and adaptation from previous researcher’s pretested questions. Original study’s aim was to analyse responses based on previous online purchase experience, which is related to current study, therefore eligibility of the construct is positive in the sight of current study’s aim. In the original research 6 questions were assessed using 5-point Likert type scale. As this study includes most of 7-point scales, intention to purchase scale was also expanded to 7-point scale. Alternative construct for intention to purchase evaluation by Le-Hoang (2020) was not considered due to it being designed specifically for smartphone purchase intention measurement. Spear et al. (2004) construct evaluating purchase intention did not meet this research either, as it consisted of 11 bipolar personal action tendencies relating to the brand. Tendencies included such descriptions as “definitely do not intend to buy”, “definitely not buy”, “probably not buy”, etc. These tendencies were considered similar and could be confusing in evaluation of intention to purchase on the website. Lastly considered Park et al. (2007) construct consisted of 2 questions, which is not sufficient in evaluation of purchase intention variable, thus, was not considered any further.

All 10 variables of current research are presented in Table 2, together with description of the construct questions, adapted measurement type and references to the original construct.

Table 2

Constructs of the questionnaire

Variable	Description	Measurement	References
Utilitarian product type	Ineffective – effective Unhelpful – helpful Not functional – functional Unnecessary – necessary Impractical – practical	7-point semantic differential scale	Voss et al., 2003

Table 2 continuation

Hedonic product type	Not fun – fun Dull – exciting Not delightful – delightful Not thrilling – thrilling Unenjoyable – enjoyable	7-point semantic differential scale	Voss et al., 2003
Aesthetic design: Classical aesthetics	1. The design of the Web site is harmonious. 2. The layout of the Web site is intuitive. 3. The Web site has logically organized elements. 4. The layout of the Web site was designed in a manner I am accustomed to.	7-point Likert type scale	Cai & Xu, 2011
Aesthetic design: Expressive aesthetics	1. The Web site is pleasing to look at. 2. I like the look and feel of the Web site. 3. The Web site is visually appealing. 4. The visual design of the Web site is attractive. 5. This Web site looks pretty.	7-point Likert type scale	Cai & Xu, 2011
Pleasure	Unhappy – Happy Annoyed – Pleased Unsatisfied – Satisfied Melancholic – Content Despairing – Hopeful Bored – Amused	7-point semantic differential scale	Bradley & Lang, 1994
Arousal	Relaxed – Stimulated Calm – Excited Sluggish – Frenzied Dull – Jittery Sleepy – Wide-awake Unaroused – Aroused	7-point semantic differential scale	Bradley & Lang, 1994
Dominance	Controlled – Controlling Influenced – Influential Cared for – In control Awed – Important Submissive – Dominant Guided – Autonomous	7-point semantic differential scale	Mehrabian & Russell, 1974

Table 2 continuation

Trustworthiness	<ol style="list-style-type: none"> 1. I am prepared to give my private information to this website. 2. I feel safe in my transactions with the website. 3. The website intends to fulfil its promises. 4. It is not a problem to pay in advance for purchased products / services. 5. I trust the website administrators will not misuse my personal information. 	7-point Likert type scale	Ramezani Nia & Shokouhyar, 2020
Attractiveness	<ol style="list-style-type: none"> 1. The web site is attractive/appealing 2. The web site promotes customer excitement 3. The web site motivates customers to feel participation 4. The web site provides attractors such as online games/cartoons 5. The web site is fun 6. The web site is entertaining 	7-point Likert type scale	Cao et al., 2005
Intention to purchase	<ol style="list-style-type: none"> 1. I will consider this site first when I want to buy this product. 2. I would be comfortable shopping at this site. 3. I would recommend the site to a friend. 4. I intend to continue using this website in the future. 5. I will purchase other products at this website. 6. I would like to buy new products from this site. 	7-point Likert type scale	Athapaththu & Kulathunga, 2018

To understand the relationships between aesthetics, product type, emotions, evaluation of the store and purchase intention, a 2x2 (classical aesthetics: high vs. low; expressive aesthetics: high vs. low) mixed factorial design was developed. When developing factorial design, 4 low and high classical and expressive designs of existing websites were chosen. All websites are designed in English language and are not-Lithuanian brands, to minimise biased evaluation due to possible previous purchase experience. Considering different behaviour based on product type (utilitarian vs. hedonic), such products as coffee – for utilitarian, and chocolate – for hedonic products were

chosen and websites are presented in the Table 3 below. Visuals of the websites at the moment of the research can be found in Annex 4.

Table 3 *Factorial design experiment framework*

Classical aesthetics	Expressive aesthetics	
Coffee https://www.rocketbeanroastery.com/	Coffee https://twochimpscoffee.com/	Utilitarian product
Chocolate https://eu.venchi.com/	Chocolate https://simplychocolate.dk/	Hedonic product

The experiment was conducted in a form of an online survey, implemented on Google Forms software in 4 versions. Respondents were asked to pick any survey containing one website, check out the given website and get familiar with the product this website offers. Time for checking out the website was not limited. After the website review, respondent was asked to fill in the questionnaire (Annex 3), consisting of 5 question blocks evaluating researched variables and 3 demographic questions. Each respondent was asked to complete only one version of the questionnaire.

5.3. Research sample size and structure

In this section of methodology chapter sampling method, size and data collection method of this study are introduced. First, target population of the study is defined. There were no specific requirements regarding gender or age of respondents, other than all the respondents should be 18 or more years old, since from that age adults are responsible for their decision-making and purchase intention or decision independently. Respondents were selected based on nonprobability convenience selection sampling method. Based on good practice and marketing research literature presented in Table 4 below, an average sample size of 284 participants was determined.

Table 4

Comparable research sampling method

No.	Author	Type of questionnaire	Sampling	Number of respondents
1.	Ramezani Nia & Shokouhyar, 2020	Online questionnaire	Probability sampling	130
2.	Peng et al., 2017	Online questionnaire	Nonprobability sampling	87
3.	Wu et al., 2013	Email, online questionnaire	Nonprobability sampling	652
4.	Liu et al., 2016	Email, online questionnaire	Nonprobability sampling	241

Table 4 continuation

5.	Wang et al., 2011	Not stated	Nonprobability sampling	258
6.	Parboteeah & Wells (2009)	Online questionnaire	Nonprobability sampling	264
7.	Phan & Pilik (2018)	Online questionnaire	Nonprobability sampling	290
8.	Cai & Xu, 2011	Quasi-experiment survey	Probability sampling	173
9.	Liu et al., 2013	Not stated	Nonprobability sampling	318
10.	Tseng & Lee, 2019	Online questionnaire	Probability sampling	288
11.	Porat, 2012	Online questionnaire	Nonprobability sampling	377
12.	Seng & Mahmoud, 2020	Online questionnaire	Nonprobability sampling	407
13.	Wang et al., 2010	Online questionnaire	Nonprobability sampling	320
14.	Bhandari et al., 2019	Laboratory experiment, online survey	Nonprobability sampling	46
15.	Kim et al., 2003	Computer assisted experiment	Nonprobability sampling	418
Average:				284

Since current study conducts an 2x2 factorial design experiment, the goal was to achieve about 71 respondents per each group. The diversity of the respondents age and gender in each experimental survey was kept similar throughout all 4 groups.

6. ANALYSIS OF COLLECTED DATA AND RESULTS OF AESTHETIC DIMENSIONS IMPACT ON PURCHASE INTENTION THROUGH EMOTIONS RESEARCH

6.1. Demographic characteristics and reliability of collected data

The period of the survey of current research – from 22nd of October 2021 till the 8th of November 2021. Total number of respondents was 287. After data filtering, 282 answers were left, since 5 respondents were under the age of 18, thus did not match independent decision-making adult requirements. Out of 282 respondents, 67.7% were women. Gender distribution across all 4 questionnaires was kept similar. Exact percentages can be seen in the Table 5 below. After processing the data, no significant statistical difference was found according to the gender of the respondents. $X^2(3) = 0.035$, $p=0.998$, $p > 0.05$. Mean age of the respondents is 29 years. After demographic data analysis no significant difference between age of the respondents was found. $X^2(114) = 115.506$, $p = 0.443$, $p > 0.05$ When analyzing the distribution of the income of the respondents it was found that 35.8 % of the respondents have an average monthly income between 501-1000 Eur. 30.5% of respondents have an average income between 1001-2000 Eur, and 20.9% of the respondents have an average income between 0-500 Eur. The least of respondents have an income between 2001-3000 Eur (8.9%) and more than 3001 Eur (3.9%). There was no statistically significant difference between evaluation of questionnaire between different income groups $X^2(12) = 11.000$, $p = 0.529$, $p > 0.05$.

Table 5

Demographical data distribution by questionnaires

Website	Rocket Coffee	Two Chimps	Venchi Choco	Simply Choco
Respondents	71	70	70	71
Female	67.6%	67.1%	68.6%	67.6%
Male	32.4%	32.9%	31.4%	32.4%
Mean age	30	28	28	30

The reliability of the questionnaire is validated using Cronbach's Alpha values, which in the scientific literature are expressed as a number from 0 to 1. With a Cronbach's Alpha value between $0.6 < \alpha \leq 0.95$ the test results are suitable for further analysis. Questionnaire reliability in general is equal to $\alpha = 0.967$. Separate constructs' reliability is presented in the Table 6.

Table 6

Constructs' reliability evaluation based on Cronbach's Alpha

Construct	Reliability Cronbach's α
Utilitarian product type	0.918
Hedonic product type	0.893

Table 6 continuation

Classical aesthetics	0.863
Expressive aesthetics	0.973
Pleasure	0.911
Arousal	0.827
Dominance	0.822
Trustworthiness	0.957
Attractiveness	0.947
Intention to purchase	0.949

The reliability of the constructs is assessed by combining the data of all questionnaires. No constructs were eliminated due to acceptable scores of each construct.

6.2. Aesthetic design type impact on purchase intention testing

As it has been found in previous scientific research, aesthetic design hardly can have a direct impact on purchase intention. However, product type might have a direct relation with purchase intention. Thus, this research includes evaluation of purchase intention affected by product type in presence of different aesthetic design types. Nevertheless, the main goal of this research was to analyze, how aesthetic design combined with product type can influence recipient's emotions, online store evaluation and, through these variables, an indirect impact on purchase intention.

a) Direct impact of aesthetic design and product type on emotions, website evaluation and purchase intention

To begin with, impact of aesthetic design on emotional response towards the website was evaluated. However, since PAD emotional framework and aesthetic design has been researched before, in this research paper product type is included when analyzing such relation. To check if there is a significant difference in impact on emotions of different aesthetics designs combined with different product types, factorial ANOVA analysis method was employed. First, the impact on pleasure domain of emotions was assessed. The factorial ANOVA showed no statistical difference between impact of classical and expressive aesthetics on pleasure. For H1a and H1b hypotheses, aesthetic design type values are as follows: $F = 0.005$ and significance $p = 0.943 > 0.05$. In further analysis it was found that product type also had no impact on pleasure, with product type results being $F = 0.069$, $p = 0.793 > 0.05$. Detailed statistical analysis is presented in Table 7. Based on analysis results it can be concluded, that **H1a and H1b hypotheses are rejected**.

Table 7

Tests of aesthetic design and product type effects on pleasure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Corrected Model	4.311 ^a	3	1.437	1.109	.346	3.328	.298
Intercept	7312.934	1	7312.934	5644.480	.000	5644.480	1.000
AestheticDesign	.007	1	.007	.005	.943	.005	.051
ProductType	.089	1	.089	.069	.793	.069	.058
AestheticDesign * ProductType	4.216	1	4.216	3.254	.072	3.254	.436
Error	360.174	278	1.296				
Total	7680.278	282					
Corrected Total	364.485	281					

a. R Squared = .012 (Adjusted R Squared = .001)

b. Computed using alpha = .05

The same factorial ANOVA analysis was employed to check if evaluation of pleasure can differ based on product type. Based on data from SPSS, presented in Table 8, mean values for pleasure evaluation in presence of different product type are the following. For utilitarian product $M = 5.110$ (4.922; 5.299), while for hedonic $M = 5.075$ (4.886; 5.263). There was no significant difference found in mean evaluation of pleasure while browsing the websites which offer utilitarian or hedonic products, thus, **H13 is rejected**.

Table 8

Impact of product type on pleasure evaluation

ProductType	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Utilitarian	5.110	.096	4.922	5.299
Hedonic	5.075	.096	4.886	5.263

The following emotional dimension of PAD framework is arousal. It was expected that hedonic product will cause higher arousal for customers, browsing on the website with expressive design. Expectation of website design type impact on arousal was found to be true, as there is a statistical difference in impact of different aesthetics design types on arousal evaluation. Based on SPSS data, presented in Table 9, $F = 8.655$, $p = 0.004 < 0.05$. Thus, it can be stated that aesthetics design type has an impact on evaluation of arousal. Moving further, difference in evaluation of arousal in case of hedonic product was found. For classical aesthetics mean evaluation of arousal is $M = 3.983$ (3.743; 4.224), and for expressive aesthetics $M = 4.603$ (4.365; 4.842). Data is presented in Table 10. The intervals don't overlap, mean of arousal evaluation in presence of expressive design is higher than in case of utilitarian design, therefore **H2 is approved**.

Table 9

Tests of Aesthetic Design and Product Type Effects on Arousal

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Corrected Model	15.339 ^a	3	5.113	4.898	.002	14.693	.907
Intercept	5376.884	1	5376.884	5150.509	.000	5150.509	1.000
AestheticDesign	9.036	1	9.036	8.655	.004	8.655	.834
ProductType	1.518	1	1.518	1.454	.229	1.454	.225
AestheticDesign * ProductType	4.837	1	4.837	4.633	.032	4.633	.573
Error	290.219	278	1.044				
Total	5685.000	282					
Corrected Total	305.558	281					

a. R Squared = .050 (Adjusted R Squared = .040)

b. Computed using alpha = .05

Table 10

Impact of product type on evaluation of pleasure in presence of website design

AestheticDesign	ProductType	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Classical	Utilitarian	4.392	.121	4.153	4.631
	Hedonic	3.983	.122	3.743	4.224
Expressive	Utilitarian	4.488	.122	4.248	4.728
	Hedonic	4.603	.121	4.365	4.842

Moving further, the same factorial ANOVA analysis was employed to measure the impact of product type on evaluation of arousal apart from aesthetic design. Based on SPSS data presented in Table 11 below, there was no significant difference found in evaluation of arousal in case of different product types. Arousal for utilitarian product was $M = 4.440$ (4.271; 4.609) and for hedonic product $M = 4.293$ (4.124; 4.463). Intervals of arousal evaluation overlap, thus, **H14 is rejected.**

Table 11

Product type impact on evaluation of arousal

ProductType	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Utilitarian	4.440	.086	4.271	4.609
Hedonic	4.293	.086	4.124	4.463

The last emotional dimension of PAD framework that can be influenced by aesthetic design of the website is dominance. It is known as the extent, to which customer feels in power over website navigation and their own choices. This research expects feeling of dominance to be

higher in case of classical aesthetic design due to clean and organized design. To add up, dominance is expected to be higher for utilitarian product, since browsing behaviour is caused by the need of the product rather than for amusement purposes. Factorial ANOVA (Table 12) proved the statistically significant importance of aesthetic design on dominance evaluation, where $F = 8.561$ with significance $p = 0.004 < 0.05$. For classical aesthetics, mean evaluation of dominance was $M = 4.817$ (4.572; 5.062), and for expressive aesthetics $M = 4.314$ (4.068; 4.561). Graphical representation of results is presented in the Figure 2 below. Intervals don't overlap and mean for classical design is higher than for expressive design, thus **H3 is approved**.

Table 12

Tests of aesthetic design and product type effects on dominance

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Corrected Model	12.506 ^a	3	4.169	3.793	.011	11.380	.812
Intercept	5679.021	1	5679.021	5167.647	.000	5167.647	1.000
AestheticDesign	9.409	1	9.409	8.561	.004	8.561	.830
ProductType	1.711	1	1.711	1.557	.213	1.557	.238
AestheticDesign * ProductType	1.329	1	1.329	1.209	.272	1.209	.195
Error	305.510	278	1.099				
Total	5998.556	282					
Corrected Total	318.016	281					

a. R Squared = .039 (Adjusted R Squared = .029)

b. Computed using alpha = .05

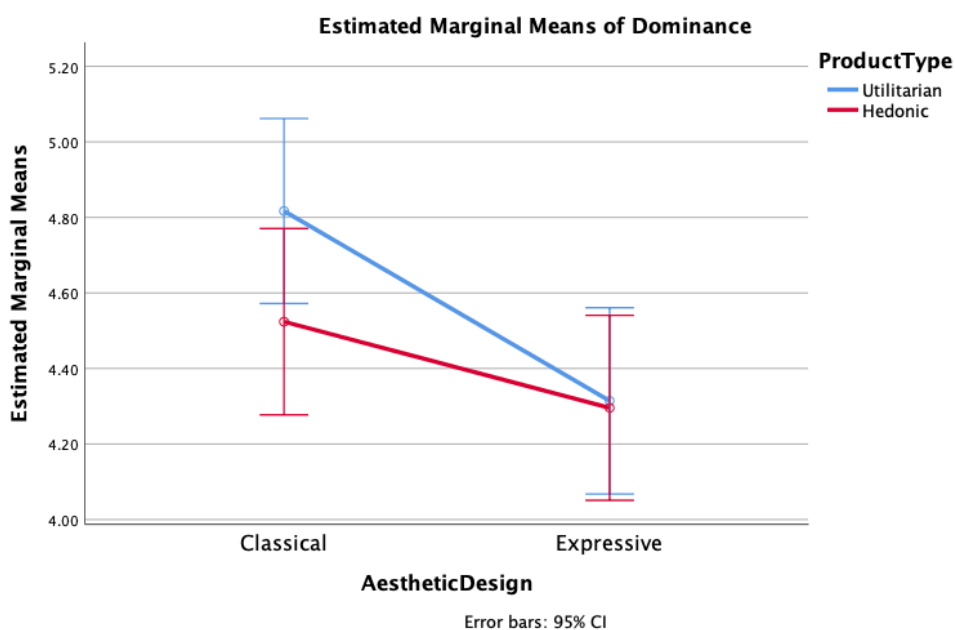


Figure 2. Different aesthetic design and product type impact on dominance evaluation

It was expected, that taking into account solely product type, dominance would be evaluated higher in case of utilitarian products. In general, product type didn't show significant impact on evaluation of dominance – $F = 1.557$, $p=0.213$. For utilitarian product $M = 4.566$ (4.392; 4.739, while for hedonic product $M = 4.410$ (4.236; 4.584). Data is represented in the Table 13 below. Intervals of dominance evaluation overlap, thus, evaluation of dominance does not differ in presence of different product types, thus, **H15 is rejected**.

Table 13

Product type impact on evaluation of dominance

ProductType	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Utilitarian	4.566	.088	4.392	4.739
Hedonic	4.410	.088	4.236	4.584

Although the amount of scientific research on direct influence of product type on purchase intention is limited, analyzed literature suggests there might be such relation. Since current research consists of two independent variables, influence of product type on purchase intention is evaluated considering aesthetic design of the website. It is expected, that while browsing for pleasure, purchase intention is more likely to occur for hedonic rather than for utilitarian product on the website with expressive design type.

Table 14

Tests of aesthetic design and product type effects on purchase intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Corrected Model	24.927 ^a	3	8.309	2.679	.047	8.038	.650
Intercept	4385.352	1	4385.352	1414.092	.000	1414.092	1.000
AestheticDesign	.185	1	.185	.060	.807	.060	.057
ProductType	.828	1	.828	.267	.606	.267	.081
AestheticDesign * ProductType	23.908	1	23.908	7.709	.006	7.709	.790
Error	862.128	278	3.101				
Total	5277.222	282					
Corrected Total	887.055	281					

a. R Squared = .028 (Adjusted R Squared = .018)

b. Computed using alpha = .05

Factorial ANOVA test was done to evaluate collected data on this relation. There was no difference found in influence of aesthetic design on purchase intention. Aesthetics in general had no significance, $F = 0.060$, $p = 0.807 > 0.05$, and construct power is 0.057, which is too low.

Product type influence on purchase intention was also insignificant, $F = 0.267$, $p = 0.606 > 0.05$, where power of the construct is 0.081. The research data is presented in the Table 14 above.

When it comes to influence of expressive design on purchase intention of different product types, a small difference in means was found. Based on SPSS results presented in the Table 15, hedonic products in expressive aesthetic design mean of evaluation is $M = 4.155$ (3.744; 4.566), while for utilitarian products in expressive design mean evaluation is $M = 3.681$ (3.267; 4.095). Taking into account solely means it can be seen that evaluation of intention to purchase hedonic product is higher, where $4.155 > 3.681$. Thus, it could be stated, that intention to purchase on website of expressive aesthetic design is slightly influenced by product type, but the intervals of evaluations overlap. To sum up, product type on expressive design website does not influence purchase intention strong enough to prove the hypothesis, purchase intention intervals overlap, therefore, **H16 is rejected.**

Table 15

Product type impact on evaluation of dominance in presence of different aesthetic design

AestheticDesign	ProductType	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Classical	Utilitarian	4.315	.209	3.903	4.726
	Hedonic	3.624	.210	3.209	4.038
Expressive	Utilitarian	3.681	.210	3.267	4.095
	Hedonic	4.155	.209	3.744	4.566

Moving further, direct impact of classical and expressive aesthetic designs on website evaluation is measured. In this paper, website evaluation consists of two variables – website trustworthiness and website attractiveness. Since classical aesthetic design is usually designed in a manner customer is accustomed to, has clear and logical structure, it is expected to be evaluated as more trustworthy than unfamiliar expressive design. Statistical T-test analysis was conducted in order to measure the difference, results of the analysis are presented in the Table 16 below.

Table 16

Mean values of evaluation of trustworthiness based on aesthetic design type

	AestheticDesign	N	Mean	Std. Deviation	Std. Error Mean
Trustworthiness	Classical	141	4.7092	1.71289	.14425
	Expressive	141	4.7475	1.72803	.14553

It was found, that mean evaluation of trustworthiness is not significantly different in neither case. For classical aesthetics $M = 4.7092$, while for expressive aesthetics it is $M = 4.7475$, which is slightly higher. Significance $p = 0.852$ is equal in both cases, therefore it can be stated, that website design type does not have an impact on the trustworthiness towards the website, and **H4 is rejected.**

Moving further, evaluation of the online store through evaluating attractiveness of the website is in fact evaluating design aesthetics. In current research, attractiveness of online store design was evaluated in presence of different product types. When purchasing hedonic product, it is more likely that interactive, creative design will cause higher evaluation of attractiveness than classical design. Using a factorial ANOVA statistical test, a difference in website evaluation with different aesthetic designs was found, where $F = 6.251$ $p = 0.013 < 0.05$ (Table 15). For hedonic product, expressive design $M = 5.162$ (4.783; 5.541), while classical design $M = 4.110$ (3.727; 4.492). The results of the analysis presented in Table 17 show there is a higher mean in evaluation of expressive design attractiveness and evaluation intervals don't overlap. Thus, it can be concluded, that **H5a is approved**, and expressive aesthetic design is perceived as more attractive in case of hedonic product.

Table 17

Tests of aesthetic design and product type effects on attractiveness of the website

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Corrected Model	40.669 ^a	3	13.556	5.139	.002	15.416	.921
Intercept	5883.378	1	5883.378	2230.122	.000	2230.122	1.000
AestheticDesign	16.492	1	16.492	6.251	.013	6.251	.703
ProductType	1.305	1	1.305	.495	.482	.495	.108
AestheticDesign * ProductType	22.806	1	22.806	8.645	.004	8.645	.834
Error	733.403	278	2.638				
Total	6662.944	282					
Corrected Total	774.073	281					

a. R Squared = .053 (Adjusted R Squared = .042)

b. Computed using alpha = .05

However, in case of utilitarian products, because of utilitarian shopping orientation, classical aesthetic design was expected to be more attractive, as it is known to be more organized, clear and easy to use. Statistical test results presented in Table 18 below were not in line with hypothesis. For utilitarian product, classical design mean evaluation was $M = 4.542$ (4.163; 4.922), and for expressive design it was $M = 4.457$ (4.075; 4.839). The results are similar, intervals of evaluation are overlapping and there is no significant difference in evaluation of attractiveness of aesthetic website design type in case of utilitarian product. Therefore, **H5b is rejected**.

Table 18

Impact of product type on evaluation of pleasure in presence of website design

AestheticDesign	ProductType	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Classical	Utilitarian	4.542	.193	4.163	4.922
	Hedonic	4.110	.194	3.727	4.492
Expressive	Utilitarian	4.457	.194	4.075	4.839
	Hedonic	5.162	.193	4.783	5.541

b) Indirect impact of aesthetic design and product type purchase intention

Moving further, indirect effect of aesthetic design and product type on purchase intention is measured. In previous section effect of these variables on emotional dimensions and evaluation of the website was analyzed. In current section impact of variables influenced by aesthetic design, i.e., emotions, trustworthiness, and attractiveness, on purchase intention is checked. Correlation analyses were conducted to test such an impact, as well as one relation between two dependent variables of website evaluation.

First, correlation between emotions and website evaluation is measured. It was expected that pleasure will cause better website evaluation, meaning the higher the pleasure, the higher the trustworthiness and attractiveness of the online store. Considering relationship between pleasure and trustworthiness, Pearson correlation coefficient showed strong and positive correlation between pleasure and trustworthiness, $R = 0.457$, $p < 0.001$. Results are presented in the Table 19 below. Correlation is strong enough to state that **H6 is approved**.

Table 19

The strength of the correlation between pleasure and trustworthiness

		Pleasure	Trustworthiness
Pleasure	Pearson Correlation	1	.457**
	Sig. (2-tailed)		.000
	N	282	282
Trustworthiness	Pearson Correlation	.457**	1
	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

Higher pleasure was expected to have a positive relationship with attractiveness of the website. Pearson coefficient illustrated in the Table 20 below showed significant positive correlation between these variables, where $R = 0.554$ with significance lower than 0.05 ($p < 0.001$). Based on the test results **H7 is approved**, correlation between pleasure and attractiveness exists.

Table 20

The strength of the correlation between pleasure and attractiveness

		Pleasure	Attractiveness
Pleasure	Pearson Correlation	1	.554**
	Sig. (2-tailed)		.000
	N	282	282
Attractiveness	Pearson Correlation	.554**	1
	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

Moving further, effects of arousal, referred to excitement, on website evaluation are considered. In this research it is expected that higher arousal will cause lower trustworthiness on the website, meaning correlation will be negative. In correlation test between these two variables presented in the Table 21, Pearson correlation was low, but positive, $R = 0.286$. Significance of the correlation is $p < 0.001$. Since positive correlation was found, **H8 is rejected**.

Table 21

The strength of the correlation between pleasure and attractiveness

		Arousal	Trustworthiness
Arousal	Pearson Correlation	1	.286**
	Sig. (2-tailed)		.000
	N	282	282
Trustworthiness	Pearson Correlation	.286**	1
	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

However, higher arousal might influence perception of attractiveness of the website, thus, correlation between arousal and attractiveness is expected to be positive. In correlation between arousal and attractiveness analysis, Person coefficient showed significant positive relationship between variables – $R = 0.452$, $p < 0.001$ (Table 22). Therefore, the positive correlation between arousal and attractiveness is true and **H9 is approved**.

Table 22

The strength of the correlation between arousal and attractiveness

		Arousal	Attractiveness
Arousal	Pearson Correlation	1	.452**
	Sig. (2-tailed)		.000
	N	282	282
Attractiveness	Pearson Correlation	.452**	1

Table 22 continuation

	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

Lastly, the feeling of dominance is expected to have a positive correlation both with trustworthiness and attractiveness. Dominance is referred to the extent, to which person feels in charge of their own actions over the website without the persistent and irritative guidelines. When assessing the correlation between dominance and trustworthiness, Pearson correlation is $R = 0.224$, which is considered a low correlation, while significance is $p < 0.001$ (Table 23). Despite of being low, correlation exists, and it can be stated, that evaluation of trustworthiness is correlated with the feeling of dominance. Based on these findings, **H10 is approved**.

Table 23

The strength of the correlation between dominance and trustworthiness

		Dominance	Trustworthiness
Dominance	Pearson Correlation	1	.224**
	Sig. (2-tailed)		.000
	N	282	282
Trustworthiness	Pearson Correlation	.224**	1
	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

When it comes to relation between dominance and attractiveness, statistical test (Table 24) showed marginal Pearson correlation, which is $R = 0.158$. However, since the correlation exists and is reliable ($p = 0.008$, thus $p < 0.05$), it can be summed up, that despite of being weak, there is a correlation between dominance and attractiveness of the website, and **H11 is approved**.

Table 24

The strength of the correlation between dominance and attractiveness

		Dominance	Attractiveness
Dominance	Pearson Correlation	1	.158**
	Sig. (2-tailed)		.008
	N	282	282
Attractiveness	Pearson Correlation	.158**	1
	Sig. (2-tailed)	.008	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the previous knowledge it is not uncommon to measure correlation of dependent variables. In current research it is expected that attractiveness of the website will have a positive correlation with trustworthiness, which, in, turn, is more likely to cause stronger purchase

intention. If such relation exists, it could be assumed, that attractiveness can also influence purchase intention indirectly, through trustworthiness. Statistical correlation test shows significant results (Table 25), with Pearson correlation being $R = 0.717$, $p < 0.001$. Based on correlation analysis, **H12 is approved** – attractiveness and trustworthiness have a strong correlation.

Table 25

The strength of the correlation between attractiveness and trustworthiness

		Attractiveness	Trustworthiness
Attractiveness	Pearson Correlation	1	.717**
	Sig. (2-tailed)		.000
	N	282	282
Trustworthiness	Pearson Correlation	.717**	1
	Sig. (2-tailed)	.000	
	N	282	282

** . Correlation is significant at the 0.01 level (2-tailed).

Finally, website evaluation variables, influenced by aesthetic design, product type and emotions, can have a direct influence on purchase intention. Previously researches on trustworthiness and attractiveness impact on purchase intention have found that these two variables have a positive influence on in. Current research validates previous findings and expects to discover positive influence, backed by many previously analyzed variables.

To test if website evaluation has an influence on purchase intention, statistical regression analysis was applied. Analysis results are presented in Table 26 and 27. Pearson correlation for trustworthiness is strong with $R = 0.633 < 0.8$, $p < 0.001$, therefore, correlation exists. Purchase intention ANOVA $F(1) = 187.445$, $p < 0.001$. $R^2 = 0.401 > 0.20$. $VIF = 1.000 < 4$, thus, responses are evenly distributed and there is no problem with multicollinearity. Maximum Cook's distance is $0.057 < 1$, therefore there are no samples which should be excluded from analysis. T-test analysis showed significance of the influence $p < 0.001$, and t value is 15.525. Strength of the influence is assed using beta coefficient – the higher it is, the greater the influence. In this case, trustworthiness^β = 0.633 ($p < 0.001$). Based on these findings it can be stated that trustworthiness influence on purchase intention exists and is positive, therefore, **H17 is approved**.

Table 26

Coefficients of trustworthiness influence on purchase intention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.848	.241		3.525	.000		
Trustworthiness	.655	.048	.633	13.691	.000	1.000	1.000

Finally, attractiveness influence on purchase intention is evaluated. Pearson correlation for attractiveness is $R = 0.680 < 0.8$, $p < 0.001$. Purchase intention ANOVA $F(1) = 241.027$, $p < 0.001$. Analysis is reliable based on the following metrics. $R^2 = 0.463 > 0.20$, $VIF = 1.000 < 4$, thus, responses are distributed evenly and problem with multicollinearity is not present. Maximum Cook's distance is $0.035 < 1$, therefore there are no samples which should be excluded from analysis. T-test analysis showed significance of the influence $p < 0.001$, and t value is 13.361. Strength of the influence is assessed using beta coefficient – the higher it is, the greater the influence. In this case, attractiveness $^{\beta} = 0.680$ ($p < 0.001$). Based on these findings it can be stated that attractiveness has a positive influence on purchase intention, and **H18 is approved**.

Table 27

Coefficients of trustworthiness influence on purchase intention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.618	.228		2.713	.007		
Attractiveness	.728	.047	.680	15.525	.000	1.000	1.000

In the table 28 below all hypotheses and approval or rejection based on statistical analysis results for hypotheses H1-H18 are presented.

Table 28

Hypotheses analysis results

Hypotheses	Result
H1a: Pleasure will be higher for expressive than for classical aesthetic design in a case of hedonic product.	Rejected
H1b: Pleasure will be higher for classical than expressive aesthetic design in case of utilitarian product.	Rejected
H2: Expressive aesthetics will cause higher arousal than classical aesthetics for hedonic product.	Approved
H3: Classical aesthetic design causes higher sense of dominance over the online store than expressive aesthetic design for utilitarian product.	Approved
H4: Trustworthiness will be higher in case of classical aesthetic design than in case of expressive aesthetic design.	Rejected
H5a: Expressive aesthetic design is perceived as more attractive when purchasing hedonic products.	Approved
H5b: Classical aesthetic design is perceived as more attractive when purchasing utilitarian products.	Rejected
H6: The higher the pleasure, the higher the trust.	Approved
H7: There is a positive relationship between pleasure and attractiveness of the website.	Approved
H8: The higher is arousal the lower is trustworthiness of the website.	Rejected
H9: The higher is arousal the higher is evaluation of the website attractiveness.	Approved

Table 28 continuation

H10: As higher is the dominance as higher the trustworthiness is.	Approved
H11: There is a relationship between the feeling of dominance and attractiveness of the website.	Approved
H12: There is a positive relationship between website attractiveness and trustworthiness evaluation.	Approved
H13: Pleasure will be higher when shopping for utilitarian products than for hedonic products.	Rejected
H14: Arousal will be higher when shopping for hedonic products than for utilitarian products.	Rejected
H15: Dominance will be higher when shopping for utilitarian products than for hedonic products.	Rejected
H16: Purchase intention of hedonic products is higher than utilitarian when expressive aesthetics design is used.	Rejected
H17: Trustworthiness has a positive influence on purchase intention.	Approved
H18: Attractiveness has a positive influence on purchase intention.	Approved

In conclusion, 18 hypotheses were statistically tested. 11 hypotheses were approved, while 7 hypotheses we rejected.

c) Additional regression analyses to analyze the overall impact on intention to purchase

To get broader conclusions about aesthetic design, product type and dependent variables impact on purchase intention, in this section 7 additional linear regression analyses were done. These analyses allow to present more detailed conclusions and to compare importance of dependent variable on purchase intention.

Firstly, comparison of emotional dimensions and attractiveness evaluation variables regarding their impact on purchase intention was conducted. This analysis allows to evaluate, which variables from current research model are the most important and have the biggest impact. Pearson correlation for each variable is < 0.8 , with significance $p < 0.001$. ANOVA $F(5) = 81.103$, $p < 0.001$, $R^2 = 0.595 > 0.20$ and VIF for each variable is < 4 , thus, responses are distributed evenly and problem with multicollinearity is not present. Detailed results of correlations are presented in the Table 29 below. Maximum Cook's distance is $0.106 < 1$, therefore all samples in the analysis can be present.

T-test analysis showed significance of 3 out of 5 variables. Pleasure, trustworthiness and attractiveness showed significance of the influence $p < 0.001$, and t values are 6.224, 4.220 and 5.416 accordingly. Arousal ($p = 0.308 > 0.05$) and dominance ($p = 0.080 > 0.05$) do not meet statistical requirements of significance, thus it can be assumed, that the importance of these variables on purchase intention is marginal. Analysis was repeated after removing arousal variable, but the results stayed similar, and no important differences appeared, therefore results analysis was proceeded based on first linear regression test. Strength of the influence is assed

using beta coefficient – the higher it is, the greater the influence. In this case, pleasure^β = 0.336, trustworthiness^β = 0.237, attractiveness^β = 0.334. The analysis results show that pleasure and attractiveness have the highest influence on purchase intention. In current analysis, trustworthiness has less impact on purchase intention, whereas arousal and dominance do not have statistically important influence.

Table 29

Coefficients of dependent variables influence on purchase intention

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.719	.383		-4.484	.000		
	Pleasure	.523	.084	.336	6.224	.000	.505	1.981
	Arousal	-.083	.081	-.049	-1.021	.308	.647	1.546
	Dominance	.126	.072	.075	1.755	.080	.795	1.258
	Trustworthiness	.245	.058	.237	4.220	.000	.464	2.153
	Attractiveness	.358	.066	.334	5.416	.000	.385	2.595

There might be a possibility, that the importance of dependent variables differs for specific aesthetic designs. To test this possibility, current research includes linear regression tests evaluating responses about websites with classical and expressive designs separately.

Firstly, classical aesthetic design websites are tested. Pearson correlation for each variable is < 0.8, with significance $p < 0.001$. Other important statistical results are presented further. ANOVA $F(5) = 60.278$, $p < 0.001$, $R^2 = 0.691 > 0.20$ and VIF for each variable is < 4. There is no problem with multicollinearity and responses are distributed evenly. Detailed results of correlations are presented in the Table 30 below. Maximum Cook's distance is $0.098 < 1$, therefore there are no samples that should be excluded from the sample.

Table 30

Coefficients of dependent variables influence on purchase intention in case of classical design

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.644	.507		-3.244	.001		
	Pleasure	.471	.114	.287	4.133	.000	.476	2.102
	Dominance	.166	.095	.093	1.754	.082	.819	1.221
	Trustworthiness	.311	.073	.313	4.256	.000	.425	2.355
	Attractiveness	.385	.082	.374	4.688	.000	.359	2.782
	Arousal	-.164	.103	-.099	-1.584	.115	.589	1.698

Based on the results of the linear regression (Table 30), the same three variables are significant ($p < 0.001$) – pleasure, trustworthiness and attractiveness. Dominance and arousal result in $p > 0.05$, therefore, these variables are not significant in case of classical aesthetic design neither. However, in case of classical aesthetic design, attractiveness $t = 4.688$, attractiveness^β = 0.374 and is the highest, the second highest is trustworthiness, $t = 4.256$, trustworthiness^β = 0.313 and the lowest is pleasure, $t = 4.133$, pleasure^β = 0.287. Therefore, pleasure being the most important variable in case of first linear regression, it is the least important out of significant ones when only classical aesthetic design is analyzed.

To compare results with previous findings, expressive aesthetic design is analyzed further. Statistically significant results to employ further analysis are as follows. Pearson correlation for each variable is < 0.8 , with significance $p < 0.001$. ANOVA $F(5) = 31.413$, $p < 0.001$, $R^2 = 0.538 > 0.20$ and VIF for each variable is < 4 . No problem with multicollinearity was found. Detailed results of correlations are presented in the Table 31 below. Maximum Cook's distance is $0.119 < 1$, therefore there are no samples that should be excluded from the sample.

Table 31

Coefficients of dependent variables influence on purchase intention in case of expressive design

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-1.852	.579		-3.200	.002		
Pleasure	.573	.124	.382	4.624	.000	.502	1.993
Arousal	.083	.130	.046	.636	.526	.653	1.532
Dominance	.026	.111	.016	.236	.814	.737	1.356
Trustworthiness	.141	.091	.131	1.538	.126	.471	2.123
Attractiveness	.352	.104	.311	3.386	.001	.407	2.457

Linear regression analysis results (Table 31) reveal significant importance of only two variables – pleasure ($p < 0.001$) and attractiveness ($p = 0.001$). Arousal and dominance remain with significance $p > 0.05$. However, in case of expressive aesthetics, trustworthiness has insignificant role on intention to purchase ($p = 0.126 > 0.05$). This finding is different to previous two linear regression tests. Pleasure with $t = 4.624$ and pleasure^β = 0.382 and is the highest as it was in first test of all responses conjuncted, however, contrary to classical aesthetic design analysis, where pleasure had the least influence. Attractiveness $t = 3.386$, attractiveness^β = 0.311, and it can be concluded, that attractiveness of the website has higher influence on purchase intention in case of classical aesthetics of the website than in case of expressive aesthetics.

Current research aims to analyze not only aesthetic design influence on purchase intention, but also evaluate if it changes dependent on product type offered on the website. Therefore, for

each questionnaire from factorial experimental design linear regression was applied to see if importance of dependent variables differs based on combination of aesthetic design and product type. Statistically important measures for linear regression are conjuncted in the Table 32

Table 32

Statistical results for verification of relevance of linear regression analysis of 4 websites

Website	Rocket Bean	Two Chimps	Venchi Choco	Simply Choco
ANOVA	F(5)=32.060	F(5)=13.794	F(5)=26.008	F(5)=18.917
Significance	<.001	<.001	<.001	.000
R ²	.744	.519	.670	.593
VIF	<4	<4	<4	<4
Cook's Max	.236	.241	.137	.140

Based on the Table 32 above, all tested websites fulfil requirements for linear regression analysis. Pearson correlations are statistically significant and are < 0.8. Trustworthiness variable in case of 1st website is marginally higher (R = 0.801), however, this variable was kept in the further analysis as the difference is marginal and presence of each variable is important for accurate comparison.

Table 33

Coefficients of dependent variables influence on purchase intention for the 1st website

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-1.959	.689		-2.842	.006		
Pleasure	.423	.155	.244	2.725	.008	.493	2.029
Arousal	-.194	.144	-.116	-1.351	.181	.533	1.875
Dominance	.316	.130	.175	2.429	.018	.758	1.319
Trustworthiness	.444	.106	.459	4.208	.000	.331	3.024
Attractiveness	.285	.116	.270	2.448	.017	.323	3.091

In the Table 33 above correlation results for the website with classical aesthetic design offering utilitarian product – coffee, are presented. In this case, 4 out of 5 variables are statistically significant. The highest impact has trustworthiness, $t = 4.208$, $\text{trustworthiness}^\beta = 0.459$ ($p < 0.001$). The second one is pleasure, $t = 2.725$, $\text{pleasure}^\beta = 0.244$ ($p = 0.008$) and attractiveness, $t = 2.448$, $\text{attractiveness}^\beta = 0.270$ ($p = 0.017$), and the last one is dominance, $t = 2.429$, $\text{dominance}^\beta = 0.175$ ($p = 0.018$). Dominance previously had no statistically significant impact in any of the tests. Therefore, it can be stated, that in case of utilitarian product and classical aesthetics, dominance is important for purchase intention.

Table 34

Coefficients of dependent variables influence on purchase intention for the 2nd website

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	-.875	.875		-1.000	.321		
Pleasure	.405	.171	.302	2.362	.021	.461	2.168
Arousal	-.174	.187	-.096	-.934	.354	.712	1.405
Dominance	.148	.170	.088	.868	.389	.725	1.379
Trustworthiness	.059	.130	.053	.454	.651	.558	1.792
Attractiveness	.539	.151	.475	3.579	.001	.426	2.346

In the Table 34 above correlation results for the website with expressive aesthetic design offering utilitarian product – coffee, are presented. The analysis shows significant importance of 2 variables. Attractiveness has the highest influence with $t = 3.579$ attractiveness^β = 0.475 ($p = 0.001$), the second variable is pleasure, with $t = 2.362$, pleasure^β = 0.302 ($p = 0.021$). The same results were presented in evaluation of both expressive websites. Therefore, utilitarian product does not change results of impact on purchase intention on the website with expressive aesthetic design.

Table 35

Coefficients of dependent variables influence on purchase intention for the 3rd website

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	-.653	.760		-.859	.393		
Pleasure	.486	.160	.322	3.044	.003	.460	2.176
Arousal	-.199	.149	-.122	-1.337	.186	.622	1.608
Dominance	-.059	.138	-.034	-.430	.669	.815	1.226
Trustworthiness	.232	.100	.237	2.311	.024	.492	2.032
Attractiveness	.449	.116	.462	3.864	.000	.361	2.770

Table 35 above presents linear regression coefficients for classical design website offering hedonic product – chocolate. 3 variables have significant importance on intention to purchase on this website. The most important is attractiveness, $t = 3.864$, attractiveness^β = 0.462, with $p < 0.001$, hereafter is pleasure, $t = 3.044$, pleasure^β = 0.322, $p = 0.003$, and last is trustworthiness, $t = 2.311$, trustworthiness^β = 0.237, $p = 0.024$. Results are in line with previous analysis of classical website without consideration of the product type, therefore, it can be stated, that hedonic product does not change impact of presented variables on the website with a classical aesthetic design.

Table 36

Coefficients of dependent variables influence on purchase intention for the 4th website

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	-2.562	.796		-3.219	.002		
Pleasure	.711	.191	.424	3.723	.000	.484	2.067
Arousal	.277	.187	.158	1.483	.143	.554	1.804
Dominance	-.086	.145	-.055	-.598	.552	.735	1.361
Trustworthiness	.255	.134	.249	1.909	.061	.367	2.724
Attractiveness	.169	.156	.145	1.084	.282	.350	2.854

Lastly, the results of the website with expressive aesthetic design offering hedonic product – chocolate, are presented in the Table 36 above. In this case, only one variable has strong influence on purchase intention on the website. Pleasure^β = 0.424, t = 3.723, p < 0.001. All 4 other variables did not show significant impact in influence on purchase intention on this website. In case of utilitarian product, pleasure and trustworthiness had an influence on purchase intention on expressive website. However, in case of purchasing hedonic product on expressive website, only pleasure has an influence on purchase intention on this website.

Based on current section analysis results it can be concluded that influence and importance of dependent variables on purchase intention is different based on product type, offered on the website. To sum up these findings, a comparison table containing all 7 analyses with beta coefficients is presented below. In case of no influence on purchase intention, cells were left blank.

Table 37

Beta coefficient representing the strength of influence

	General	Class.	Expr.	Clas+Ut	Exp+Ut	Clas+Hed	Exp+Hed
Pleasure	0.336	0.287	0.382	0.244	0.302	0.322	0.424
Arousal	-	-	-	-	-	-	-
Dominance	-	-	-	0.175	-	-	-
Trustworthiness	0.237	0.313	-	0.459	-	0.237	-
Attractiveness	0.334	0.274	0.311	0.270	0.475	0.462	-

Based on the t-test analysis arousal does not impact purchase intention in any case. Dominance has an impact on purchase intention only in case of classical aesthetic design and utilitarian product, however, an impact is the lowest out of all variables. Trustworthiness has an

impact only in case of classical aesthetic design. Strength of the impact is on the weaker side (Table 37), making other impactful variables more important. There is an exception in case of classical website design for utilitarian product, where trustworthiness has the highest and the strongest impact. Moving further, the main variables important in most of the cases are attractiveness and pleasure. Attractiveness has no impact on expressive design for hedonic product and has the weakest impact for classical aesthetic design in general, although the impact is the highest compared to other variables. Both highest and strongest influence is found for expressive design and utilitarian product. Pleasure is the only variable important in each analysis case, however, strength and amount of the impact differs throughout all cases.

6.3. Discussion

The main research question of this study was how aesthetic design and product type in e-commerce website affect emotional response, online store evaluation and intention to purchase through these variables. The overall pattern of results indicates that results are different in case of different experimental combinations, although not each dependent variable was equally important. Nevertheless, to answer this question, hypotheses are reflected considering the objectives of this study and previous research.

The first goal of this research was to evaluate the effect of classical and expressive website aesthetics combined with utilitarian and hedonic products on emotional pleasure, arousal, and dominance. It was found that aesthetic design nor product type have no significant impact on pleasure evaluation (H1a and H1b). Previous research assessing aesthetic design impact on pleasure did not include other variables (Porat & Tractinsky, 2012, Liu et al., 2016). Therefore, different results might have occurred in current study because of online stores with specific one type products. Research on arousal have found it being affected by expressive aesthetic design (Liu et al., 2016; Wang et al., 2011, Bhandari et al., 2019). Excitement caused by arousal is considered desirable in shopping activities. Current research results are in line with previous research, statistically significant difference was found in effect of different aesthetic designs on arousal (H2) and arousal is higher in case of expressive design while shopping for hedonic product (chocolate). Lastly, limited research has found visual style impact on dominance (Chang et al., 2014), but specific aesthetic design was not specified. Hypothesis of current research was based on understanding that well organized, clear, understandable design (classical aesthetics) may cause higher sense of dominance when shopping for utilitarian product. Therefore, impact of classical aesthetics on dominance was found (H3) and results confirm previous conclusions about presence of such an impact.

Moving further, effect of aesthetic design on website evaluation is measured. Current research found no difference in trustworthiness evaluation in case of different aesthetic designs (H4). Previous research analyzed mostly website credibility evaluation in different aesthetic designs (Alsudani & Casey, 2009, Oyibo & Vassileva, 2017). Research on trust was dissimilar, while one research stated customizable, appealing website (expressive aesthetics; Li & Yeh, 2010) can cause higher trust, another research found trust influenced by clarity and cleanliness (classical aesthetics; Karvonen, 2000). Therefore, current research failed to find unambiguous result, as it partially supports previous research. Evaluation of website attractiveness is dependent on consumer goal (Cai & Xu, 2011). Therefore, current research found, that website is perceived as more attractive when shopping for hedonic product on expressively designed website (H5a). Results might support previous finding, as when customer browses hedonic products, one of their goals can be amusement. Since expressive design is playful, previous findings can be supported. However, current research found no difference in website attractiveness evaluation between different designs in case of utilitarian products (H5b). In this research utilitarian product was coffee, therefore, it is expected, that coffee was perceived not only as utilitarian product, thus, respondent might have perceived their browsing goal not as utilitarian.

Hereafter, correlations between dependent variables, influenced by aesthetic design, were analyzed. Previously it was found that aesthetic design influences emotions, which in turn impact consumer's evaluation of the store (Porat & Tractinsky, 2012). A strong relationship was found between pleasure and attitude towards website (Liu et al., 2016). Current research supports these findings, there is a correlation between pleasure and trustworthiness and attractiveness evaluation (H6, H7). Findings on arousal impact were unlike. Researchers stated that it can lead to defocusing behavior (Mehrabian & Russell, 1974). Another research (Sutcliffe, 2002; Bhandari et al., 2019) found that arousal, influenced by visual design, can increase perception of attractiveness. Current research expected to find negative correlation between arousal and trustworthiness, however, low but positive correlation was found, and the expectations were not true (H8). Previous research on this correlation was not broad and aesthetic design orientated, therefore this independent variable together with utilitarian or hedonic product could cause different findings. Meanwhile, arousal and attractiveness are correlated (H9), thus, findings support previous research. Finally, previously dominance was found to affect evaluation of the website (Alsudani & Casey, 2009). Another research had contradictory results (Porat & Tractinsky, 2012). Current research found strong correlation between dominance and both trustworthiness and attractiveness (H10, H11). To add up, literature showed correlation between trustworthiness and attractiveness (Lindgaard et al., 2011), thus, current research as well tested it and results are in line with previous research (H12).

Previous knowledge found differences in aesthetic design influence based on product type (Cai & Xu, 2011). It was found that utilitarian shopping orientation causes higher pleasure and arousal (Koo & Lee, 2011). Arousal was found to be higher when shopping for hedonic products, meanwhile pleasure was higher in case of utilitarian products (Kempf, 1999). Current research findings differ from previous research, no influence of product type was found in neither case (H13, H14). These findings might differ because of chosen products (coffee and chocolate), where both could be perceived as hedonic or as well utilitarian. Both products can be used daily as a necessity as well as for pleasure, thus, results of the impact do not differ. Moving further, research on dominance as emotional dimension is limited as it was often excluded from the research due to better reliability of other dimensions (Kampf, 1999; Bhandari et al., 2019). Current research hypothesis was based on affective involvement findings (Ding & Lin, 2012), therefore, not directly based on previous findings. Nevertheless, no influence of product type on dominance was found (H15), therefore, findings partially match previous research that excluded dominance evaluation at all because of its' insignificant effect.

Hereafter, influence of dependent variables on purchase intention is reviewed. First, direct impact of product type in light of aesthetic design was researched. Previous research suggests that purchase intention for hedonic products is higher when expressive design is present (Wang et al., 2015). Current research didn't find the same results, as purchase intention was not significantly different for different product types (H16). Such conclusion might be influenced by perception of the product, e.g., if consumer perceives coffee as hedonic product rather than utilitarian, they evaluated purchase intention to the similar extents, as the ones who evaluated intention to purchase chocolate – hedonic product. To end up, previous research was consistent in case of positive effect of trustworthiness (Ramezani Nia & Shokouhyar, 2020; McKnight et al., 2002; as cited in Sarkar, 2015) and attractiveness (Peng et al., 2017; Pebrianti, 2016) on purchase intention. Current research supports these findings (H17, H18).

CONCLUSIONS, SUGGESTIONS AND PRACTICAL IMPLICATIONS OF THE STUDY BASED ON THE ANALYSIS OF RESEARCHED FACTORS

In general understanding, aesthetic means the extent of beauty perceived by individual from a visual stimulus, which depends on personal properties, such as personality and feelings. In research analysis it was discovered that there are two main aesthetic design dimensions – classical aesthetics and expressive aesthetics. These names are interchangeable with previously used aesthetic formality and aesthetic appeal. Aesthetics have a cause-and-effect relationship with feelings, emotions and first impression of perceived visual stimuli. It is one of the main decisive factors for keeping user engaged in the online environment. Although design dimensions as a whole have an impact on consumer perception, more precise factors of design, such as visual boundaries, layout, headers, font and graphical buttons can also affect impression of the website. Certain design elements can suggest direction of browser's actions and impact customer's decision making, thus, both aesthetic dimensions should be used accordingly to desired behavior. To summarize, online store environment impact on customer's emotions and purchase behavior has been confirmed. Readable and well-organized website, optimized towards user experience, is essential to the customer in online decision-making process.

Website aesthetics on purchase intention is rarely direct. Variables, mediating this impact, include but are not limited to product type, shopping task, satisfaction of the customer, emotions and overall website evaluation. Visual website aesthetics can cause a positive effect on user experience, value and emotions regardless of shopping frequency; thus, it is important for new and returning consumers. Product type together with shopping orientation can have an impact on customer behavior and website evaluation. In case of hedonic product, aesthetics is more important than in case of utilitarian product. However, regardless of product type, at least a little classical aesthetic is needed to facilitate and ease a shopping task, although this type of aesthetics is not a motivator for neither product type purchase intention. For hedonic products, together with expressive aesthetics, classical aesthetics will have a stronger effect in purchase decision making process. Customer's shopping orientation and presence of purchase task should be taken into account when deciding on website design. Literature analysis findings suggest that classical aesthetics has a direct impact on trust perception. Personal customization and functional appeal of the website, such as security symbols, have a significant impact on visitor's trusting beliefs. Last but not least, attractiveness is perceived within the first second after entering the website. It can cause positive attitude toward the website, stimulate the intention to stay on the website and browse further with higher chances of purchase decision. Hedonic shoppers pay more attention to

attractiveness, than utilitarian products-oriented consumers. Finally, website attractiveness is more important for the first-time shopper, than for a repeated visitor.

Emotions caused by aesthetic design of the website have a significant impact on consumer in their decision-making process. Pleasure creates positive attitude and can be influenced by arousal, whereas arousal can be influenced by dominance. However, dominance may not have a direct effect on purchase intention. Desired emotions can be evoked in consumers by specific website design, based on retailer's goal, intention, and offered product type.

Speaking of socio-demographical characteristics, visual design is important for both male and female. Men take this into account less than women, although men tend to rate trustworthiness based on visual appeal of the website. Gender differences are stronger in high-masculinity countries. Perception of visual complexity remains stable in people aged 12-40 years old. Profession and education might have an impact on website perception and decision making on the website. Higher educational degree lowers need for website complexity, whereas designers and random respondents perceive website design differently.

Current research aimed to analyzed impact of aesthetic design and product type on emotions – pleasure, arousal and dominance, and on website evaluation in terms of attractiveness and trustworthiness with further effect on purchase intention. At first, effect of combinations of aesthetic design and product type measured. It was found that feeling of pleasure is not significantly affected by aesthetic design of the website and product type. Previous research didn't include product type while evaluating website aesthetics impact on pleasure, therefore, results might differ. However, aesthetic website design has an impact on evaluation of arousal, and it is higher in case of expressive design, when hedonic product is offered on the website. These results support previous research findings. Nevertheless, product type individually does not influence arousal, despite of previous research contrary results. Classical aesthetic design causes higher sense of dominance than expressive design for utilitarian product, meanwhile product type separately does not influence dominance significantly. Hereafter, direct influence of product type on purchase intention was tested. Previous research suggests that intention to purchase hedonic products is higher on expressive design website, however, results did not show any significant relation between these variables. Moving further, direct effect of website aesthetics on website evaluation is assessed. There was no impact of website design type on trustworthiness evaluation found. Previous research focused mostly on website credibility, even though these terms are similar, accurate characteristics description might differ and be the reason for results being inconsistent with previous research. Yet attractiveness evaluation can be influenced by aesthetic design. For hedonic product, expressive design is perceived as more attractive than classical. For utilitarian product, no influence of design type on attractiveness evaluation was found. Previous

research suggests dependency of attractiveness evaluation on consumer's browsing goal, therefore, results might suggest that hedonic shopping goal includes amusement, whereas expressive aesthetic design typically has animations and extraordinary design elements.

Further in the research relations between emotions and online store evaluation were measured. Positive correlation was found between pleasure and trustworthiness as well as between pleasure and attractiveness of the website. The findings are in line with previous research results and support importance of pleasant emotions on evaluation of the store. Arousal and attractiveness correlate positively and support previous findings on this relation. Despite expectation of negative correlation between arousal and trustworthiness, a positive correlation was discovered. Previous research suggested higher arousal might cause alternative seeking and defocusing behavior, and therefore lower perception of trustworthiness. However, research has been done on other websites than those in current research, therefore visual design itself could cause such evaluation. Domain of dominance has not been research broadly previously, however, there were findings of dominance influencing evaluation of the store. Current research found correlation between dominance and attractiveness as weak, but still positive, meanwhile feeling of dominance and evaluation of trustworthiness correlate strongly. To add up, website attractiveness influence on perception of trustworthiness was evaluated and strong correlation was found. Previously this correlation was known, thus, this research aimed to test and confirm correlation.

Finally, effect of website evaluation on purchase intention has been evaluated. Both trustworthiness and attractiveness are proven to correlate positively with purchase intention. Research on these two factors influencing purchase intention has been broad before, and current research provides the results consistent with previous research. To provide better insights on the most important variable out of tested ones for purchase intention, additional tests were done for each design type and product combination. It was found, that considering all responses, pleasure has the highest impact on purchase intention. Moreover, pleasure is the only variable, significantly increasing purchase intention in each case. For classical aesthetic design, attractiveness plays the most important role in purchase intention, followed by trustworthiness and pleasure. Meanwhile for expressive aesthetic design of the website, pleasure is the most important purchase intention cause. The second one is attractiveness, and the other variables were not significantly important for purchase intention on expressive website. Each website out of four carried different results in factors impactful on purchase intention. Classical aesthetics website offering coffee (utilitarian product) is the most influenced by trustworthiness. Pleasure, attractiveness and dominance have lookalike impact on purchase intention. However, dominance does not influence purchase intention in any other case, thus, is important only in case of classical design and utilitarian product. For expressive aesthetic design and coffee as a utilitarian product, attractiveness holds

the highest influence, followed by pleasure. Trust does not have significant influence on purchase intention in this case. In case of chocolate – hedonic product, for classical website design attractiveness has the highest impact on purchase intention. The other two variables are pleasure and trustworthiness. However, in case of offering chocolate on expressive design website, only pleasure is important in having purchase intention. Findings suggest that trustworthiness is important in purchase intention for classical aesthetic design and this influence is not affected by product type. For expressive aesthetic design, pleasure and attractiveness have the highest influence on purchase intention, meanwhile in case of chocolate as the product offered, only pleasure is important.

Implications of the study

Current study aims to benefits both academic environment and business environment that is interested in impact of aesthetic website design on consumer purchase intention. First of all, based on the analysis of previous research, literature review of current study provided with insights about possible impact of website design and product type combinations on emotions and purchase, evaluation of the store intention. Previous studies on this topic typically included solely aesthetics design impact on a specific website, such as mobile phones store or job offer website. Product type impact was not actively evaluated in terms of its' impact on consumer behavior. Such conceptualization allows future researchers to evaluate website impact including more aspects than only visual design type.

Second aspect beneficial for academic environment is the model of the study, which was developed based on stimulus-organism-response model but enhanced with two stimuli instead of one. Additionally, organism part of the model includes two different domains of affected variables, which allows more in-depth research on relations between many variables. Such model can be employed in further research while enhanced with other constant variable variations and used in different settings through manipulating moderating variables, since it can be easily modified.

Considering business environment, current study defined multiple factors that can impact consumer behavior depending on website aesthetic design. First of all, desired emotions can be evoked using a specific website design. Based on marketer's intention, goal or product offered while having defined target audience, properly selected website design will help consumers understand their emotions better, avoid confusion and stimulate desired behavior in consumers. Ultimately, design aiming to create emotions leading to purchase intention will help marketers in their purchase stimulation goal. To add up, stimuli perception and evaluation differs based on gender. Differences are strong in high-masculinity countries and weak in low-masculinity

countries. Thus, online store creators can design interface of the website based on target audience gender and/or masculinity level in the country, where business operates.

Second aspect that might benefit business environment are different findings based on product type and website design combinations. Additional linear regression analysis showed clearly that importance of different emotions and website evaluation measurement differs depending on product offered on the website and visual design. For example, purchase intention for coffee on classical website can be influenced by 80% of tested factors, whereas selling the same product on expressive website can be influenced by 40%. Therefore, website design selection for coffee store can be based on ability to control factors, that are more important in impacting purchase intention. Website with classical design selling chocolate also has more controllable factors, that can influence purchase intention (60%) compared to chocolate sold on expressive website (20%). To sum up, website design choice should be made based on product type and ability to have more influence over customer's behavior. Factors analyzed in the study help marketers prioritize elements of consumer response to website design, and which ones can be disregarded in term of aesthetic impact and purchase intention.

Limitations and future research directions

This research has several limitations. First of all, only four websites were included in experiment without a pilot study. Choice was based on classical and expressive design characteristics, defined by previous research. Future research could test more websites referred to classical or expressive design, as well as supported by confirmatory pilot study. Future research could explore, how specific features of classical and expressive designs affect evaluation of the website. Moreover, two specific products were chosen – coffee as utilitarian, and chocolate as hedonic product. Responses could be influenced by personal respondents' preference towards these products and overall likeliness of consumption. To add up, respondents could perceive products not as expected, i.e., coffee could be perceived as hedonic product. Therefore, future research can include different product examples, less likely to be perceived differently, as well as assess perception of the product prior to the main study.

Considering limitations in data collection, questionnaires that respondents received were quite long and respondents could feel tired and confused by the number of emotions and similarity of them. Future research can employ different emotion assessment tool, still consisting of bipolar emotions, although including noticeably different emotions. Also, the other limitations in data collection might be that data was collected in Lithuania only, therefore, cultural dimensions, such as power distance, individualism, masculinity or uncertainty avoidance could influence evaluation and responses. Additionally, questionnaire was translated from English to Lithuanian, therefore,

such constructs as emotional assessment framework could appear more confusing in Lithuanian than in English as well as include translation errors. To add up, websites were presented in English, meanwhile respondents were from Lithuania, therefore language barrier could influence understanding of the website and distort perception of the product offered there.

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ANNEXES

Annex 1

Aesthetic Emotions

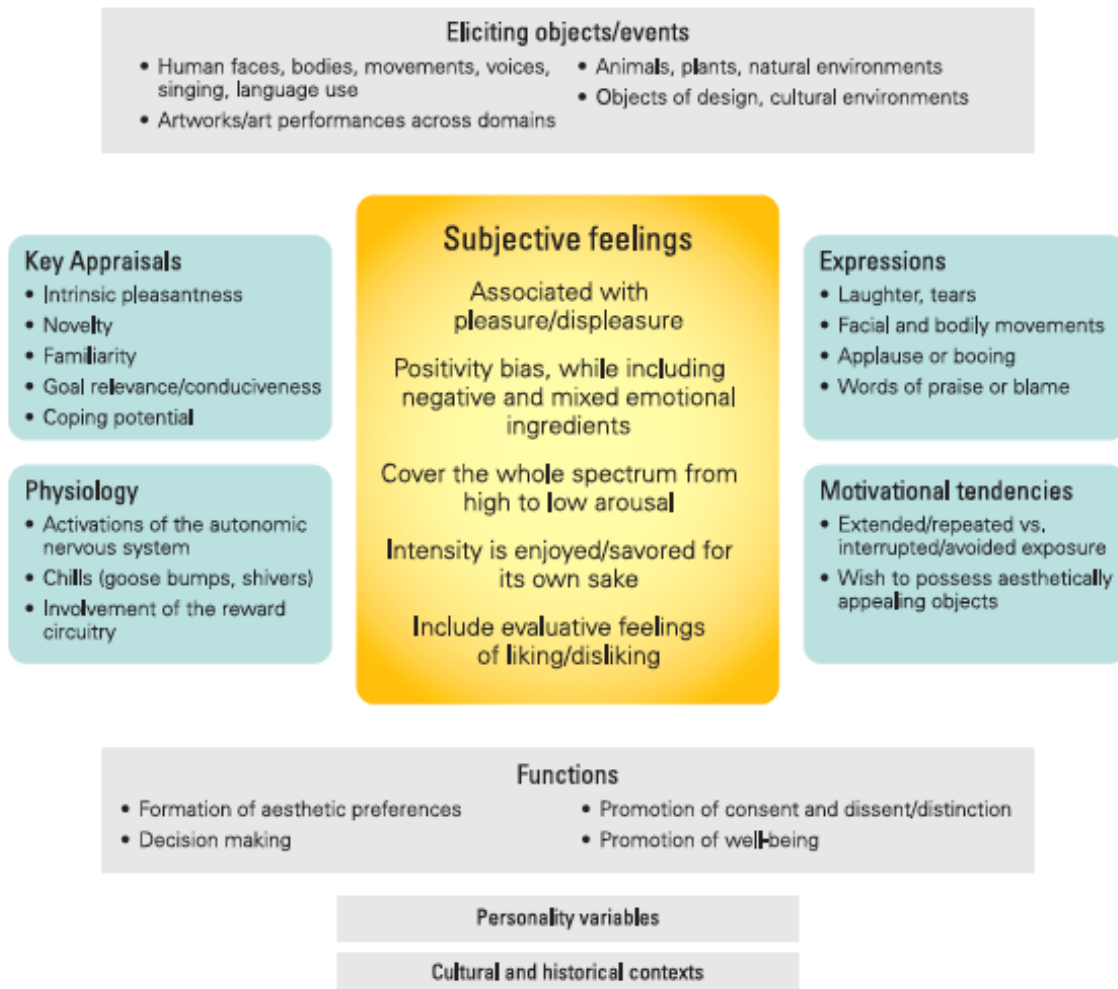


Figure 1. Menninghaus et al. (2019) Aesthetic emotions framework.

Annex 2

Country	Power distance	Individualism	Masculinity	Uncertainty avoidance	Long term orientation	Indulgence
Russia	33	63	26	59	38	57
Finland	35	67	66	65	83	40
Germany	54	46	95	92	88	42
Japan	93	39	36	95	81	20
Canada	39	80	52	48	36	68
U.S.	40	91	62	46	26	68
Serbia	86	86	25	92	52	28
BiH	90	22	48	87	70	44
Mexico	81	30	69	82	24	97
Chile	63	23	28	86	31	68
France	68	71	43	86	63	48
Macedonia	90	22	45	87	62	35
Malaysia	100	26	50	36	41	57

Table 1. Comparison cultural value differences based on research results.

Annex 3

Questionnaire development

Dear respondent,

My name is Evelina Bogdiun, I am Digital Marketing Master's programme student at Vilnius University. By this research I aim to analyse the impact of website design on purchase intention for my master's thesis. The questionnaire contains 5 question blocks and will take approximately 7-10 minutes to complete. It is anonymous, and the answers will be analysed solely for the research purposes. If you have any concerns regarding the research, you can contact me via email:

Evelina.bogdiun@vm.stud.vu.lt

Thank you for your participation and input in my research!

1. Please look at this website and explore its design and product.
 - Classical aesthetics utilitarian product: <https://www.rocketbeanroastery.com/>
 - Expressive aesthetics utilitarian product: <https://twochimpscoffee.com/>
 - Classical aesthetics hedonic product: <https://eu.venchi.com/>
 - Expressive aesthetics hedonic product: <https://simplychocolate.dk/>
2. After viewing the website, please estimate at the 7-point scale, what feelings this website caused:

7-point semantic differential scale, reference - Bradley & Lang, 1994.

Unhappy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Happy
Annoyed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleased
Unsatisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Satisfied
Melancholic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contented
Despairing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hopeful
Bored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amused
Relaxed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stimulated
Calm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Excited
Sluggish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Frenzied
Dull	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jittery
Sleepy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wide-awake
Unaroused	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Aroused
Controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Controlling
Influenced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influential

Cared for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In control
Awed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Important
Submissive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dominant
Guided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Autonomous

3. Rate your level of agreement with the statements regarding perceive website appearance, where 1 – Strongly disagree, 7 – Strongly agree:

7-point Likert type scale; reference - Cai & Xu, 2011.

	1	2	3	4	5	6	7
	Strongly disagree						Strongly agree
The design of the Web site is harmonious.							
The layout of the Web site is intuitive.							
The Web site has logically organized elements.							
The layout of the Web site was designed in a manner I am accustomed to.							
The Web site is pleasing to look at.							
I like the look and feel of the Web site.							
The Web site is visually appealing.							
This Web site looks pretty.							

4. Rate your level of agreement with the statements regarding perceived trustworthiness and attractiveness of the website, where 1 – Strongly disagree, 7 – Strongly agree:

7-point Likert type scale; reference - Ramezani Nia & Shokouhyar, 2020, Cao et al., 2005.

	1	2	3	4	5	6	7
	Strongly disagree						Strongly agree
I am prepared to give my private information to this website.							

I feel safe in my transactions with the website.								
The website intends to fulfil its promises.								
It is not a problem to pay in advance for purchased products.								
I trust the website administrators will not misuse my personal information.								
The web site is attractive.								
The web site promotes customer excitement.								
The web site motivates customers to feel participation.								
The web site provides attractors such as animations / playful elements.								
The web site is fun.								
The web site is entertaining.								

5. Please estimate, to what extent you perceive the product given on the website as:
7-point semantic differential scale, reference – Voss et al., 2003.

Ineffective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effective
Unhelpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Helpful
Not functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Functional
Unnecessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Necessary
Impractical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Practical
Not fun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fun
Dull	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exciting
Not delightful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Delightful
Not thrilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thrilling
Unenjoyable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enjoyable

6. Rate your level of agreement with the statements regarding the intention to purchase on the website, where 1 – Strongly disagree, 7 – Strongly agree:

7-point Likert type scale; reference - Athapaththu & Kulathunga, 2018.

	1 Strongly disagree	2	3	4	5	6	7 Strongly agree
I will consider this site first when I want to buy this product.							
I would be comfortable shopping at this site.							
I would recommend the site to a friend.							
I intend to continue using this website in the future.							
I will purchase other products at this website.							
I will purchase other products at this website.							
I would like to buy new products from this site.							

7. Please choose your gender:

- Female
- Male

8. Please write your age: ____

9. Which one of the following ranges includes your average monthly income after taxes?

- 0-500 Eur
- 501-1000 Eur
- 1001-2000 Eur
- 2001-3000 Eur
- 3001 Eur and more

Annex 4



Figure 2. <https://twochimpscoffee.com/> interface



Figure 3. <https://simplychocolate.dk/> interface

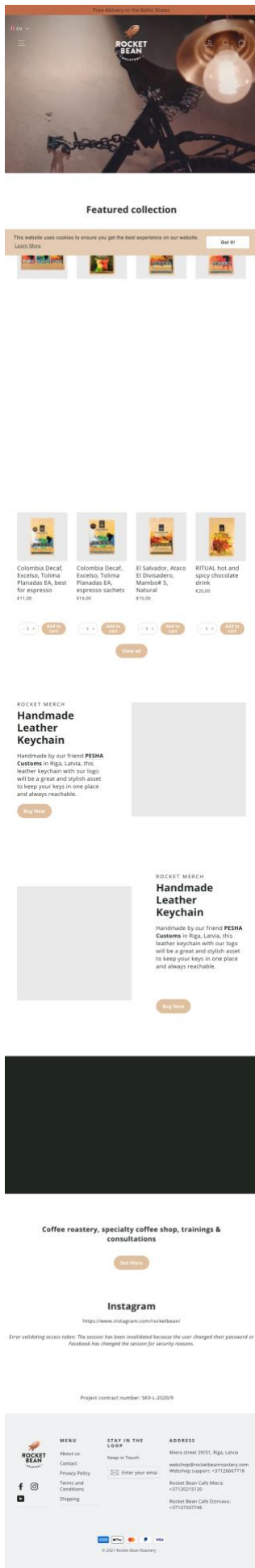


Figure 4. <https://www.rocketbeanroastery.com/> interface

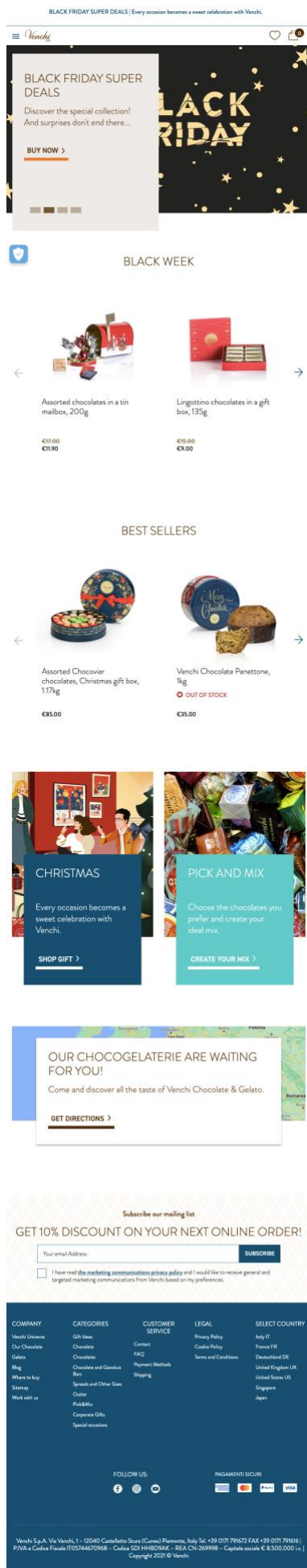


Figure 5. <https://venchi.com/> interface